

2

INSTALLATION RESTORATION PROGRAM

AD-A277 740



FINAL

Site Investigation Report

Volume 3

Appendices H Through M

November 1992

161st AIR REFUELING GROUP
ARIZONA AIR NATIONAL GUARD
SKY HARBOR INTERNATIONAL AIRPORT
PHOENIX, ARIZONA

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Hazardous Waste Remedial Actions Program
Oak Ridge K-25 Site
Oak Ridge, Tennessee 37831-7606
Managed by MARTIN MARIETTA ENERGY SYSTEMS, INC.
For the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-84OR21400

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1. Agency Use Only (Leave Blank)		2. Report Date NOV 1992		3. Report Type and Dates Covered SITE INVESTIGATION REPORT	
4. Title and Subtitle Site Investigation Report, Volume 3 Appendix A through M Sly Harbor AND EAST, PHOENIX, AZ				5. Funding Numbers	
6. Author(s)					
7. Performing Organization Name(s) and Address(es) IT CORPORATION 312 Directors Drive Knoxville, TN 37923				8. Performing Organization Report number	
9. Sponsoring/Monitoring Agency Name(s) and Address(es) Hazardous Waste Remedial Action Program Oak Ridge TN Air National Guard Readiness Center Andrews Air Force Base, Maryland 20331				10. Sponsoring/Monitoring Agency Report Number	
11. Supplemental Notes					
12. Distribution/Availability Statement Approved for public release; distribution is unlimited				12b. Distribution Code	
13. Abstract (maximum 200 words) SITE INVESTIGATION OF FIVE (5) ERP SITES AT SLY HARBOR AIR NATIONAL GUARD BASE AND ONE (1) SITE AT PAPAGO MILITARY RESERVATION. THREE VOLUMES CONTAINING					
14. Subject Terms - Investigation Restoration Program, Air National Guard Readiness Center, Site Investigation Report Appendix A through M, Sly Harbor, IT Corporation Report, Phoenix, AZ				15. Number of Pages 742	
				16. Price Code	
17. Security Classification of Report Unclassified	18. Security Classification of this Page Unclassified	19. Security Classification of Abstract Unclassified	20. Limitation of Abstract None		

**FINAL
SITE INVESTIGATION REPORT
161ST AIR REFUELING GROUP
ARIZONA AIR NATIONAL GUARD
SKY HARBOR INTERNATIONAL AIRPORT
AND PAPAGO MILITARY RESERVATION
PHOENIX, ARIZONA**

**VOLUME 3
APPENDICES
H THROUGH M**

**4 JAN 1993
RECEIVED**

Submitted To:

**AIR NATIONAL GUARD READINESS CENTER
ANDREWS AIR FORCE BASE, MARYLAND**

Submitted By:

**HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
Oak Ridge K-25 Site
Oak Ridge, Tennessee 37831-7606
managed by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-84OR21400**

Prepared By:

**IT CORPORATION
312 DIRECTORS DRIVE
KNOXVILLE, TENNESSEE 37923**

Prepared For:

**U.S. DEPARTMENT OF ENERGY
CONTRACT DE-AC05-84OR21400**

NOVEMBER 1992

DTIC QUALITY INSPECTED 3

List of Appendices

Appendix

Title

VOLUME 2

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- B Preliminary Review of Hydrogeologic Data for Facilities Adjacent to Sky Harbor Air National Guard Base
- C Geophysical Survey Report
- D SOV Survey Report
- E Soil Boring Logs
- F Piezometer and Monitoring Well Completion Diagrams
- G Piezometer and Monitoring Well Development Records

VOLUME 3

- H Sample Collection Logs
- I Slug Tests and Analysis
- J Potentiometric Measurements
- K Results of Screening Analyses
- L Tabulation of Soil Analytical Results
- M Tabulation of Water Analytical Results

Accession For	
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DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

APPENDIX H
SAMPLE COLLECTION LOGS



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

DATE	01	1	89	1
TIME	1	0	4	0
PAGE	1 OF 2			
PAGE				
PROJECT NO. 40121.02.0				

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG

SAMPLE NO. SB1-05-0-1/01 & 02

SAMPLE LOCATION Soil Boring SB1-05

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE SURFACE

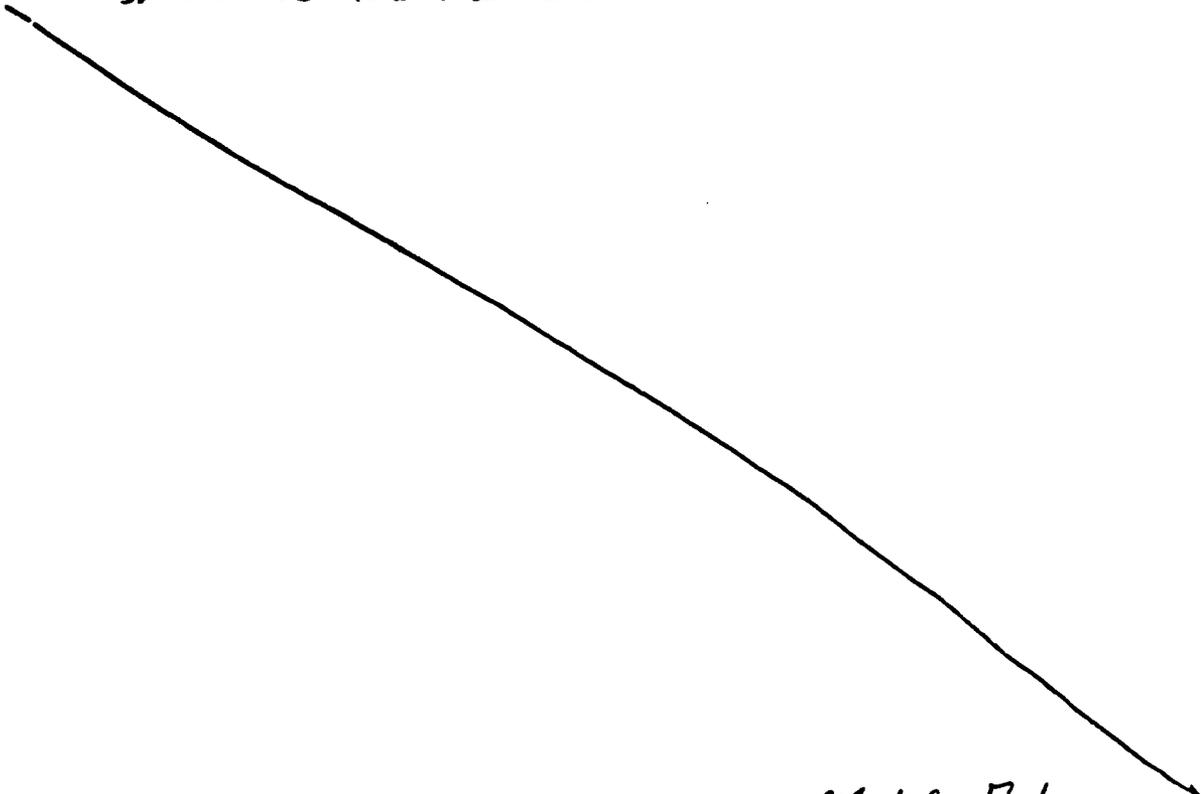
WEATHER CLEAR, BREEZY, WARM

CONTAINERS USED	AMOUNT COLLECTED
6" Bore SLEEVE	
(2)	

COMMENTS:

SAMPLE 01 FOR HOME LAB

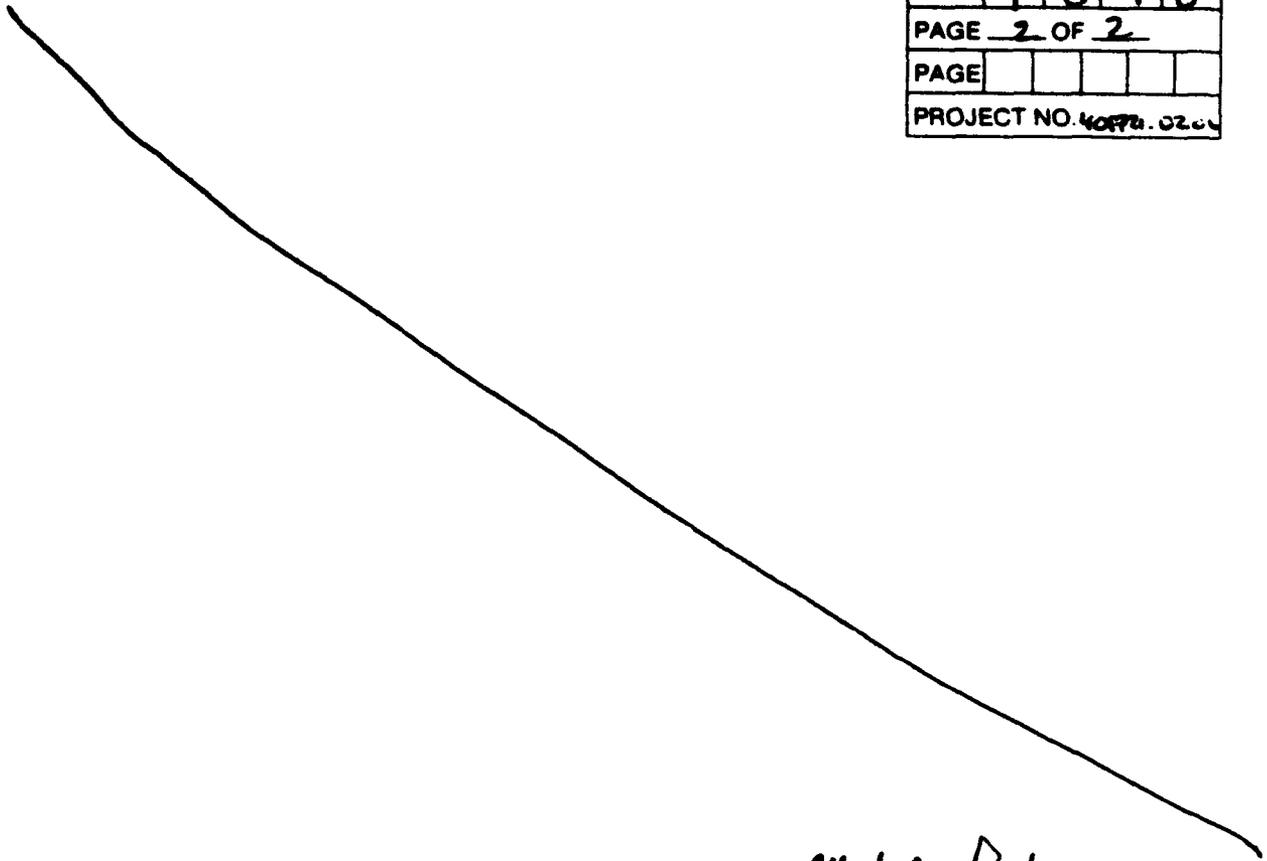
SAMPLE 02 FOR FIELD LAB



PREPARED BY: Mark A. Bardin

COMMENTS:
(Continued)

DATE	01	12	90
TIME	1	04	0
PAGE	2 OF 2		
PAGE			
PROJECT NO.	40774.0200		



PREPARED BY: Mark A. Anderson

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A
- 4 DATE. USE MONTH/DAY/YEAR. I.E., 10/30/85
- 5 TIME. USE 24-HOUR CLOCK. I.E., 1835 FOR 6:35 P M
- 6 PAGE. EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC.
- 7 SAMPLE LOCATION: USE BORING OR MONITORING WELL NUMBER, GRID LOCATION (TRANSECT), SAMPLING STATION I.D., OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES. INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY
- 8 SAMPLE TYPE: USE THE FOLLOWING - SOIL, WATER (SURFACE OR GROUND), AIR (FILTERS, TUBES, AMBIENT, PERSONNEL), SLUDGE DRUM CONTENTS, OIL, VEGETATION, WIPE, SEDIMENT
- 9 COMPOSITE TYPE: I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE
- 10 DEPTH OF SAMPLE: GIVE UNITS, WRITE OUT UNITS SUCH AS INCHES, FEET, DON'T USE " OR "
- 11 WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS
- 12 CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL)

DATE	0	1	18	91
TIME	1	05	0	
PAGE	1 OF 2			
PAGE				
PROJECT NO. 40721.02				

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARVEST AN6

SAMPLE NO. SB1-05-0-5/01 & 02

SAMPLE LOCATION SOIL DURING SB1-05

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE _____

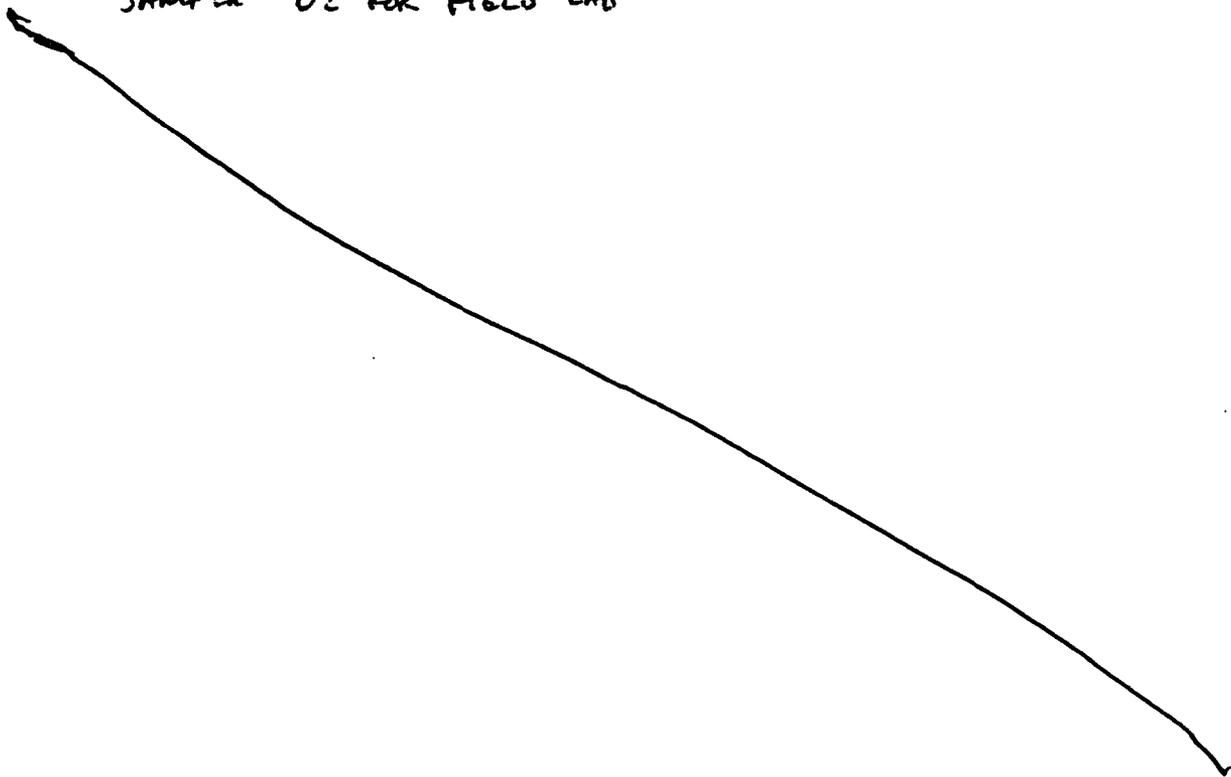
DEPTH OF SAMPLE 0-5ft INTERVAL

WEATHER CLEAR, BREEZY, WARM

CONTAINERS USED	AMOUNT COLLECTED
<u>(2) 6 inch</u>	
<u>BRASS SLEEVE</u>	<input checked="" type="checkbox"/>

COMMENTS:

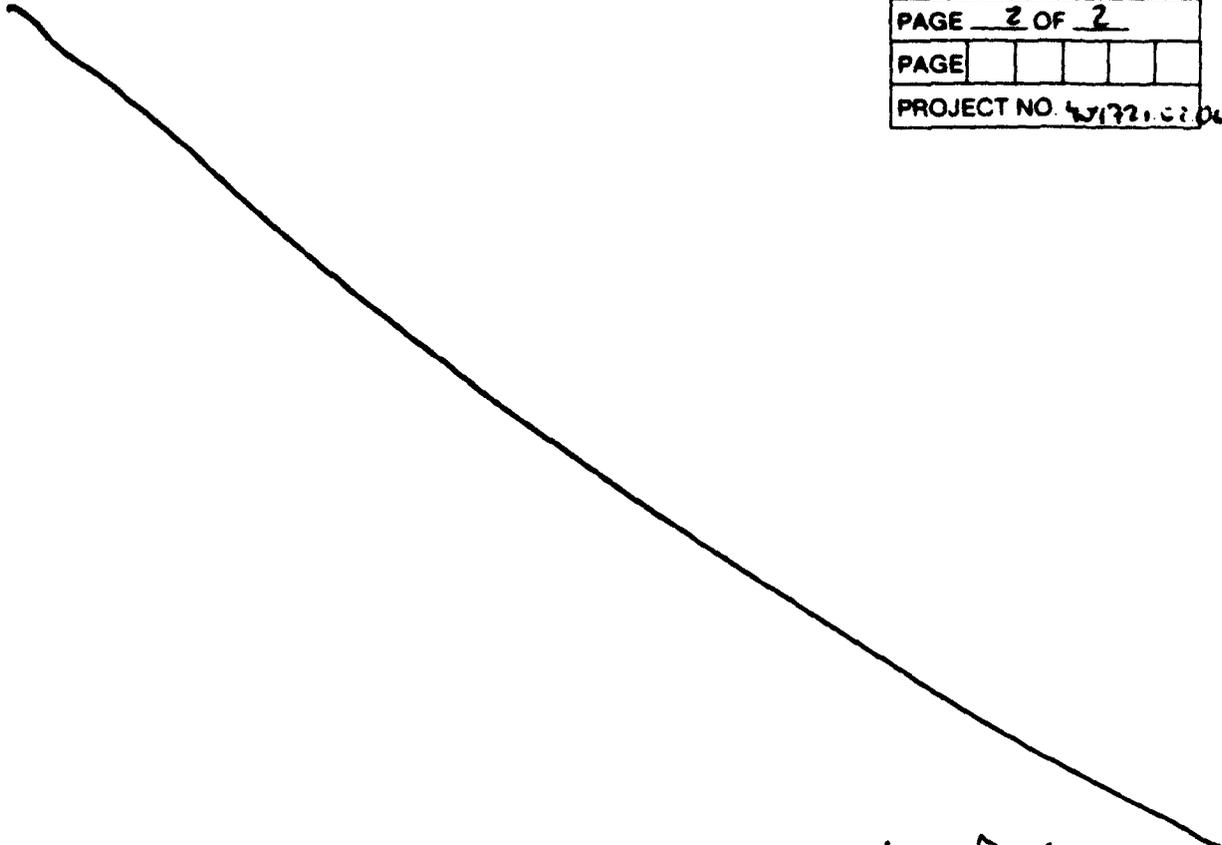
SAMPLE 01 FOR HOME LAB
SAMPLE 02 FOR FIELD LAB



PREPARED BY: Mark A. Anderson

COMMENTS:
(Continued)

DATE	0	1	18	90
TIME	1	0	5	0
PAGE	2 OF 2			
PAGE				
PROJECT NO.	W721.0706			



PREPARED BY: Mark A. Dandrea

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED. DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
- 3 ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A.
- 4 DATE USE MONTH/DAY-YEAR. I.E. 10/30/85
- 5 TIME USE 24-HOUR CLOCK. I.E. 1835 FOR 6.35 P.M.
- 6 PAGE EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E. IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24 2 OF 24. ETC
- 7 SAMPLE LOCATION USE BORING OR MONITORING WELL NUMBER GRID LOCATION (TRANSECT), SAMPLING STATION I.D. OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES. INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY
- 8 SAMPLE TYPE USE THE FOLLOWING - SOIL, WATER (SURFACE OR GROUND), AIR (FILTERS, TUBES, AMBIENT, PERSONNEL), SLUDGE, DRUM CONTENTS, OIL, VEGETATION, WIPE, SEDIMENT
- 9 COMPOSITE TYPE. I.E. 24-HOUR. LIST SAMPLE NUMBERS IN COMPOSITE. SPATIAL COMPOSITE
- 10 DEPTH OF SAMPLE GIVE UNITS. WRITE OUT UNITS SUCH AS INCHES, FEET. DON'T USE "OR"
- 11 WEATHER APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS
- 12 CONTAINERS USED LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G. 2 - 1L GLASS 4 - 40 ML GLASS VIAL 1 - 400 ML PLASTIC 1 - 3 INCH STEEL TUBE 1 - 8 OZ GLASS JAR)
- 13 AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G. 1/2 FULL)



DATE	0	1	1	9	9	1
TIME	1	1	0	5		
PAGE	1 OF 2					
PAGE						
PROJECT NO.	44721000					

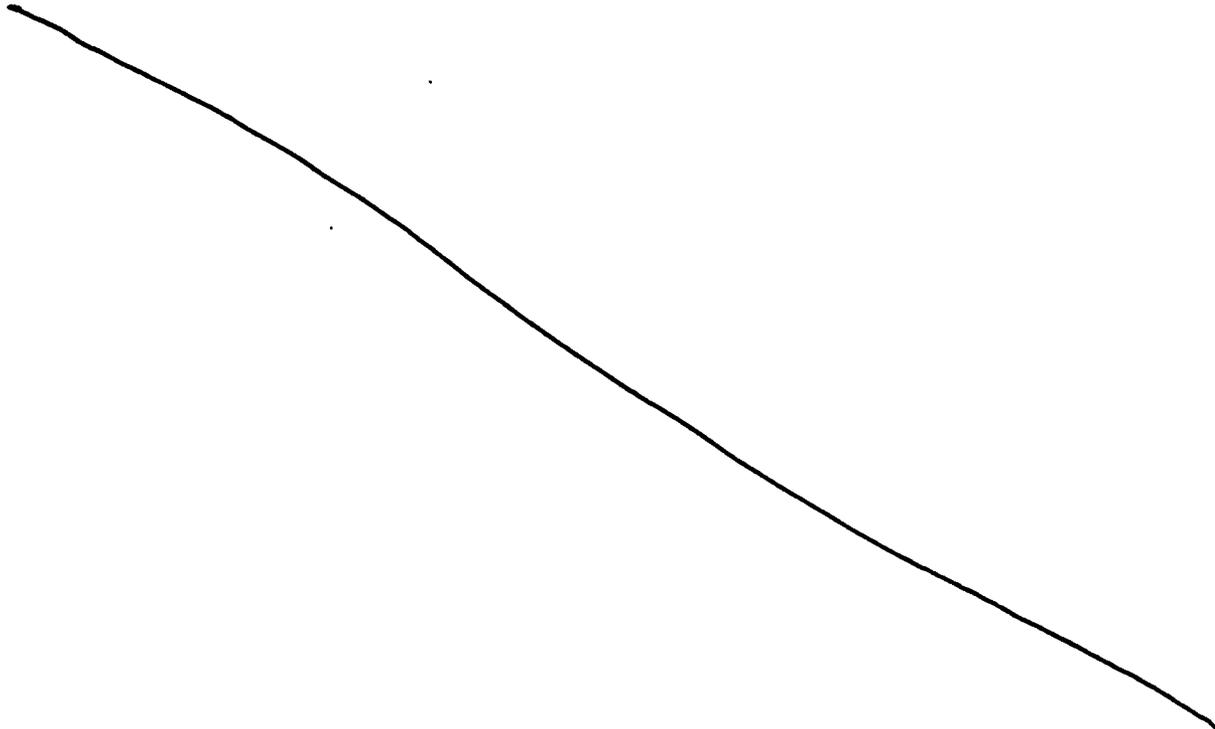
SAMPLE COLLECTION LOG

PROJECT NAME Srv Horizon ANIG
SAMPLE NO. SB1-05-5-10/01 & 02
SAMPLE LOCATION Site Down SB1-05
SAMPLE TYPE Soil
COMPOSITE YES NO
COMPOSITE TYPE _____
DEPTH OF SAMPLE 5-10 ft. In-TRENCH
WEATHER Clear, Breezy, Warm

CONTAINERS USED	AMOUNT COLLECTED
<u>(2) 6-well</u>	
<u>BRAS; SLEEVES</u>	<input checked="" type="checkbox"/>

COMMENTS:

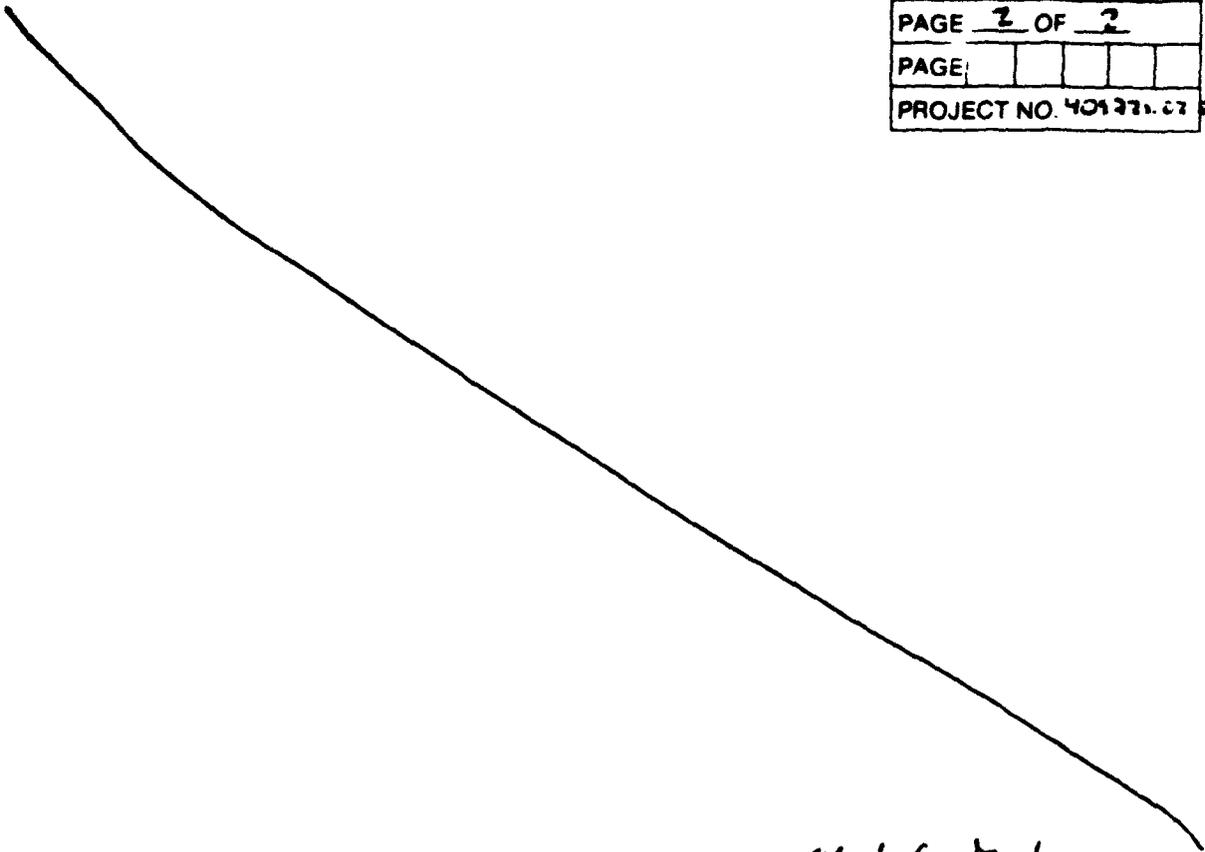
SAMPLE 01 FOR HOME LAB
SAMPLE 02 FOR FIELD LAB



PREPARED BY: Mark A. Hansen

COMMENTS:
(Continued)

DATE	0	1	1	9	1
TIME	1	1	0	3	
PAGE	2		OF		2
PAGE:					
PROJECT NO.	401771.07				



PREPARED BY: Mark A. Gardner

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED DRAW A LINE THROUGH IT AND MARK N/A FILL IN CONTROL BLOCK AND PREPARED BY
- 3 ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A
- 4 DATE USE MONTH/DAY/YEAR. I.E. 10/30/85
- 5 TIME USE 24-HOUR CLOCK. I.E. 1835 FOR 6 35 P M
- 6 PAGE EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY I.E. IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24 2 OF 24 ETC
- 7 SAMPLE LOCATION USE BORING OR MONITORING WELL NUMBER GRID LOCATION (TRANSECT) SAMPLING STATION I.D. OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY
- 8 SAMPLE TYPE USE THE FOLLOWING - SOIL WATER (SURFACE OR GROUND) AIR (FILTERS TUBES AMBIENT PERSONNEL) SLUDGE DRUM CONTENTS OIL VEGETATION WIPE SEDIMENT
- 9 COMPOSITE TYPE I.E. 24-HOUR LIST SAMPLE NUMBERS IN COMPOSITE SPATIAL COMPOSITE
- 10 DEPTH OF SAMPLE GIVE UNITS WRITE OUT UNITS SUCH AS INCHES FEET DON'T USE OR "
- 11 WEATHER APPROXIMATE TEMPERATURE SUN AND MOISTURE CONDITIONS
- 12 CONTAINERS USED LIST EACH CONTAINER TYPE AS NUMBER VOLUME MATERIAL (E.G. 2 - 1L GLASS 4 - 40 ML GLASS VIAL 1 - 400 ML PLASTIC 1 - 3 INCH STEEL TUBE 1 - 8 OZ GLASS JAR)
- 13 AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G. 1 2 FULL)



DATE	0	1	1	8	9	1
TIME	1	1	1	6		
PAGE	1 OF 3					
PAGE						
PROJECT NO.	409721-02-06					

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOUR ANG

SAMPLE NO. SBI-05-10-15/01 & 02

SAMPLE LOCATION SOIL BORING SBI-05

SAMPLE TYPE SOIL

CONTAINERS USED	AMOUNT COLLECTED
<u>(2) 6-INCH</u>	
<u>DRESS SLEEVES</u>	<input checked="" type="checkbox"/>

COMPOSITE YES NO

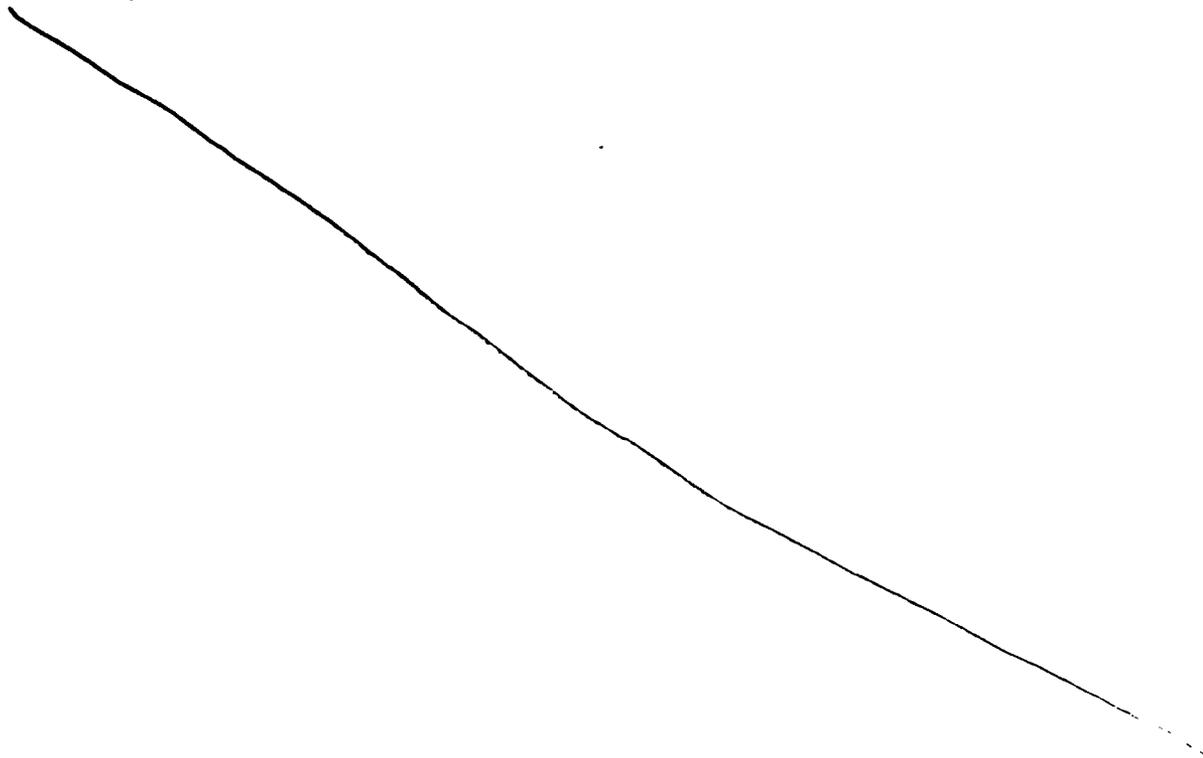
COMPOSITE TYPE _____

DEPTH OF SAMPLE 10-15 ft Interval

WEATHER CLEAR, BREEZY, WARM

COMMENTS:

SAMPLE 01 FOR HOME LAB
SAMPLE 02 FOR FIELD LAB



PREPARED BY: Mark A. Dandrea

COMMENTS:
(Continued)

DATE	0	1	1	8	9	1
TIME	1	1	1	6		
PAGE	2		OF		2	
PAGE						
PROJECT NO.	40771.					02.06



PREPARED BY: Mark A. Paulini

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED. DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
- 3 ALL ENTRIES ON LOG ARE TO BE COMPLETED IF NOT APPLICABLE MARK N/A
- 4 DATE USE MONTH/DAY/YEAR. I.E. 10/30/85
- 5 TIME USE 24-HOUR CLOCK. I.E. 1835 FOR 6 35 P.M.
- 6 PAGE. EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24 2 OF 24 ETC
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- 8 SAMPLE TYPE USE THE FOLLOWING - SOIL WATER (SURFACE OR GROUND) AIR (FILTERS TUBES AMBIENT PERSONNEL) SLUDGE DRUM CONTENTS. OIL. VEGETATION. WIPE SEDIMENT
- 9 COMPOSITE TYPE. I.E. 24-HOUR. LIST SAMPLE NUMBERS IN COMPOSITE. SPATIAL COMPOSITE
- 10 DEPTH OF SAMPLE GIVE UNITS WRITE OUT UNITS SUCH AS INCHES FEET DON'T USE " OR "
- 11 WEATHER APPROXIMATE TEMPERATURE SUN AND MOISTURE CONDITIONS
- 12 CONTAINERS USED LIST EACH CONTAINER TYPE AS NUMBER. VOLUME. MATERIAL (E.G. 2 - 1L GLASS 4 - 40 ML GLASS VIAL 1 - 400 ML PLASTIC. 1 - 3 INCH STEEL TUBE. 1 - 8 OZ GLASS JAR)
- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL)

DATE	0	1	1	8	9	1
TIME	1	2	1	5		
PAGE	1 OF 2					
PAGE						
PROJECT NO.	40321. 02.01					

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOUR ANGL

SAMPLE NO. S131-05-25-30/01 & 02

SAMPLE LOCATION Soil BORING SB1-05

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE 25-30 ft. INTERVAL

WEATHER CLEAR, BRISK, WARM

CONTAINERS USED	AMOUNT COLLECTED
<u>(2) 6-INCH</u>	
<u>BRASS SLEEVES</u>	<input checked="" type="checkbox"/>

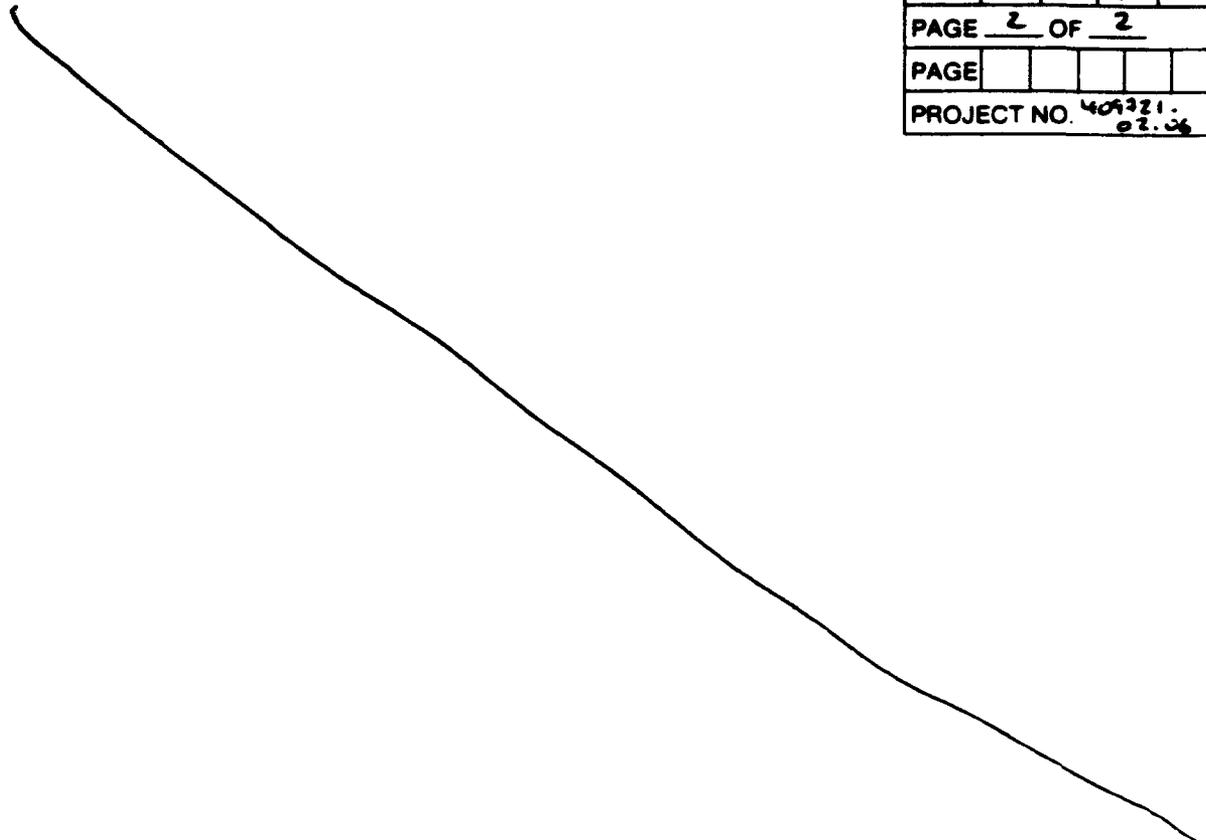
COMMENTS:

SAMPLE 01 FOR HOME LAB
SAMPLE 02 FOR FIELD LAB

PREPARED BY: M.G. Fudria

COMMENTS:
(Continued)

DATE	0	1	1	8	9	1
TIME	1	2	1	5		
PAGE	2		OF		2	
PAGE						
PROJECT NO.	409321.					02.06



PREPARED BY: M. G. Anderson

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED. DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
- 3 ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A
- 4 DATE: USE MONTH/DAY/YEAR. I.E., 10/30/85
- 5 TIME: USE 24-HOUR CLOCK. I.E., 1835 FOR 6:35 P.M.
- 6 PAGE: EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC.
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- 10 DEPTH OF SAMPLE: GIVE UNITS. WRITE OUT UNITS SUCH AS INCHES, FEET. DON'T USE "OR"
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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	0	1	18	91
TIME	1	2	30	
PAGE	1 OF 2			
PAGE				
PROJECT NO.	40221-02			

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOUR AWG

SAMPLE NO. SB1-05-30-35/01

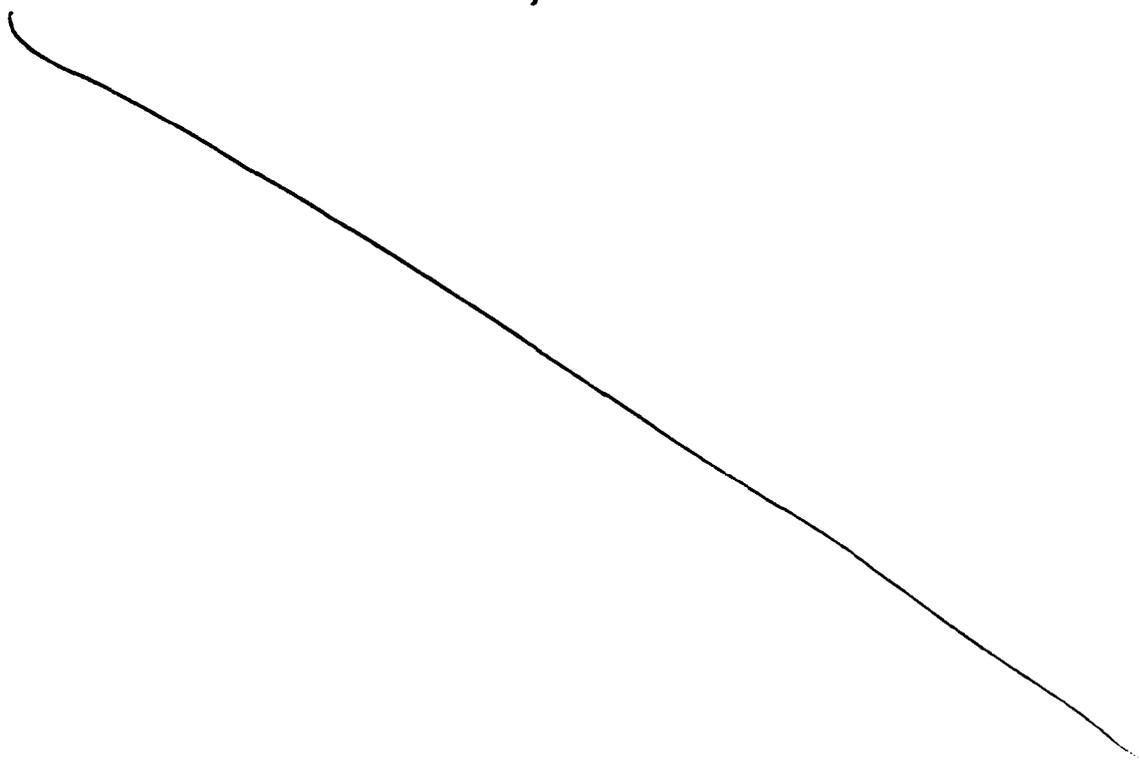
SAMPLE LOCATION Soil Boring SB1-05

SAMPLE TYPE Soil

COMPOSITE	CONTAINERS USED	AMOUNT COLLECTED
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	<u>(2) 6 inch</u>	
COMPOSITE TYPE _____	<u>Bags, sub-samp.</u>	<input checked="" type="checkbox"/>
DEPTH OF SAMPLE <u>30-35 ft.</u>		
WEATHER <u>Clear, Breeze</u>		

COMMENTS:

Sample 01 for heavy LAB; 02 not recovered.



PREPARED BY: M.A. Gordon

COMMENTS:
(Continued)

DATE	0	1	18	71
TIME	1	2	3	0
PAGE	2 OF 2			
PAGE				
PROJECT NO.	40721.wr. 06			

PREPARED BY: M. G. Anderson

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



INTERNATIONAL
TECHNOLOGY
CORPORATION

DATE	0	1	8	9	1
TIME	1	2	4	9	
PAGE	1 OF 2				
PAGE					
PROJECT NO.	45321 02-06				

SAMPLE COLLECTION LOG

PROJECT NAME KEY HABIT ANGL

SAMPLE NO. S01-05-35-40/01

SAMPLE LOCATION Soil Bore S01-05

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

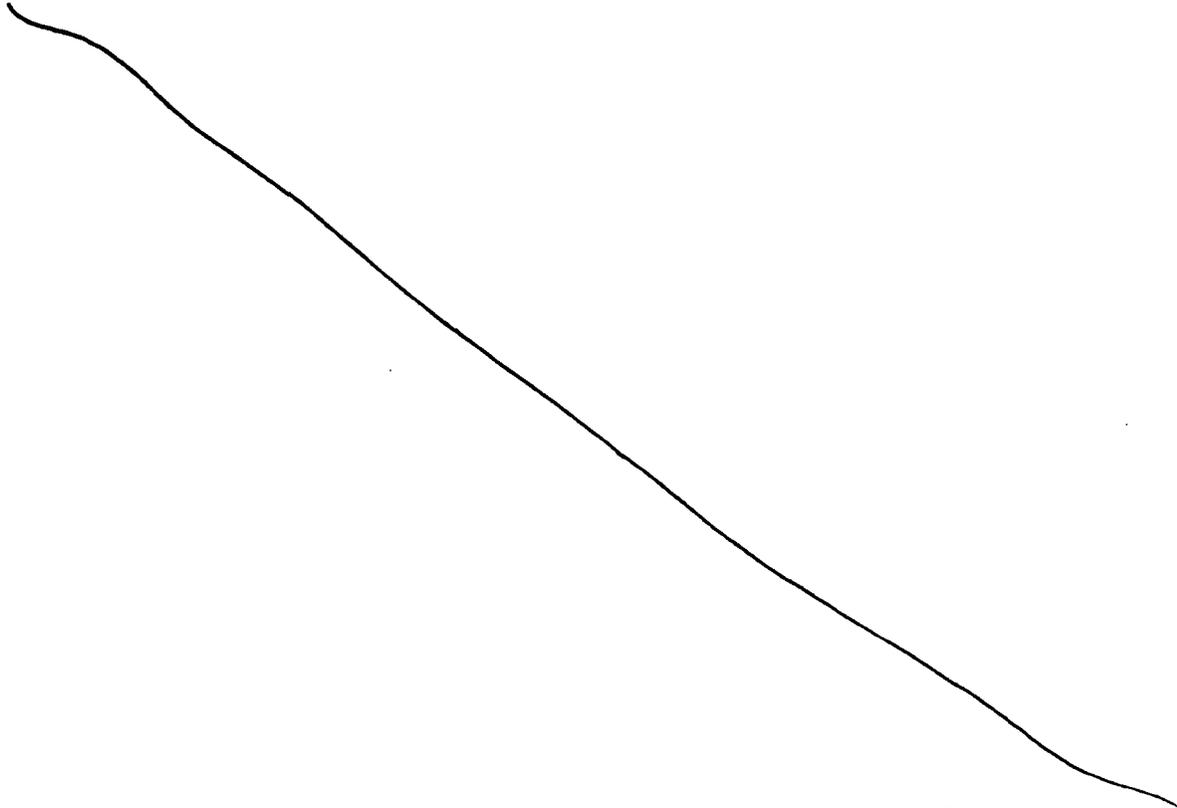
DEPTH OF SAMPLE 35-40 ft.

WEATHER Clear, Breezy

CONTAINERS USED	AMOUNT COLLECTED
<u>(2) 6-inch</u>	
<u>3 inch Screens</u>	<input checked="" type="checkbox"/>

COMMENTS:

Sample 01 For Home Lab; 02 Not Recored.



PREPARED BY: M. A. Fisher

COMMENTS:
(Continued)

DATE	01	13	91
TIME	1	24	9
PAGE	2 OF 2		
PAGE			
PROJECT NO.	40981.02 02		

PREPARED BY: M.A. [Signature]

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED. DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
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- 13 AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G. 1/2 FULL)



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

DATE	0	1	1	8	9	1
TIME	1	3	1	0		
PAGE	1 OF 2					
PAGE						
PROJECT NO.	40221-01 24					

SAMPLE COLLECTION LOG

PROJECT NAME S21-05 Ski House AN6

SAMPLE NO. S B1-05 - 40-45/01

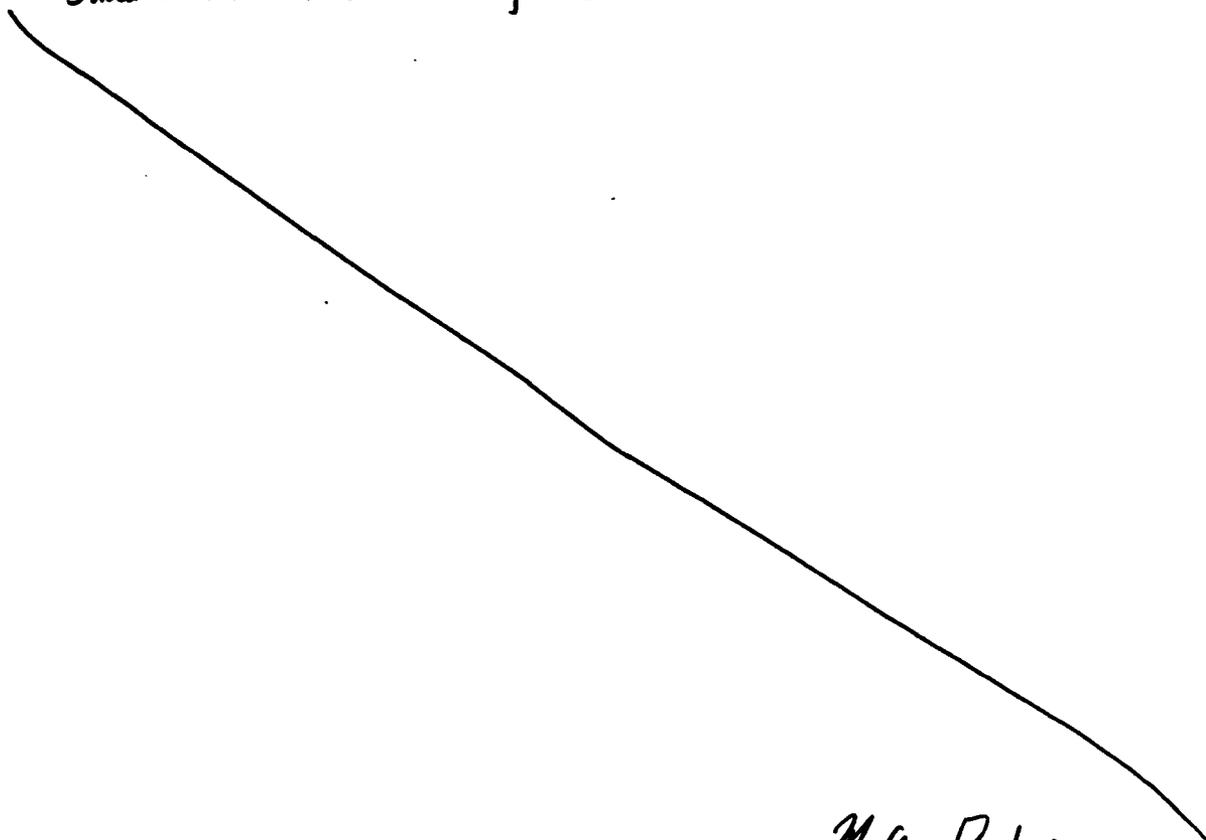
SAMPLE LOCATION Soil Boring S B1-05

SAMPLE TYPE Soil

COMPOSITE	CONTAINERS USED	AMOUNT COLLECTED
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	(2) 6 inch	
COMPOSITE TYPE _____	3 inch screens	✓
DEPTH OF SAMPLE <u>40-45 ft</u>		
WEATHER <u>Clear, Breezy</u>		

COMMENTS:

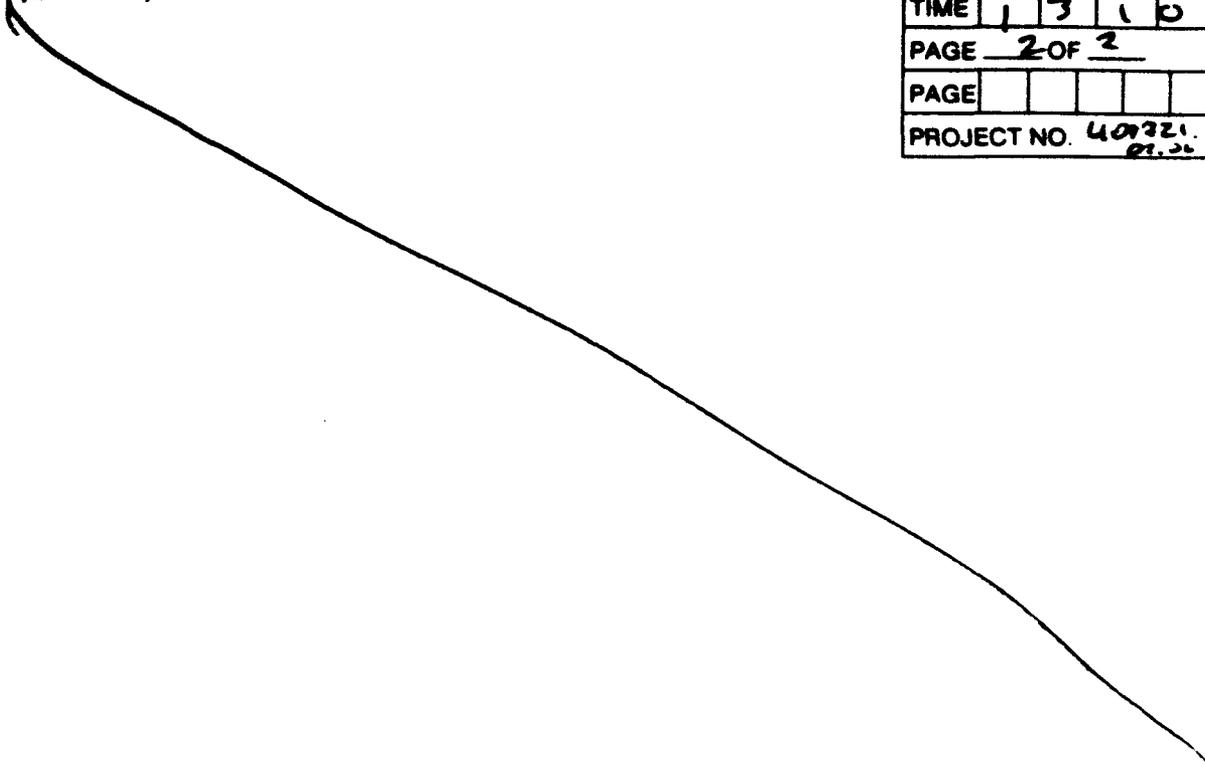
Sample 01 for home lab; 02 NOT recovered.



PREPARED BY: M.A. Deakin

COMMENTS:
(Continued)

DATE	0	1	1	9	1
TIME	1	3	1	0	
PAGE	2 OF 2				
PAGE					
PROJECT NO.	40721. P1.26				



PREPARED BY: M.A. Redman

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED. DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A
- 4 DATE. USE MONTH/DAY/YEAR. I.E. 10/30/85
- 5 TIME. USE 24-HOUR CLOCK. I.E. 1835 FOR 6 35 P M
- 6 PAGE EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E. IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
- 7 SAMPLE LOCATION USE BORING OR MONITORING WELL NUMBER GRID LOCATION (TRANSECT), SAMPLING STATION I.D., OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY
- 8 SAMPLE TYPE. USE THE FOLLOWING - SOIL, WATER (SURFACE OR GROUND), AIR (FILTERS TUBES, AMBIENT, PERSONNEL), SLUDGE, DRUM CONTENTS, OIL, VEGETATION, WIPE, SEDIMENT
- 9 COMPOSITE TYPE I.E. 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE SPATIAL COMPOSITE
- 10 DEPTH OF SAMPLE GIVE UNITS. WRITE OUT UNITS SUCH AS INCHES FEET DONT USE " OR "
- 11 WEATHER APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS
- 12 CONTAINERS USED LIST EACH CONTAINER TYPE AS NUMBER VOLUME, MATERIAL (E.G. 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR)
- 13 AMOUNT COLLECTED. VOLUME IN CONTAINERS (E.G. 1/2 FULL)



DATE	01	18	91
TIME	14	30	
PAGE	1 OF 2		
PAGE			
PROJECT NO.	409321-02		

SAMPLE COLLECTION LOG

PROJECT NAME Sh. Howard Ave
SAMPLE NO. S31-05-45-50/01
SAMPLE LOCATION Soil Boring, S31-05
SAMPLE TYPE Soil
COMPOSITE YES NO
COMPOSITE TYPE _____
DEPTH OF SAMPLE 45-50 ft.
WEATHER Clear, Breezy, warm

CONTAINERS USED	AMOUNT COLLECTED
(2) 6 inch Bore	
Summs	✓

COMMENTS:
Sample of soil from 45-50 ft; O2 not retained.

PREPARED BY: M.G. Hendrix



DATE	0	1	1	8	9	1
TIME	1	5	4	0		
PAGE	1 OF 2					
PAGE						
PROJECT NO.	409 221.02 02					

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOUR APN#
SAMPLE NO. SIS1-05-65-70/01
SAMPLE LOCATION SOIL BIN, SIS1-05
SAMPLE TYPE SOIL
COMPOSITE YES NO
COMPOSITE TYPE _____
DEPTH OF SAMPLE 65-70 ft.
WEATHER Clear, Windy

CONTAINERS USED	AMOUNT COLLECTED
6" BARS	
Sieves (2)	<input checked="" type="checkbox"/>

COMMENTS:

Sample #1 For Heavy Metal, OR NOT REQUIRED.

PREPARED BY: M.G. Rodwin

COMMENTS:
(Continued)

DATE	01	18	91
TIME	1	5	40
PAGE	2 OF 2		
PAGE			
PROJECT NO.	409 221. 62 OK		

PREPARED BY: M. G. Henderson

LEGEND

1. A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A.
4. DATE: USE MONTH/DAY/YEAR: I.E., 10/30/85
5. TIME: USE 24-HOUR CLOCK: I.E., 1835 FOR 6:35 P.M.
6. PAGE: EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY, I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
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8. SAMPLE TYPE USE THE FOLLOWING - SOIL, WATER (SURFACE OR GROUND), AIR (FILTERS, TUBES, AMBIENT, PERSONNEL), SLUDGE, DRUM CONTENTS, OIL, VEGETATION, WIPE, SEDIMENT
9. COMPOSITE TYPE, I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE.
10. DEPTH OF SAMPLE GIVE UNITS, WRITE OUT UNITS SUCH AS INCHES, FEET, DON'T USE " OR "
11. WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS
12. CONTAINERS USED LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL)



DATE	0	1	1	8	9	1
TIME	1	6	0	0		
PAGE	1 OF 1					
PAGE						
PROJECT NO.	409721					

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG
SAMPLE NO. QC-FBI
SAMPLE LOCATION At end of decon source (through steam cleaner)
SAMPLE TYPE Water
COMPOSITE YES NO
CONTAINERS USED See below
AMOUNT COLLECTED
COMPOSITE TYPE NA
DEPTH OF SAMPLE NA
WEATHER Clear, sunny, 70°F

COMMENTS:
Collect decon water from pipe truck steam cleaner
7:30 am hrs
7.84 pH
21.6°C
Containers used
5 - 40ml glass
2 - 1 liters poly
2 - 1 liters amber glass
1 - 500ml poly
Sample to be analyzed for complete suite.

PREPARED BY: J Tyburaki



DATE	011991
TIME	See Below
PAGE	1 OF 2
PAGE	
PROJECT NO.	404921-02.00

SAMPLE COLLECTION LOG

PROJECT NAME SKY HORIZON AN6

SAMPLE NO. SEE BELOW

SAMPLE LOCATION PROPER Military RESERVATION

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE SEE BELOW

WEATHER Clear, Breezy, Warm

CONTAINERS USED	AMOUNT COLLECTED
500 ml Cans	See Below
6mm Fan	

COMMENTS:					
Sample #	Time	Amount	Depth Sampled	Comments	
PP-01-58-59-01	1135	500ml	58-59 ft.	Recovered from Cylinders	
PP-02-54-55-01	1320	500ml	54-55 ft.	Recovered from Cylinders	
PP-03-54-55-01	0920	500ml	55 ft.	Recovered from Cylinders	
/					

PREPARED BY: Mark A. Gardner

COMMENTS: (Continued)	
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DATE	0	1	9	9	1
TIME	1	7	0	0	
PAGE	2 OF 2				
PAGE					
PROJECT NO.	40121.02-1				

PREPARED BY: M. G. Jackson

LEGEND

1. A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY
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12. CONTAINERS USED LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS; 4 - 40 ML GLASS VIAL; 1 - 400 ML PLASTIC; 1 - 3 INCH STEEL TUBE; 1 - 8 OZ GLASS JAR)
13. AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G., 1/2 FULL).

COMMENTS: (Continued)																															
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PREPARED BY: _____

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL)

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	_____ OF _____				
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



INTERNATIONAL
TECHNOLOGY
CORPORATION

DATE	012191
TIME	See Below
PAGE	1 OF 2
PAGE	
PROJECT NO.	401211

SAMPLE COLLECTION LOG

PROJECT NAME Six Hazard AN6

SAMPLE NO. See Below

SAMPLE LOCATION Soil Bank SB1-03

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE See Below

WEATHER Partly Cloudy, Warm, Breezy

CONTAINERS USED	AMOUNT COLLECTED
6" Brass Screen	See Below
w/ Telescopic Hoop	
Caps	

COMMENTS:	Sample #	Time	Brass Count	Hazardous	Recovery
	SB1-03-0-2-01 & 02	1405	15, 12, 13	0	95%
NO	SB1-03-5-7-01 & 02	1420	13, 12, 18	-	0%
	SB1-03-10-12-01 & 02	1435	10, 16	0	50%
	SB1-03-15-17-01 & 02	1445	0, 50	-	10%
	SB1-03-20-22-01 & 02	1450	8, 11, 12	0	50%
NO	SB1-03-25-27-01 & 02	1510	50	-	0%
NO	SB1-03-30-32-01 & 02	1520	50	-	0%
	SB1-03-35-37-01 & 02	1535	16, 16, 50	0	75%
NO	SB1-03-40-42-01 & 02	1545	50	-	0%
NO	SB1-03-45-47-01 & 02	15600	50	-	0%
NO	SB1-03-50-52-01 & 02	1615	50	-	0%

PREPARED BY: Mark A. Flaminio

COMMENTS: (Continued)																																				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DATE</td> <td>0</td> <td>1</td> <td>2</td> <td>1</td> <td>9</td> <td>1</td> </tr> <tr> <td>TIME</td> <td>1</td> <td>7</td> <td>0</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td>PAGE</td> <td colspan="6">2 OF 2</td> </tr> <tr> <td>PAGE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PROJECT NO.</td> <td colspan="6">40721-22</td> </tr> </table>	DATE	0	1	2	1	9	1	TIME	1	7	0	0			PAGE	2 OF 2						PAGE							PROJECT NO.	40721-22					
DATE	0	1	2	1	9	1																														
TIME	1	7	0	0																																
PAGE	2 OF 2																																			
PAGE																																				
PROJECT NO.	40721-22																																			

PREPARED BY: M.G. [Signature]

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
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- 13 AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	01	21	91
TIME	See Below		
PAGE	2 OF 2		
PAGE			
PROJECT NO.	40921-02.06		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG

SAMPLE NO. See Below

SAMPLE LOCATION Soil Boring SB1-03

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE See Below

WEATHER _____

CONTAINERS USED	AMOUNT COLLECTED
6" Brass Sleeve	See Below
w/ Teflon lined	
Caps	

COMMENTS:	SAMPLE #	TIME	Beta Count	Half Reading	RECOVERY
	SB1-03 - ST-53 - 01	02/03 0810	21, 25, 23	0	95%
[A large diagonal line is drawn across the remaining grid cells.]					

PREPARED BY: M.G. [Signature]

COMMENTS: (Continued)	
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DATE	0	1	2	1	9	1
TIME	0	8	3	0		
PAGE	2		OF		2	
PAGE						
PROJECT NO.	48721. 01.06					

PREPARED BY: M. L. Hankin

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
- 2 ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL)



DATE	01	21	91
TIME	See Below		
PAGE	1	OF	1
PAGE			
PROJECT NO.	W17E1.02.04		

SAMPLE COLLECTION LOG

PROJECT NAME Sky Horizon A026

SAMPLE NO. See Below

SAMPLE LOCATION Soil Boring SBI-04

SAMPLE TYPE Soil

CONTAINERS USED | AMOUNT COLLECTED

COMPOSITE YES NO |

COMPOSITE TYPE 6" Brass | See Below

DEPTH OF SAMPLE See Below | Sleeves of Test

WEATHER Cloudy, Cool, Breezy | Limited Cont.

COMMENTS:	Sample #	Time	Blow Count	Humidity	Relative
	SBI-04-07-2-01 & 02	0855	22, 20, 24	0.2 ppm	75%
	SBI-04-05-2-01 & 02	0905	10, 14, 35	0	95%
	SBI-04-10-12-01 & 02	0915	18, 14, 30	0	95%
MP	SBI-04-15-12-01 & 02	0925	50	—	0%
	SBI-04-20-22-01 & 02 ^{MP}	0935	50	0	10%
MP	SBI-04-25-22-01 & 02	0950	50	—	0%
	SBI-04-30-32-01 & 02 ^{MP}	0955	6, 10, 50 ⁺	0	10%
MP	SBI-04-35-32-01 & 02	1010	50	—	0%
	SBI-04-40-42-01 & 02 ^{MP}	1025	50	0	5%
MP	SBI-04-45-42-01 & 02	1040	50	—	0%
MP	SBI-04-50-42-01 & 02	1055	50	—	0%
	SBI-04-55-54-01 & 02	1105	13, 23, 22	0	75%
MP	SBI-04-60-62-01 & 02	1115	50	—	0%
MP	SBI-04-65-62-01 & 02	1125	50	—	0%
MP	SBI-04-70-72-01 & 02	1135	50	—	0%

PREPARED BY: Mark A. Paulin

SAMPLE COLLECTION LOG

PROJECT NAME Sky Horizon ANG
 SAMPLE NO. See Below
 SAMPLE LOCATION Site 2, Soil Borehole SB2-04
 SAMPLE TYPE Soil
 COMPOSITE YES NO
 COMPOSITE TYPE _____
 DEPTH OF SAMPLE See Below
 WEATHER Sunny, Variable wind, warm

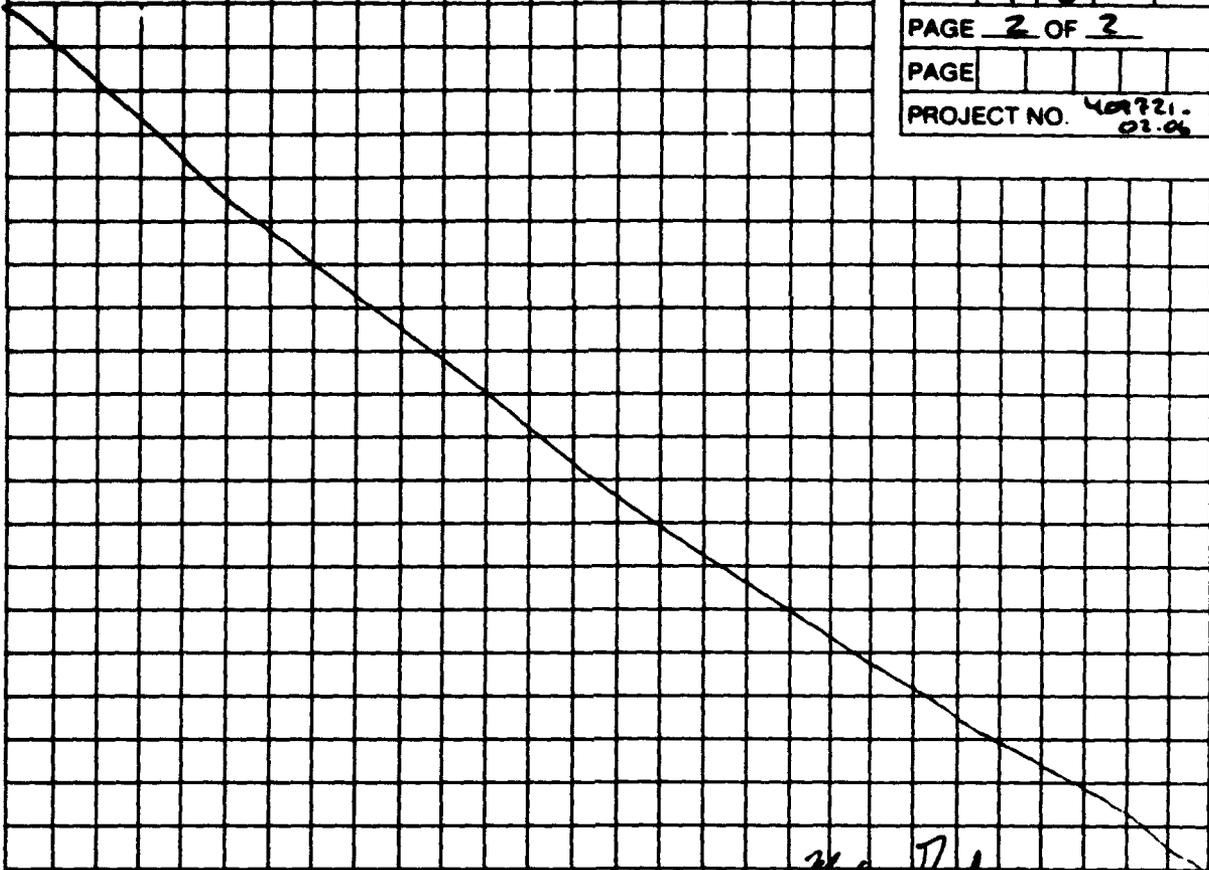
CONTAINERS USED	AMOUNT COLLECTED
6" Brass Sleeve	See Below
W Teflon-lined	
Caps	

COMMENTS:	Sample #	Time	Bore Gauge	Moisture Reading	Relatng
	SB2-04-0-2-01 + 02	1510	5.4, 4	0 ppm	95%
	SB2-04-5-7-01	1520	5.18, 16	0	40%
id	SB2-04-10-12-	1530	50	-	0%
	SB2-04-15-17-01	1535	2, 4, 6, 50	0	75%

PREPARED BY: M.G. Berlin

COMMENTS:
(Continued)

DATE	0	1	22	9	1
TIME	1	6	0	0	
PAGE	2 OF 2				
PAGE					
PROJECT NO.	40721-02.06				



PREPARED BY: M.A. [Signature]

LEGEND

1. A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED, IF NOT APPLICABLE MARK N/A.
4. DATE: USE MONTH/DAY/YEAR: I.E., 10/30/85
5. TIME: USE 24-HOUR CLOCK, I.E., 1835 FOR 6:35 P.M.
6. PAGE: EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY, I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
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8. SAMPLE TYPE. USE THE FOLLOWING - SOIL; WATER (SURFACE OR GROUND); AIR (FILTERS, TUBES, AMBIENT, PERSONNEL); SLUDGE; DRUM CONTENTS; OIL; VEGETATION; WIPE; SEDIMENT
9. COMPOSITE TYPE: I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE.
10. DEPTH OF SAMPLE: GIVE UNITS, WRITE OUT UNITS SUCH AS INCHES, FEET DON'T USE " OR "
11. WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
12. CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	012291
TIME	See Below
PAGE	1 OF 2
PAGE	
PROJECT NO.	40721.02 02

SAMPLE COLLECTION LOG

PROJECT NAME Ski Harbor ANG

SAMPLE NO. See Below

SAMPLE LOCATION Site 2, Soil Boring SB2-02

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE See Below

WEATHER Clear, Warm, Breeze

CONTAINERS USED	AMOUNT COLLECTED
<u>6-inch Bore</u>	<u>See Below</u>
<u>Success of Test</u>	
<u>Used Cars</u>	

COMMENTS:	Sample #	Time	Bore Depth	Humidity	Relative
	SB2-02-02-01402	1110	8, 7, 5	0	95%
	SB2-02-03-01402	1115	6, 7, 10	0	95%
	SB2-02-10-12-01402	1125	8, 10, 16	0	60%
110	SB2-02-15-17-01402		50	-	0%
	SB2-02-20-22-01	1155	50	0	1% (only)
	SB2-02-40-42-01402	1240	40, 50	0	75%
	SB2-02-50-52-01402	1255	13, 50	0	90%
	SB2-02-55-57-01	1315	50	-	40%
	SB2-02-70-72-01402	1350	19, 26	0	80%

PREPARED BY: M.G. Fisher

COMMENTS:
(Continued)

DATE	0	1	2	2	9	1
TIME	1	4	0	0		
PAGE	2 OF 2					
PAGE						
PROJECT NO.	401321 03-85					

PREPARED BY: M.A. Perkins

LEGEND

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11. WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
12. CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS; 4 - 40 ML GLASS VIAL; 1 - 400 ML PLASTIC; 1 - 3 INCH STEEL TUBE; 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE ____ OF ____					
		PAGE					
		PROJECT NO.					

/

PREPARED BY: _____

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- 13 AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	012391
TIME	See Below
PAGE	1 OF 2
PAGE	
PROJECT NO.	40721 02.01

SAMPLE COLLECTION LOG

PROJECT NAME SKY HORIZON ANG

SAMPLE NO. SEE BELOW

SAMPLE LOCATION SITE 2, BORING SB2-04

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE SEE BELOW

WEATHER _____

CONTAINERS USED	AMOUNT COLLECTED
<u>2x 60ml</u>	<u>SEE BELOW</u>
<u>BRASS SLEEVES w/</u>	
<u>TERRAZO-LINED CAPS</u>	

COMMENTS:	Sample #	Time	Bore Comp	Min Pressure	Retention
	SB2-04-50-52-01	0905	50	0	10%
	SB2-04-55-57-01	0915	50	0	90%
	SB2-04-70-72-01/02	0955	7, 16, 22	0.6 ppm	30%

PREPARED BY: M. G. Hamilton 1/28/01

COMMENTS:
(Continued)

DATE	0	2	3	9	1
TIME	1	3	0	0	
PAGE	2 OF		2		
PAGE					
PROJECT NO.	40961. 02-06				

PREPARED BY: Mark A. Pearson

LEGEND

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- 13 AMOUNT COLLECTED. VOLUME IN CONTAINERS (E.G., 1/2 FULL)

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	_____ OF _____				
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL)

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	OF				
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



2800

DATE	01	28	91
TIME	See Below		
PAGE	1 OF 2		
PAGE			
PROJECT NO.	401721.01.06		

SAMPLE COLLECTION LOG

PROJECT NAME Six Hazard AN6

SAMPLE NO. See Below

SAMPLE LOCATION Maxima Well MW1-02, Site 1

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE See Below

WEATHER Summer, Clear, Breeze

CONTAINERS USED	AMOUNT COLLECTED
6" Bams	See Below
Sieves 4	
Tenon lined Can	

COMMENTS:	Sample #	Time	Bams Count	Moisture	Recovery
* STD	MW1-02-0-2-01 407303	0815	12, 12, 21	0	100%
* MW1-02-15-17-01		0915	50	0	20%
MW1-02-10-12-01		0915			
	MW1-02-35-37-01	0950	10, 15, 20	0	50%
o	MW1-02-50-52-01	1030	50	0	40%
* MW1-02-55-57-01		1045	50	0	20%
	MW1-02-60-62-01	1055	50	0	40%
	MW1-02-75-78-01	1140	50	0	50%
	MW1-02-TB	1700	—	—	—

* Standards to Field Lab. Not enough to send to Chemists.

PREPARED BY: M.L. Anderson

COMMENTS: (Continued)	
---------------------------------	--

DATE							
TIME							
PAGE					OF		
PROJECT NO.							

PREPARED BY: _____

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- 13 AMOUNT COLLECTED, VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	012991
TIME	See Below
PAGE	1 OF 2
PAGE	
PROJECT NO.	4057202

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harze Arx.

SAMPLE NO. See Below

SAMPLE LOCATION S. Sky Harze Borehole Well, MMS-U1

SAMPLE TYPE Soil

CONTAINERS USED

AMOUNT COLLECTED

COMPOSITE YES NO

COMPOSITE TYPE -

DEPTH OF SAMPLE See Below

WEATHER Sunny, wgy windy, cool

6" PEAN SUGAR See Below

4 Teflon lined

CAN

COMMENTS:	Sample #	Time	Depth (m)	Humidity	Relative %
	MMS-01-0-2-01, 02, 03	1310	4, 10, 12	0.2	100, 100, 90
	MMS-01-5-7-01	1330	10, 50	0	20, 0, 0
	MMS-01-10-12-01	1340	8, 10, 50 ^{Asst} _{Ground}	0	20, 0, 0
	MBS-01-10-02-01	1520	22, 22, 25	-	70, 0, 0
	MBS-01-TB	0200	NA	NA	NA
(Teflon Sample)					
/					

PREPARED BY: M.A. Fisher

COMMENTS: (Continued)	
	DATE 012991
	TIME 1700
	PAGE 2 OF 2
	PAGE
	PROJECT NO. 40721.08.

PREPARED BY: M.G. Gordin

LEGEND

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- 13 AMOUNT COLLECTED. VOLUME IN CONTAINERS (E.G., 1/2 FULL)



DATE	01	24	91
TIME	See Below		
PAGE	1 OF 1		
PAGE			
PROJECT NO.	401821.02		

SAMPLE COLLECTION LOG

PROJECT NAME Site Houston NW

SAMPLE NO. See Below

SAMPLE LOCATION Site 2, Site Building SB2-01

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE —

DEPTH OF SAMPLE See Below

WEATHER Sunny, Breeze, Clear

CONTAINERS USED	AMOUNT COLLECTED
6" Brass Screens	See Below
1/4" I.P.C. - Lead	
CAN	

COMMENTS:	Sample #	Time	Beta Count	Half Range	Remarks
x	SB2-01-0-2-01, 02 & 03	0805	4, 8, 9	0.2	100, 50, 30
	SB2-01-0-7-01	0815	4, 7, 8	0	35, 0, 0
	SB2-01-10-12-01	0830	10, 11, 13	0	50, 0, 0
	SB2-01-15-17-01	0840	50	0	90, 0, 0
x	SB2-01-50-52-01 & 02	1005	50	0	100, 70, 0
+	SB2-01-55-53-01 & 02	1015	50	0	60, 20, 0
+	SB2-01-60-62-01	1035	50	0	10, 0, 0

PREPARED BY: M.A. Friedman

COMMENTS: (Continued)	
	DATE <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
	TIME <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
	PAGE ____ OF ____
	PAGE <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
	PROJECT NO. <input style="width: 100px;" type="text"/>

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	01	30	91
TIME	See Below		
PAGE	1	OF	1
PAGE			
PROJECT NO.	409721.02		

SAMPLE COLLECTION LOG

PROJECT NAME SRI Habitat: ANA

SAMPLE NO. See Below

SAMPLE LOCATION SRI Habitat: Pansylvania Way & Mill's - NJ

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE —

DEPTH OF SAMPLE See Below

WEATHER SUNNY, CLEAR, BREEZY, COLD

CONTAINERS USED	AMOUNT COLLECTED
<u>Durick Bins</u>	<u>See Below</u>
<u>Shovels w/ Tapes</u>	
<u>Limbed Cars</u>	

COMMENTS:	Sample #	Time	Run Count	Half Reading	Reading	Comments
*	MBS-03-0-2-01, 02, 03	1325	2050	0	100, 95, 70	THROCCIA, 100 & F.L.
*	MBS-03-5-7-01, 02	1350	6, 9, 13	0	70, 0, 70	COCKROACH & F.L.
*	MBS-03-50-52-01	1540	50	0	10%	F.L.
	MBS-03-TB	0800	—	—	—	Tail Blank
DATE: 01/31/91						
*	MBS-03-75-77-01	0830	40, 50		20, 0	F.L.

PREPARED BY: M.G. Hankin

COMMENTS:
(Continued)

DATE					
TIME					
PAGE	_____ OF _____				
PAGE					
PROJECT NO.					

PREPARED BY: _____

LEGEND

1. A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED, IF NOT APPLICABLE MARK N/A.
4. DATE: USE MONTH/DAY/YEAR: I.E., 10/30/85
5. TIME: USE 24-HOUR CLOCK: I.E., 1835 FOR 6:35 P.M.
6. PAGE: EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY, I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
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11. WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL)

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG
 SAMPLE NO. QC-FB3 + QC-FB3-TB
 SAMPLE LOCATION DECON TRAILER
 SAMPLE TYPE WATER
 COMPOSITE YES NO
 COMPOSITE TYPE N/A
 DEPTH OF SAMPLE N/A
 WEATHER SUNNY, COOL SLIGHT BREEZE ~ 45

CONTAINERS USED	AMOUNT COLLECTED
<u>SEE BELOW</u>	

COMMENTS:	FIELD PARAMETER OF WATER USED FOR DECON
	TEMP: 10.6
	PH = 8.09
	COND: 0630
	<u>CONTAINERS</u>
	<u>AMOUNT COLLECTED</u>
	10 x 40 mL
	400 mL
	3 x 1 LITER AG
	3 LITERS
	2 x 1 LITER CPE
	2 LITERS
	1 x 500 mL CPE
	500 mL

PREPARED BY: Jon Saamocha

COMMENTS: (Continued)		DATE				
		TIME				
		PAGE	___	OF	___	
		PAGE				
		PROJECT NO.				

/

PREPARED BY: _____

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- 13 AMOUNT COLLECTED VOLUME IN CONTAINERS (E.G. 1/2 FULL).

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE ____ OF ____					
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL)

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG
 SAMPLE NO. QC-FB4
 SAMPLE LOCATION D.I. Field Blank
 SAMPLE TYPE Water
 COMPOSITE YES NO
 COMPOSITE TYPE Water
 DEPTH OF SAMPLE NA
 WEATHER 70°F, Clear

CONTAINERS USED	AMOUNT COLLECTED
<u>See Below</u>	

COMMENTS:
Field Blank of first shipment of 5 gallon bottles of distilled water
pH = 4.38
Cond = 110 μ mhos
Temp = 22.6°C
1-liter w/ HCl
2-liters glass
2-liters poly w/ HNO ₃
1-500-ml poly w/ H ₂ SO ₄
4-40-ml glass w/ HCl

PREPARED BY: J. Tyland

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	_____	OF	_____		
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL)



DATE	013191
TIME	See Below
PAGE	1 OF 1
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PROJECT NO.	409221.02. 06

SAMPLE COLLECTION LOG

PROJECT NAME SKY HORIZON ANALG

SAMPLE NO. See Below

SAMPLE LOCATION SKY HORIZON BUCKLEBOARD LINES MUIS-02

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE —

DEPTH OF SAMPLE See Below

WEATHER Sunny, Breeze, Cool

CONTAINERS USED	AMOUNT COLLECTED
6 WAX DRUMS	See Below
SACKS w/ TRAIL	
LINER CANS	

COMMENTS:	Sample #	Time	Bar Count	NU Bar	Pressure	Comments
*	MBS-02-0-2-01,02,03	1425	14,22,26	0	100,90,80	2-Comp, 1-FL
*	MBS-02-5-7-01,02,03	1435	10,15,20	0	20,20,20	2-14, 1-FL
x	MBS-02-10-12-01,02,03	1445	18,6,6	0	100,80,20	11 u
*	MBS-02-15-17-01	1455	50	0	20,0,0	FL
x	MBS-02-25-27-01	1520	50	0 to 02	20,0,0	FL
x	MBS-02-40-42-01	1605	50	0	20,0,0	FL
	MBS-02-TD	0800	—	—	—	Camera Trip Photo

PREPARED BY: M.A. Gardner



DATE	0	2	0	1	9	1
TIME	See Below					
PAGE	1 OF 1					
PAGE						
PROJECT NO.	409721.02. 26					

SAMPLE COLLECTION LOG

PROJECT NAME Star Harbor ANX

SAMPLE NO. See Below

SAMPLE LOCATION SITE 4, Pumps Meters Reservoirs

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE NA

WEATHER Overcast, cool, Breezy

CONTAINERS USED	AMOUNT COLLECTED
<u>50 ml Cup</u>	<u>See Below</u>
<u>Glass w/ Teras</u>	
<u>Lined Car</u>	

COMMENTS:	Sample #	Time	Make Range	Comments
	SV-MW4-02-1	1000	0	Field Lab Sample
	SV-PP1-1	1130	0	Field Lab Composite
	SV-PP2-1	1130	0	Field Lab Composite
	SV-PP3-1	1130	0	Field Lab Composite
	SV-MW4-01-1	1345	0	Field Lab Composite
/				

PREPARED BY: Mark A. Hudson

COMMENTS: (Continued)																															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; padding: 2px;">DATE</td> <td style="width: 15%;"></td> </tr> <tr> <td style="padding: 2px;">TIME</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px;">PAGE</td> <td style="text-align: center;">_____</td> <td style="padding: 2px;">OF</td> <td style="text-align: center;">_____</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 2px;">PAGE</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6" style="padding: 2px;">PROJECT NO.</td> </tr> </table>	DATE						TIME						PAGE	_____	OF	_____			PAGE						PROJECT NO.					
DATE																															
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COMMENTS: (Continued)		DATE					
		TIME					
		PAGE ____ OF ____					
		PAGE					
		PROJECT NO.					

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	02	04	91
TIME	1	7	00
PAGE	1	OF	1
PAGE			
PROJECT NO.	409721.02 36		

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor Area
SAMPLE NO. QC-ER8
SAMPLE LOCATION Equipment Rinsewater at SBI-02
SAMPLE TYPE WATER
COMPOSITE YES NO
COMPOSITE TYPE NA
DEPTH OF SAMPLE NA
WEATHER Sunny, warm, light breeze

CONTAINERS USED	AMOUNT COLLECTED
<u>See Below.</u>	

COMMENTS:

Equipment Rinsewater of CA Storage Area Bldg
Rinse:

pH = 4.22
Conductivity = 40 micromhos
Temp = 24.2

BOTTLES

<u>1 - 1 liter Glass w/ HCl</u>	<u>TPH</u>
<u>1 - 1 liter Glass</u>	<u>SVOA</u>
<u>2 - 40 ml Glass</u>	<u>NOA</u>

PREPARED BY: M.L. Deakin



DATE	02	04	91
TIME	See Below		
PAGE	1	OF	1
PAGE			
PROJECT NO.	40331-2		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR APTS

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR BIRKBECK WELLS MW-01 & MW-03

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Warm, Clear, Sunny

CONTAINERS USED	AMOUNT COLLECTED
<u>2x 40-L</u>	
<u>PER WELL</u>	

COMMENTS:

SAMPLES COLLECTED FOR ROUTE FIELD LAB ANALYSIS FOR BTEX, PCE, TCA & DCE, FROM MONITOR WELLS MW-01 & MW-03.

Sample #	Well #	Time	Amount Collected	ANALYTES
WV-MW-03	MW-03	1400	2x 40ml	BTEX, PCE, TCA, DCE
WV-MW-01-01	MW-01	1430	2x 40ml	BTEX, PCE, TCA, DCE

PREPARED BY: Mark A. Gashin



DATE	020491
TIME	1300
PAGE	1 OF 1
PAGE	
PROJECT NO.	409321.02

SAMPLE COLLECTION LOG

PROJECT NAME SKY HORIZON ANK

SAMPLE NO. QC-FB5

SAMPLE LOCATION DECON TRAILER FIELD BLANK

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE _____

DEPTH OF SAMPLE NA

WEATHER Sunny, warm, clear

CONTAINERS USED	AMOUNT COLLECTED
<u>SEE BELOW</u>	

COMMENTS:	
FIELD BLANK of WATER in DECON TRAILER - RUN THROUGH STEAM CLEANER.	
pH = 7.88	
CONDUCTIVITY = 680 μ mhos	
TEMP = 27.3	
Amount	ANALYTES
1 - 1 liter Glass w/ HCl	TPH
2 - 1 liter Glass	SVOA & TOPK
2 - 1 liter Poly w/ HNO ₃	Metals
1 - 500 ml Poly w/ H ₂ O ₂	NITRATE/NITRITE
4 - 40 ml glass w/ HCl	VOA & VINYL CHLORIDE
4 - 40 ml glass w/ HCl	TRAP BLANKS FOR VOA & VINYL CHLORIDE
2 - 40 ml glass w/ HCl	ISTEX, PCE, DCE, TCA FOR FIELD LAB ANALYSIS

PREPARED BY: Mark A. Hardin



DATE	02	04	91
TIME	See Below		
PAGE	1 OF 1		
PAGE			
PROJECT NO.	40721.02.00		

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor AN6

SAMPLE NO. See Below

SAMPLE LOCATION Soil Borings SB1-02

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE -

DEPTH OF SAMPLE See Below

WEATHER _____

CONTAINERS USED	AMOUNT COLLECTED
6" BRASS SLEEVE	See Below
w/ TEFLOW-LINED	
CAPS	

COMMENTS:	Sample #	Time	Baromet	HAZ. RADON	Pressure	Comments
SB1-02-0-2-01	0203	0835	5.11.16	0	100, 100, 80, 20	Soil 15' + 10' + 10'
SB1-02-TB		0800	NA	NA	NA	TRW Borings

PREPARED BY: Mark A. Paulson

COMMENTS:
(Continued)

DATE					
TIME					
PAGE	_____ OF _____				
PAGE					
PROJECT NO.					

PREPARED BY: _____

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	080591
TIME	See Below
PAGE	1 OF 1
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PROJECT NO.	40721.07. 06

SAMPLE COLLECTION LOG

PROJECT NAME SKY Harbor ANJ6

SAMPLE NO. See Below

SAMPLE LOCATION SITE 1, Soil Boring SBI-02

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER Sunny, Warm, Slight Breeze

CONTAINERS USED	AMOUNT COLLECTED
<u>6-mm Brass</u>	<u>See Below</u>
<u>Sleeves w/ Terani</u>	
<u>Lined Caps</u>	

H.L. = HOME LAB; F.L. = FIELD LAB

COMMENTS:	SAMPLE #	Time	Bar Code	Moisture	Recovery	Comments
	SBI-02-5-7-01	1010	9,12,41	NA	10,0,0	H.L.
	SBI-02-15-27-01	1028	50	3.5 ppm	10,0,0	F.L. ^{Grain} DOE Soil Moisture
	SBI-02-25-27-01/02	1055	17,15,30	0	10,0,0	H.L., F.L.
7/10	SBI-02-35-37	1115				
	SBI-02-50-52-01	1145	50	0	20,0,0	F.L.
	SBI-02-TB2	0800 0900	NA	NA	NA	TRIP BLANKS

PREPARED BY: Mark A. Harkin



DATE	02	05	91
TIME	See Below		
PAGE	1 OF 1		
PAGE			
PROJECT NO.	40921.02 26		

SAMPLE COLLECTION LOG

PROJECT NAME See HANSON AN 26

SAMPLE NO. See Below

SAMPLE LOCATION SEE HANSON BACKGROUND WALL MWS-02

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER Sunny, warm, Breezy

CONTAINERS USED	AMOUNT COLLECTED
6-1/2" DIA BRASS SCREENS	See Below
1/2" TYPICAL - 1/4" DIA CHIPS	

COMMENTS:	Sample #	Time	Flow Count	H ₂ O Retention	Retention Comments
	MBS-02-45-47-01	1430	50	0	20.0 F.L.
	MBS-02-50-52-01	1440	50	0	20.0 F.L.
(The remainder of the table is crossed out with a diagonal line.)					

PREPARED BY: Mark A. Fisher

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	_____ OF _____				
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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- 6 PAGE EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
- 7 SAMPLE LOCATION USE BORING OR MONITORING WELL NUMBER, GRID LOCATION (TRANSECT), SAMPLING STATION I.D., OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES. INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY
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- 12 CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS; 4 - 40 ML GLASS VIAL; 1 - 400 ML PLASTIC; 1 - 3 INCH STEEL TUBE; 1 - 8 OZ. GLASS JAR)
- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL)



DATE	0	2	0	5	9	1
TIME	1	5	4	5		
PAGE	1		OF 1			
PAGE						
PROJECT NO. 409721						

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. QC - ERB⁹

SAMPLE LOCATION MWS - 02

SAMPLE TYPE Water

COMPOSITE YES NO

COMPOSITE TYPE -

DEPTH OF SAMPLE NA

WEATHER 78°F Clouds thin

CONTAINERS USED	AMOUNT COLLECTED
<u>See below</u>	

COMMENTS:									
Equipment Rinsate of CA sampler at well MWS-02									
pH - 5.38 ³¹ ₇₇									
Cond - 30 umhos									
Temp - 29.7 °C									
1 - 1 liter glass amber w/ HCl									
2 - liters glass amber									
2 - liters poly w/ HNO ₃									
1 - 500ml poly w/ H ₂ SO ₄									
2 - 40ml glass w/ HCl									

PREPARED BY: J. Tybirk

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE ____ OF ____					
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

LEGEND

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2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
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12. CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	020691
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	40942102

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR AN6

SAMPLE NO. SEE BELOW

SAMPLE LOCATION SITE 2, So Main. for Water MW2-02

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE SEE BELOW

WEATHER SUNNY, WINDY, DREARY

CONTAINERS USED	AMOUNT COLLECTED
6-INCH BROWN SERRA	SEE BELOW
W/TERMIN-L-100	
CAPS	

COMMENTS: SAMPLE #	TIME	BRAND COUNT	HAZARD	RECOVERY	COMMENTS
MB2-02-002-01,02,03,04	1100	NA	0	90,90,35,50	HL=3, FL=1
MB2-02-5-7-01,02,03	1100	6,12,19	0	100,25,100	HL=7, FL=1
MB2-02-10-12-01	1150	16,26,50	0	20,0,0	FL=1
MB2-02-30-32-01,02	1210	30,25,50	0	60,30,0	HL=1, FL=1
MB2-02-45-47-01	1300	50	0	10,0,0	FL=1
MB2-02-50-52-01	1310	50	0	10,0,0	FL=1
MB2-02-65-67-01	1350	50	0	10,0,0	FL=1
MB2-02-70-72-01,02,03	1400	17,30,50	0	100,50,20	HL=2, FL=1
MB2-02-TB	0800	NA	NA	NA	TRIP BACK

PREPARED BY: M. U. Fashin

COMMENTS: (Continued)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">DATE</td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> </tr> <tr> <td style="padding: 2px;">TIME</td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> </tr> <tr> <td style="padding: 2px;">PAGE</td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> </tr> <tr> <td colspan="5" style="padding: 2px;">PAGE ____ OF ____</td> </tr> <tr> <td style="padding: 2px;">PROJECT NO.</td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> <td style="width: 10px;"> </td> </tr> </table>	DATE					TIME					PAGE					PAGE ____ OF ____					PROJECT NO.				
DATE																										
TIME																										
PAGE																										
PAGE ____ OF ____																										
PROJECT NO.																										

PREPARED BY: _____

LEGEND

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2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED, IF NOT APPLICABLE MARK N/A.
4. DATE: USE MONTH/DAY/YEAR: I.E., 10/30/85
5. TIME: USE 24-HOUR CLOCK: I.E., 1835 FOR 6:35 P.M.
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11. WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
12. CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	0	2	0	6	9	1
TIME	1	4	3	0		
PAGE	1 OF 1					
PAGE						
PROJECT NO.	409721					

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. QC - ER10

SAMPLE LOCATION Equip. Rinse from MW2-02

SAMPLE TYPE Water

COMPOSITE YES NO

CONTAINERS USED

AMOUNT COLLECTED

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER 78°F, warm, clear, Sph E wind

See Below

COMMENTS:											
Equipment Rinse taken from											
CA sampler at MW2-02											
pH - 7.05											
Cond - 80 uenhas											
Temp - 26.1 °C											
1-liter glass w/ HCl											
1-liter glass											
2-liters poly w/ HNO ₃											
2-40ml glass w/ HCl											

PREPARED BY: J. Tyndal



DATE	020791
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	45721.02.01

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOUR AN6

SAMPLE NO. See Below

SAMPLE LOCATION SITE 5, MONITOR W/TH MW5-01

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER Partly Cloudy, Breezy, Cool

CONTAINERS USED	AMOUNT COLLECTED
6-inch Brass Seams	See Below
W/TERMIN-LINED	
CAPS	

COMMENTS:	Sample #	Time	Bin, Cont	How Retain	Recovery	Comments
	MBS-01-02-01,02,03,04	0840	6,9,8	0	90,90,90,50	FL=3, FC=1
	MBS-01-5-A-01,02,03	0845	8,9,10	0	100,90,50	HL=2, FL=1
	MBS-01-20-22-01	0915	50	0	10,0,0	FL=1
	MBS-01-25-27-01	0925	50	0	10,0,0	FL=1
	MBS-01-45-47-01	1005	50	0	10,0,0	FL=1
	MBS-01-55-52-01	1025	50	0	20,0,0	FL=1
	MBS-01-60-62-01,02	1035	20,30,18	0	90,50,0	HL=1, FL=1
	MBS-01-70-72-01	1100	50	NA	90,0,0	HL=1 FL=0
	MBS-01-75-77-01	1110	20,50	0	50,0,0	FL=1
	MBS-01-TB	0730	NA	NA	NA	Tap Blank
← LAST LINE →						

PREPARED BY: M.U. Franklin 2/7/91



DATE	0	2	0	7	9	1
TIME	1	1	0	0		
PAGE	1 OF 1					
PAGE						
PROJECT NO.	40970					

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. QC-ER11

SAMPLE LOCATION Equipment Rinse at MWS-01

SAMPLE TYPE Water

CONTAINERS USED

AMOUNT COLLECTED

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER 60°F Cloudy partly Smp E breeze

See Below

COMMENTS:
Equipment Rinse of CA Sampler at well MWS-01
pH = 4.16
Cond = 10 umhos
Temp = 23.1 °C
1-liter glass w/ HCl
2-liters glass
2-liters poly w/ HNO ₃
1-500-ml poly w/ H ₂ SO ₄
2-40-ml glass

PREPARED BY: J. Tybirk



DATE	020891
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	40721-06

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. See Below

SAMPLE LOCATION Site 4, Monitor Wells MWY-01 & MWY-02

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, warm, Sweet Bridge

CONTAINERS USED	AMOUNT COLLECTED
<u>2 x 40 mL</u>	<u>80 mL</u>
<u>Grass</u>	

COMMENTS:

Sample #	Time	Amount	Comments
<u>MW-MWY-01-01</u>	<u>1015</u>	<u>2 x 40 mL</u>	<u>FOR FIELD LAB SCREENING</u>
<u>MW-MWY-02-01</u>	<u>1040</u>	<u>2 x 40 mL</u>	<u>FOR FIELD LAB SCREENING</u>
<u>LAST LINE</u>			

PREPARED BY: M. G. Anderson

COMMENTS:
(Continued)

DATE					
TIME					
PAGE		OF			
PAGE					
PROJECT NO.					

PREPARED BY: _____

LEGEND

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).

COMMENTS: (Continued)	
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DATE					
TIME					
PAGE		OF		PAGE	
PROJECT NO.					

PREPARED BY: _____

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	02	11	11
TIME	See Below		
PAGE	1 of 1		
PAGE			
PROJECT NO.	401321 02.00		

SAMPLE COLLECTION LOG

PROJECT NAME Skt Havana Avib

SAMPLE NO. See Below

SAMPLE LOCATION SITE 4, Manua Well MW4-01 & MW4-02

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Partly Cloudy, Warm, Breezy

CONTAINERS USED	AMOUNT COLLECTED
<u>2 x 40ml</u>	<u>80ml / well</u>
<u>Clear Glass For</u>	
<u>each well</u>	

COMMENTS:

Sample #	Time	Amount	PH	Conductivity	Temp
WV-MW4-02-02	1600	2 x 40ml	7.43	950	24.3°C
WV-MW4-01-02	NA	NA	NA	NA	NA
No Sample Available - Well Dry					

← LAST LINE →

PREPARED BY: M.G. Hartman

COMMENTS: (Continued)		DATE							
		TIME							
		PAGE	_____ OF _____						
		PAGE							
		PROJECT NO.							

PREPARED BY: _____

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	0	2	1	3	9	1
TIME	See Below					
PAGE	1 OF 2					
PAGE						
PROJECT NO.	409721.02 06					

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR AN6

SAMPLE NO. See Below

SAMPLE LOCATION SITE 4

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE MIXED SOILS

DEPTH OF SAMPLE NA

WEATHER SUNNY, COOL, SLIGHT WIND

CONTAINERS USED	AMOUNT COLLECTED
<u>500ml & 40ml</u>	<u>See Below</u>
<u>GLASS JARS</u>	

COMMENTS:	<u>SAMPLE #</u>	<u>TIME</u>	<u>AMT COLLECTED</u>	<u>COMMENTS</u>
	SS4-01	0905	1080ml	HNu @ ppm
	SS4-02	0925	1080ml	HNu @ ppm
	SS4-03	0945	1080ml	HNu @ ppm
	SS4-04	1005	1080ml	HNu @ ppm
	SS4-05	1030	1080ml	Sample taken below 1/2" asphalt
	SS4-06	1045	1080ml	Background sample 25 ft due East of PP-01
	See attachment 2 of 2 for locations			

PREPARED BY: J. Tybirk



Attachment

2 of 2

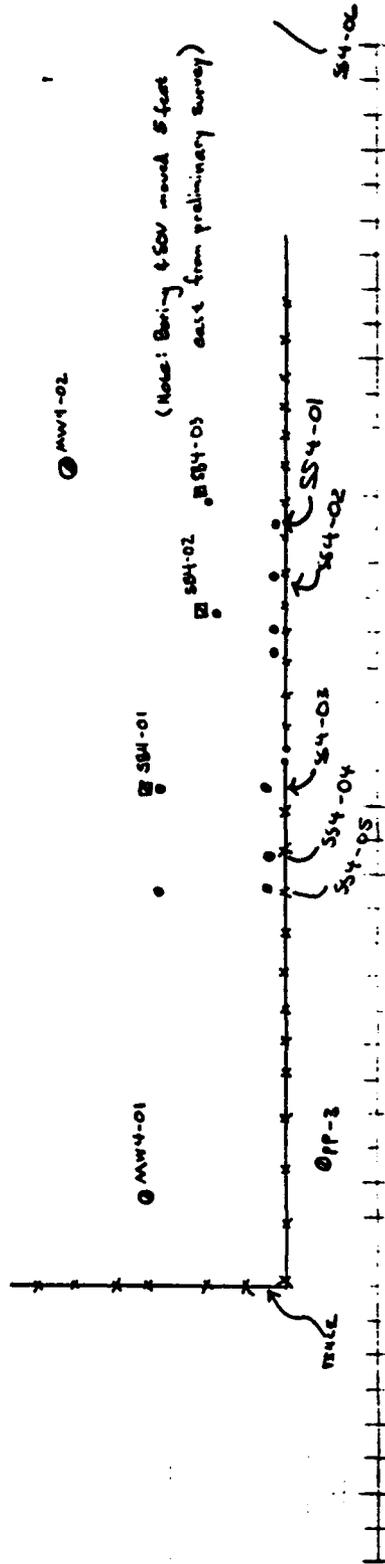


By JRT Date 12/18/90 Subject Site 4 Sketch Sheet No. 4 of 4
Chkd. By --- Date --- Papago Military Reservation Proj. No. 409721

0.5cm. X 0.5cm.

Note: Piezometers PP-1 & PP-2 are several hundred feet east & south of the site, respectively.

- SOV
- Monitor Well
- ⊙ Piezometer
- ⊞ Soil Boring



Scale 1" = 50 ft



DATE	032191
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	40721.02.06

SAMPLE COLLECTION LOG

PROJECT NAME SKT Harbor AN6

SAMPLE NO. See Below

SAMPLE LOCATION SKT Harbor Breaker Line MWS-04

SAMPLE TYPE Soil

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER Overcast, Some Rain, Cool, Windy

CONTAINERS USED	AMOUNT COLLECTED
6-neck Beers	See Below
Sieve w/Teinw-	
Lined Caps	

COMMENTS:	Sample #	Time	Flow Rate	Flow Rate	Flow Rate	Comments
	MWS-04-0-2-01.02	0959	7,10,10	0	100, 90, 0	HL=1, FL=1
	MWS-04-5-6 1/2-01	1020			No Rain	
	MWS-04-15-16 1/2-01.02.03	1030	25,10,15	0	100, 90, 40	HL=2, FL=1
	MWS-04-20-21 1/2-01	1040	50	NA	20%	FL=1
	MWS-04-25-26 1/2-01	1045	50	NA	20%	FL=1
	MWS-04-40-41 1/2-01	1115	50	160	10%	FL=1
	MWS-04-45-46 1/2-01	1130	50	190	10%	FL=1
	MWS-04-50-51 1/2-01	1140	50	220	10%	FL=1
	MWS-04-65-66 1/2-01	1250	21,50	300	20%	FL=1
	MWS-04-70-71 1/2-01	1305	50	300	10%	FL=1
	MWS-04-99-01	1330	NA	NA	NA	Composite Sample For H.L.
	← LAST LOG →					
	QC ER13-TIS	0300	NA	NA	NA	TRIP Blank

MU
Checked
MWS D
MWS
3/21/91

PREPARED BY: M.U. Anderson



DATE	03	22	91
TIME	See Below		
PAGE	1	OF	1
PAGE			
PROJECT NO.	40921-02-06		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR ANG, SITE 3, MONITOR WELL MW3-01

SAMPLE TYPE Soil

CONTAINERS USED 6-inch Brass

AMOUNT COLLECTED See Below

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER Clear

SLEEVES w/ TERRY

LINEAR CORR

COMMENTS:	Sample #	Time	Brass Cont	HL/R Ready	Recovery	Composite
	M03-01-0-1 1/2-01,02,03	0845	12, 10H	0	100, 90, 70	FL=2 FL=1
	M03-01-5-6 1/2-01,02,03	0900	5, 6, 6	0	100, 100, 100	FL=2 FL=1
	M03-01-10-1 1/2-01	0910	30, 29, 30	NA	85, 0, 0	HL=1
	M03-01-35-36 1/2-01,02	1010	50	0	80, 10	HL=1, R=1
	M03-01-40-41 1/2-01	1030	50	0	20	FL=1
	M03-01-45-46 1/2-01 M03-01-49-50	1030	NA	10	NA	FL=1 (Composite in 5 min, 5 min, 2000)
	M03-01-50-51 1/2-01,02	1050	50	0	75, 10	HL=1 FL=1
	M03-01-55-56 1/2-01	1105	3 1/2, 50	0	3 1/2, 50	FL=1
	M03-01-60-61 1/2-01,02	1115	32, 0	0	70, 20	HL=1, R=1

PREPARED BY: Mark A. Hamilton

COMMENTS:
(Continued)

DATE					
TIME					
PAGE	___	OF	___		
PAGE					
PROJECT NO.					

PREPARED BY: _____

LEGEND

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	0	3	2	2	9	1
TIME	0	9	5	0		
PAGE	1 OF 1					
PAGE						
PROJECT NO.	409721					

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG
SAMPLE NO. QC-ER14
SAMPLE LOCATION Well MW3-01 Rinse
SAMPLE TYPE Water
COMPOSITE YES NO
COMPOSITE TYPE NA
DEPTH OF SAMPLE NA
WEATHER Clear, slight NE breeze 30°F

CONTAINERS USED	AMOUNT COLLECTED
<u>See below</u>	

COMMENTS:
<u>Rinse of CA sampler</u>
<u>pH = 4.48</u>
<u>Cond: 80 μmhos</u>
<u>Temp: 16.1 °C</u>
<u>2 - 40-ml w/ HCl</u>
<u>1 - 1 liter w/ HCl</u>
<u>2 - 1 liter w/o HCl</u>

PREPARED BY: J. Tyrol



DATE	0	3	2	3	9	1
TIME	1	1	3	5		
PAGE	1 OF 1					
PAGE						
PROJECT NO.	40721					

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. QC - ERIS

SAMPLE LOCATION Equip. Rinse well MW3-02

SAMPLE TYPE Water

COMPOSITE	YES	NO	CONTAINERS USED	AMOUNT COLLECTED
COMPOSITE TYPE		<input checked="" type="checkbox"/>	<u>See below</u>	
DEPTH OF SAMPLE		<u>NA</u>		
WEATHER	<u>Clear, light SE breeze 60°F</u>			

COMMENTS:
<u>Equipment Rinse of CA sampler</u>
<u>pH = 4.28</u>
<u>Cond = 30 umhos</u>
<u>Temp = 24.3 °C</u>
<u>2 - 40-ml glass w/ HCl</u>
<u>2 - 1-liter glass w/ preservatives</u>
<u>1 - 1-liter glass w/ HCl</u>

PREPARED BY: J. Tyburski

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	_____ OF _____				
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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).

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DATE	03	24	91
TIME	See Below		
PAGE	1	OF	1
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PROJECT NO.	40921-06		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANK

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR ANK, SITE 3, SOIL BORING AT SB3-01

SAMPLE TYPE SOIL

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER SUNNY, BREEZY, COOL (AM) TO WARM (PM)

CONTAINERS USED	AMOUNT COLLECTED
6-INCH BRASS	See Below
SCREWS w/ TURNS-	
LOWED CAPS	

COMMENTS:	Sample #	Time	Bar Comp	HNA Reading	Reading	Comments
	SB3-01-01 1/2-01, UZ, U3	0840	32, 24, 22	0	100, 99, 40	HL=2, FE1
	SB3-01-24-01	0930	NA	0	NA	FE1: Sample from 24 ft.
	SB3-01-36-01	1000	NA	NA	NA	FE1: Sample from 36 ft.
	SB3-01-44-01	1015	NA	110	NA	FE1: Sample from 44 ft.
	SB3-01-50-5 1/2-01	1030	23.5	4	75%	HL=1, FE1: Sample from 50 ft.
	SB3-01-63-01	1105	NA	34	NA	FE1: Sample from 63 ft.
	SB3-01-69-01	1125	NA	188	NA	FE1: Sample from 69 ft.
	SB3-01-70-30 1/2-01	1135	NA 50	150	10%	FE1
← LAST LINE →						

PREPARED BY: Mark G. Harding

COMMENTS: (Continued)		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>DATE</td><td></td><td></td><td></td></tr> <tr><td>TIME</td><td></td><td></td><td></td></tr> <tr><td>PAGE</td><td>_____</td><td>OF</td><td>_____</td></tr> <tr><td>PAGE</td><td></td><td></td><td></td></tr> <tr><td>PROJECT NO.</td><td></td><td></td><td></td></tr> </table>	DATE				TIME				PAGE	_____	OF	_____	PAGE				PROJECT NO.			
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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL)



DATE	03	25	91
TIME	See Below		
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PROJECT NO.	409321-02-02		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR AN-16 Base

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR AN-16 Base, SITE 3, BORING SB3-03

SAMPLE TYPE Soil

CONTAINERS USED: Green Bases AMOUNT COLLECTED: See Below

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE See Below

WEATHER Overcast, Drizzle, Cool

CONTAINERS USED: Seams w/ Teras

CONTAINERS USED: lined caps

COMMENTS:	Sample #	Time	Blank/Cont	H/W Ratio	Recovery	Comments
	SB3-03-0-1 1/2-01, 02, 03	1150	22, 25, 34	0	90, NA, 50	HL=2, FL=2
	SB3-03-5-3/4-01	1205	25, 50	NA	50	HL=1
	SB3-03-10-11 1/2-01, 02	1210	23, 22, 50	0	100, 90, 10%	HL=2, FL=1
	SB3-03-20-2 1/2-01, 02	1255	19, 29, 31	0	75, 30	HL=1, FL=1
	SB3-03-34-01	1325	NA	0	NA	FL=1: Confusion at 234A
	SB3-03-40-4 1/2-01	1335	50	0	20%	FL=1
	SB3-03-54-01	1400	NA	0	NA	FL=1: Confusion at 234A
	SB3-03-74-01	1450	NA	0	NA	FL=1: Confusion at 234A
← LAST LINE →						

PREPARED BY: M.A. Parker



DATE	03	25	91
TIME	See Below		
PAGE	1	OF	1
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PROJECT NO.	40821.02.06		

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANK
 SAMPLE NO. See Below
 SAMPLE LOCATION Sky Harbor ANK Base, Site 3, Soil Borehole SB3-04 (Continued)
 SAMPLE TYPE Soil
 COMPOSITE YES NO
 COMPOSITE TYPE NA
 DEPTH OF SAMPLE See Below
 WEATHER Overcast, Drizzly, Cool

CONTAINERS USED	AMOUNT COLLECTED
<u>6-gallon Drums</u>	<u>See Below</u>
<u>Success of Team</u>	
<u>Liner Caps</u>	

COMMENTS:	Sample #	Time	Bar/Case	Humidity	Pressure	Comments
	SB3-04-49-01	0840	50 NA	0	NA	Composite nr = 49 ft.
	SB3-04-68-69-01	0920	50	0	10%	FL=1
	SB3-04-74-01	0940	NA	0	NA	FL=1: Composite nr = 74 ft.

LAST LINE

PREPARED BY: Mark A. Gaudin



DATE	0	3	26	9	1
TIME	08:00 11:55				
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PROJECT NO.	409821.02.06				

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG

SAMPLE NO. ~~278~~ WV-MWS-04-01

SAMPLE LOCATION SKY HARBOR ANG Base, Phoenix, AZ, ~~Site 3 & MWS-04~~

SAMPLE TYPE Water

COMPOSITE	CONTAINERS USED	AMOUNT COLLECTED
COMPOSITE YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	<u>2 3x 40 ml</u>	<u>120 ml</u> ✓
COMPOSITE TYPE <u>NA</u>	<u>VOA Bottles</u>	
DEPTH OF SAMPLE <u>NA</u>		
WEATHER <u>Rainy, Breezy, Cool</u>		

COMMENTS:
<p>pH = 6.78</p> <p>Conductivity = 1050 μmhos/cm</p> <p>Turbidity = 25.2 NTU</p> <p>Temperature = 23.8°C</p> <p>Collected 3-40 ml VOA's</p> <p>Sample collected for BTEX, TCE, DCE, DCA FOR FIELD G.C.</p>

PREPARED BY: M. G. Martin



DATE	03	27	91
TIME	5:30 PM		
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PROJECT NO.	40121.02.06		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOUR ANG

SAMPLE NO. WV-MW3-01-01

SAMPLE LOCATION Mon. Well MW3-01

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breezy, Cool

CONTAINERS USED	AMOUNT COLLECTED
<u>3 x 40ml</u>	<u>120 ml</u>
<u>VOA Bottles</u>	

COMMENTS:
PH = 6.77
CONDUCTIVITY = 1000
TURBIDITY = 18.1
TEMP = 22.2
collected 3 x 40ml VOA's
Sample collected for BTEX, TCE, DCE, DCA for field G.C

PREPARED BY: Brad Wilkins



DATE	032791
TIME	
PAGE	1 OF
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PROJECT NO.	40921.02.01

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor AN6
SAMPLE NO. UV-MW3-02-01
SAMPLE LOCATION Monitor Well MW3-02
SAMPLE TYPE WATER
COMPOSITE YES NO
COMPOSITE TYPE NA
DEPTH OF SAMPLE NA
WEATHER Rainy, Windy, Cool

CONTAINERS USED	AMOUNT COLLECTED
<u>3 x 40 ml</u>	<u>120 ml</u>
<u>VOA Bottles</u>	

COMMENTS:

PH = 6.83
Conductivity = 110
Turbidity = 10.1
Temp = 22.2
Collected 3-40ml VOA's
sample collected for BE BTEX, TCE, DCE, DCA, Field G.C.

PREPARED BY: Bonnie Wilkins



DATE	040291
TIME	See Below
PAGE	1 OF 1
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PROJECT NO.	40721-02

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor AN6

SAMPLE NO. See Below

SAMPLE LOCATION Sky Harbor AN6 BASE, Phoenix, AZ, PULL WATER FROM TANKS

SAMPLE TYPE Water

COMPOSITE YES NO

COMPOSITE TYPE COMPOSITE SAMPLER

DEPTH OF SAMPLE X-SECTION TOP TO BOTTOM

WEATHER Sunny, Warm, BREEZY (N35W)

CONTAINERS USED	AMOUNT COLLECTED
<u>See Below</u>	<u>See Below</u>

COMMENTS:	Tank #	Sample #	Time	Am. Collected
	1	T1-01	1600	2x 40 ml (VOA) 1x 1000 ml Amber Glass (TPH)
	2	T2-01	1620	2x 40 ml (VOA) 1x 1000 ml Amber (TPH)
	3	T3-01	1640	2x 40 ml (VOA) 1x 1000 ml Amber (TPH)
	4	T4-01	1650	2x 40 ml (VOA) 1x 1000 ml Amber (TPH)
	5	T5-01	1655	2x 40 ml (VOA) 1x 1000 ml Amber (TPH)
	LAST LINE			

PREPARED BY: Mark A. Houston

COMMENTS:
(Continued)

~~DATE~~
~~TIME~~
~~PAGE ____ OF ____~~
~~PAGE~~
~~PROJECT NO.~~

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).

COMMENTS: (Continued)		DATE					
		TIME					
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- 4 DATE: USE MONTH/DAY/YEAR: I.E., 10/30/85
- 5 TIME: USE 24-HOUR CLOCK: I.E., 1835 FOR 6:35 P.M.
- 6 PAGE: EACH SAMPLE TEAM SHOULD NUMBER PAGE ____ OF ____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
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- 9 COMPOSITE TYPE: I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE.
- 10 DEPTH OF SAMPLE: GIVE UNITS, WRITE OUT UNITS SUCH AS INCHES, FEET. DON'T USE " OR ".
- 11 WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
- 12 CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS; 4 - 40 ML GLASS VIAL; 1 - 400 ML PLASTIC; 1 - 3 INCH STEEL TUBE; 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).

COMMENTS: (Continued)		DATE							
		TIME							
		PAGE	_____ OF _____						
		PAGE							
		PROJECT NO.							

PREPARED BY: _____

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COMMENTS: (Continued)		DATE					
		TIME					
		PAGE	_____	OF	_____		
		PAGE					
		PROJECT NO.					

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL)



10

DATE	04/08/91
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	40974-01-05

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor AN6

SAMPLE NO. See Below

SAMPLE LOCATION Sky Harbor AN6 Base, Phoenix, AZ

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breezy, HOT (90°)

CONTAINERS USED	AMOUNT COLLECTED
NA	NA

COMMENTS:	SAMPLE #	TIME	# BOTTLES	COMMENTS
	MW2-02-01	1100	8	VDA ⁽¹⁾ , V. Coliform ⁽²⁾ , TPH ⁽³⁾ , SVA ⁽⁴⁾ , Metals ⁽⁵⁾
	MW2-02-01-MS	1115	8	SAME AS ABOVE
	MW2-02-01-MSD	1130	8	SAME AS ABOVE
	MW2-02-01-TB	0700	4	VDA ⁽¹⁾ , V. Coliform ⁽²⁾ , TRP Blank
	MWS-03-01A	1700	10	VDA ⁽¹⁾ , V. Coliform ⁽²⁾ , TPH ⁽³⁾ , SVA ⁽⁴⁾ , Metals ⁽⁵⁾ , Nitrogen ⁽⁶⁾ , TOC
	QC-ER24	1715	10	SAME AS ABOVE
Trans. p.p.m. Conductivity: 1.54 NTU Temp: 38.4 °C pH: 5.17 ECW: 0.010 mmol/L				

PREPARED BY: M. U. Andrew



DATE	041191
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	409326-02.05

SAMPLE COLLECTION LOG

PROJECT NAME SKY Harbor AN6

SAMPLE NO. See Below

SAMPLE LOCATION See Harbor AN6 Base, Phoenix, AZ

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breezy, NOT WINDY (WIND)

CONTAINERS USED	AMOUNT COLLECTED
<u>NA</u>	<u>NA</u>

COMMENTS:	Sample #	Time	# Bottles	Comments
	MW5-04-01	1050	7	VOC ⁽¹⁾ , V. Vol. Compounds ⁽¹⁾ , TPH ⁽¹⁾ , SVOC ⁽¹⁾ , TOP ⁽¹⁾
	MW3-01-01	1630	7	VOC ⁽¹⁾ , V. Vol. Compounds ⁽¹⁾ , TPH ⁽¹⁾ , SVOC ⁽¹⁾ , TOP ⁽¹⁾
	MW3-01-01-TB	0700	4	VOC ⁽¹⁾ , V. Vol. Compounds ⁽¹⁾ / TPH / SVOC / TOP
	QC-ER25	1730	7	VOC ⁽¹⁾ , N. Vol. Compounds ⁽¹⁾ , TPH ⁽¹⁾ , SVOC ⁽¹⁾ , TOP ⁽¹⁾
Rinse Parameters:				
ml Conductivity = 0.31 umhos/cm Temp = 26.8°C pH = 5.78 ml Conductivity = 10.				

PREPARED BY: M. U. Harkin

COMMENTS: (Continued)	
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DATE	
TIME	
PAGE	OF
PAGE	
PROJECT NO.	

PREPARED BY: _____

LEGEND

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- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	041291
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	49924-05

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR AN6

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR AN6 Base, Phoenix, AZ

SAMPLE TYPE WATER

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breezy, HOT (w/SH)

CONTAINERS USED	AMOUNT COLLECTED
<u>NA</u>	<u>NA</u>

COMMENTS:	SAMPLE #	TIME	# BOTTLES	COMMENTS
	<u>MWS-02-01</u>	<u>1030</u>	<u>10</u>	<u>VOL⁽¹⁾ Vials, Closures⁽¹⁾ TPH⁽¹⁾ SVDA⁽¹⁾ Meters⁽¹⁾ Nitrates/Nitrite⁽¹⁾ TOPb⁽¹⁾</u>
	<u>QC-ER26</u>	<u>1130</u>	<u>10</u>	<u>VOL⁽¹⁾ Vials, Closures⁽¹⁾ TPH⁽¹⁾ SVDA⁽¹⁾ Meters⁽¹⁾ Nitrates/Nitrite⁽¹⁾ TOPb⁽¹⁾</u>
<u>RWSATE Parameters:</u>				
<u>pH = 5.47</u>				
<u>COND = 10</u>				
<u>Temp = 24.7°C</u>				
<u>Turbidity = 0.87 NTU/Sec</u>				

PREPARED BY: M.A. Hadwin



DATE	04	15	91
TIME	1300		
PAGE	1	OF	1
PAGE			
PROJECT NO.			

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. See below

SAMPLE LOCATION Sky Harbor ANG Base Phoenix AZ

SAMPLE TYPE Water

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breezy 85°F

CONTAINERS USED	AMOUNT COLLECTED
<u>NA</u>	<u>NA</u>

COMMENTS:	Sample #	Time	Bottles	Comments
muds - DI - DIA		1300	10	VDA ⁽²⁾ Venv Chloride ⁽²⁾ TDPH ⁽¹⁾ SVA ⁽¹⁾ N. Nitrate/Nitrite ⁽¹⁾ TOP ⁽¹⁾ metals ⁽¹⁾ Mercury ⁽¹⁾
Rinse	QC - ERZF	1445	10	VDA ⁽²⁾ Venv Chloride ⁽²⁾ TDPH ⁽¹⁾ SVA ⁽¹⁾ Nitrate ⁽¹⁾ Nitrite ⁽¹⁾ TOP ⁽¹⁾ metals ⁽¹⁾ Mercury ⁽¹⁾
Rinse	Parameters	PH	Temp	Cond
		4.62	28.2	30
				Turbidity
				4.20

PREPARED BY: Candee Darr

COMMENTS: (Continued)		DATE	
		TIME	
		PAGE	OF
		PAGE	
		PROJECT NO.	

PREPARED BY: _____

LEGEND

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).

COMMENTS: (Continued)		DATE				
		TIME				
		PAGE ____ OF ____				
		PAGE				
		PROJECT NO.				

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	04	16	91
TIME	See below		
PAGE	1	OF	1
PAGE			
PROJECT NO. 409721			

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor

SAMPLE NO. See Below

SAMPLE LOCATION Sky Harbor ANG Base, Phoenix AZ.

SAMPLE TYPE ground water

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER breezy, cool 70°F

CONTAINERS USED	AMOUNT COLLECTED

COMMENTS: Sample #	Bottles	Time	Comments
MW4-01-01A	8	1130	VIA ⁽²⁾ Vanil Chloride ⁽²⁾ TPH ⁽¹⁾ Metals ⁽¹⁾ Mercury ⁽¹⁾ SWOA ⁽¹⁾
MW5-01-01A	3	1545	Metals ⁽¹⁾ Mercury ⁽¹⁾ Nitrate Nitrite ⁽¹⁾
MW5-01-01A-DUP	3	11300 1545	Metals Mercury ⁽¹⁾ Nitrate/Nitrite ⁽¹⁾
QC-ER28	3	1630	Metals ⁽¹⁾ Mercury ⁽¹⁾ Nitrate/Nitrite ⁽¹⁾
Parameters	PH	Temp	Conductivity
	4.63	32.40C	20 µmhos
Last line ← →			

PREPARED BY: Amie Darr

COMMENTS:
(Continued)

DATE					
TIME					
PAGE	_____	OF	_____		
PAGE					
PROJECT NO.					

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME (% CONTAINERS (E.G., 1/2 FULL).



DATE	041791
TIME	See below
PAGE	1 OF 1
PAGE	
PROJECT NO.	409721

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. See below

SAMPLE LOCATION See below

SAMPLE TYPE Water

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny Warm getting hot

CONTAINERS USED	AMOUNT COLLECTED
<u>See below</u>	<u>See below</u>
<u>NA</u>	<u>NA</u>

COMMENTS: Sample #	Bottles	Time	Comments
mw3-02-01A	7	1250	VOA ⁽²⁾ TPA ⁽¹⁾ Vinyl Chloride ⁽²⁾ SVOA ⁽¹⁾ Tot. Org. Pb ⁽¹⁾
mw3-02-01A-Dup	7	1250	VOA ⁽²⁾ TPA ⁽¹⁾ Vinyl Chloride ⁽²⁾ SVOA ⁽¹⁾ Total Org. Pb ⁽¹⁾
DC-ER 09	7	144530	VOA ⁽²⁾ Vinyl Chloride ⁽²⁾ TPA ⁽¹⁾ SVOA ⁽¹⁾ Tot. Org. Pb ⁽¹⁾
DC Parameters	Time	PH	Temp
	144530	5.45	22.2
Conductivity	Turbidity		
60	0		
LAST LINE ←			→

PREPARED BY: Carlie Dorr

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE _____	OF _____				
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

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13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).

COMMENTS: (Continued)		DATE					
		TIME					
		PAGE _____ OF _____					
		PAGE					
		PROJECT NO.					

A diagonal line is drawn from the top-left corner to the bottom-right corner of this grid area.							
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PREPARED BY: _____

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COMMENTS: (Continued)		DATE					
		TIME					
		PAGE ____ OF ____					
		PAGE					
		PROJECT NO.					

PREPARED BY: _____

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
- 2 ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
- 3 ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A.
- 4 DATE. USE MONTH/DAY/YEAR. I.E., 10/30/85
- 5 TIME. USE 24-HOUR CLOCK. I.E., 1835 FOR 6 35 P M
- 6 PAGE EACH SAMPLE TEAM SHOULD NUMBER PAGE ____ OF ____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC
- 7 SAMPLE LOCATION: USE BORING OR MONITORING WELL NUMBER, GRID LOCATION (TRANSECT), SAMPLING STATION I.D., OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES. INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY
- 8 SAMPLE TYPE USE THE FOLLOWING - SOIL, WATER (SURFACE OR GROUND), AIR (FILTERS, TUBES, AMBIENT, PERSONNEL), SLUDGE, DRUM CONTENTS, OIL, VEGETATION WIPE SEDIMENT
- 9 COMPOSITE TYPE: I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE.
- 10 DEPTH OF SAMPLE. GIVE UNITS. WRITE OUT UNITS SUCH AS INCHES, FEET DON'T USE " OR "
- 11 WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS
- 12 CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G. 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR)
- 13 AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	06	25	91
TIME	See Below		
PAGE	1	OF	1
PAGE			
PROJECT NO.	409021 .02.05		

SAMPLE COLLECTION LOG

PROJECT NAME Sky Harbor ANG

SAMPLE NO. See Below

SAMPLE LOCATION Sky Harbor Air National Guard Base, Phoenix, AZ

SAMPLE TYPE Water

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breeze, 100 (°F)

CONTAINERS USED	AMOUNT COLLECTED
<u>See Below</u>	<u>See Below</u>

COMMENTS:	Sample #	Time	# Bottles	Comments
	MW1-02-02	1200	6	VOA ⁽²⁾ , Vion-Guanine ⁽²⁾ , TPH ⁽¹⁾ , SVA ⁽¹⁾
	MW11-02-02-TB	0830	4	VOA ⁽²⁾ , Vion-Guanine ⁽²⁾ TRIP Blank
	MWS-01-02	1555	10	VOA ⁽²⁾ , Vion-Guanine ⁽²⁾ , TPH ⁽¹⁾ SVA ⁽¹⁾ , M ⁽²⁾ , TDP ⁽²⁾ Nitrate/Nitrite ⁽¹⁾
	QC-ER30	1630	10	SAME AS ABOVE FOR MWS-01-02. Duplicate sample.
	<u>Residual Parameters</u> pH = 6.01 Temperature = 42.1°C Conductivity = 10.0 µmhos/cm Turbidity = 0.25 NTU			
← LAST LINE →				

PREPARED BY: M. L. Jenkins

COMMENTS:
(Continued)

DATE					
TIME					
PAGE		OF			
PAGE					
PROJECT NO.					

PREPARED BY: M.G. Franklin

LEGEND

- 1 A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
- 2 ALWAYS COMPLETE BOTH SIDES IF SECOND SIDE IS NOT USED. DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
- 3 ALL ENTRIES ON LOG ARE TO BE COMPLETED. IF NOT APPLICABLE MARK N/A.
- 4 DATE USE MONTH/DAY/YEAR. I.E. 10/30/85
- 5 TIME USE 24-HOUR CLOCK. I.E. 1835 FOR 6:35 P.M.
- 6 PAGE EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY. I.E. IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC.
- 7 SAMPLE LOCATION USE BORING OR MONITORING WELL NUMBER, GRID LOCATION (TRANSECT), SAMPLING STATION I.D., OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES. INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY.
- 8 SAMPLE TYPE USE THE FOLLOWING - SOIL, WATER (SURFACE OR GROUND), AIR (FILTERS, TUBES, AMBIENT, PERSONNEL), SLUDGE, DRUM CONTENTS, OIL, VEGETATION, WIPE, SEDIMENT.
- 9 COMPOSITE TYPE. I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE.
- 10 DEPTH OF SAMPLE GIVE UNITS. WRITE OUT UNITS SUCH AS INCHES, FEET. DON'T USE " OR '.
- 11 WEATHER APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
- 12 CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G. 1/2 FULL).



DATE	062691
TIME	See Below
PAGE	1 OF 1
PAGE	
PROJECT NO.	409921 02.08

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR Air National Guard Base, Phoenix, AZ

SAMPLE TYPE Water

COMPOSITE YES NO

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER Sunny, Breeze, HOT (91.00°F)

CONTAINERS USED	AMOUNT COLLECTED
<u>See Below</u>	<u>See Below</u>

COMMENTS:	Sample #	Time	# Bottles	COMMENTS
	MWS-01-02	1100	3	META ⁽¹⁾ NITROGEN ⁽¹⁾
	MWS-01-02-ER31	1115	3	SAME AS ABOVE (MWS-01-02)
	MWS-02-02	1515	8	NOA ⁽¹⁾ VIALS CHANGE ⁽¹⁾ TPK ⁽¹⁾ SVDA ⁽¹⁾ M. S. 10 ⁽¹⁾
	MWS-02-02-MS	1530 1530	8	SAME AS ABOVE FOR MWS-02-02. MATRX SPIKE
	MWS-02-02-MSD	1530 1530	8	SAME AS ABOVE FOR MWS-02-02. MATRX SPIKE D.C.
	MWS-01-02-TTB	0900	4	NOA ⁽¹⁾ VIALS CHANGE ⁽¹⁾ TRIP BLANK
RESERVE PARAMETERS				
pH = 6.44				
TEMPERATURE = 31.6 °C				
CONDUCTIVITY = 10 µmhos/cm				
TURBIDITY = 0.66 NTU				
	MWS-02-02-TTB	0900	4	NOA ⁽¹⁾ VIALS CHANGE ⁽¹⁾ TRIP BLANK
← LAST LINE →				

PREPARED BY: M. A. Dandrea



DATE	06	27	91
TIME	See Below		
PAGE	1 OF 1		
PAGE			
PROJECT NO.	40721 .02.05		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG

SAMPLE NO. See Below

SAMPLE LOCATION SKY HARBOR Air National Guard Base, Phoenix, AZ

SAMPLE TYPE WATER

CONTAINERS USED | AMOUNT COLLECTED

COMPOSITE YES NO | See Below | See Below

COMPOSITE TYPE NA

DEPTH OF SAMPLE NA

WEATHER SUNNY, BARELY, HOT (92-100°F)

COMMENTS:	Sample #	Time	# Bottles	COMMENTS
	MW4-02-02	1135	8	VOA ⁽¹⁾ , Vials Collected, TPH ⁽¹⁾ , SVA ⁽¹⁾ Method ⁽¹⁾
	MW4-01-02	1235	4	VOA ⁽¹⁾ , Vials Collected ⁽¹⁾ CALIBRATED VOLATILES ONLY SEMI'S & OTHER CALIBRATED
	QC-ER32	1210	8	TEMPERATURE VOA ⁽¹⁾ , VIALS Same AS ABOVE FOR SAMPLE MW4-02-02
				REINSERT PARAMETERS PH = 5.96 TEMPERATURE = 35.1°C CONDUCTIVITY = 10 µmhos/cm TURBIDITY = 0.20 NTU
← LAST LINE →				

PREPARED BY: M. G. Anderson

COMMENTS: (Continued)	
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DATE	
TIME	
PAGE	OF
PAGE	
PROJECT NO.	

PREPARED BY: _____

LEGEND

1. A SAMPLE COLLECTION LOG IS TO BE COMPLETED FOR EACH SAMPLE.
2. ALWAYS COMPLETE BOTH SIDES. IF SECOND SIDE IS NOT USED, DRAW A LINE THROUGH IT AND MARK N/A. FILL IN CONTROL BLOCK AND PREPARED BY.
3. ALL ENTRIES ON LOG ARE TO BE COMPLETED, IF NOT APPLICABLE MARK N/A.
4. DATE: USE MONTH/DAY/YEAR; I.E., 10/30/85
5. TIME: USE 24-HOUR CLOCK; I.E., 1835 FOR 6:35 P.M.
6. PAGE: EACH SAMPLE TEAM SHOULD NUMBER PAGE _____ OF _____ FOR THE DAY'S ACTIVITIES FOR ALL SHEETS PREPARED ON A SINGLE DAY, I.E., IF THERE ARE A TOTAL OF 24 PAGES (INCLUDING FRONT AND BACK) NUMBER 1 OF 24, 2 OF 24, ETC.
7. SAMPLE LOCATION: USE BORING OR MONITORING WELL NUMBER, GRID LOCATION (TRANSECT), SAMPLING STATION I.D., OR COORDINATE TO PHYSICAL FEATURES WITH DISTANCES. INCLUDE SKETCH IN COMMENT SECTION IF NECESSARY.
8. SAMPLE TYPE: USE THE FOLLOWING - SOIL; WATER (SURFACE OR GROUND); AIR (FILTERS, TUBES, AMBIENT, PERSONNEL); SLUDGE, DRUM CONTENTS, OIL; VEGETATION; WIPE; SEDIMENT.
9. COMPOSITE TYPE: I.E., 24-HOUR, LIST SAMPLE NUMBERS IN COMPOSITE, SPATIAL COMPOSITE.
10. DEPTH OF SAMPLE: GIVE UNITS. WRITE OUT UNITS SUCH AS INCHES, FEET. DON'T USE " OR "
11. WEATHER: APPROXIMATE TEMPERATURE, SUN AND MOISTURE CONDITIONS.
12. CONTAINERS USED: LIST EACH CONTAINER TYPE AS NUMBER, VOLUME, MATERIAL (E.G., 2 - 1L GLASS, 4 - 40 ML GLASS VIAL, 1 - 400 ML PLASTIC, 1 - 3 INCH STEEL TUBE, 1 - 8 OZ. GLASS JAR).
13. AMOUNT COLLECTED: VOLUME IN CONTAINERS (E.G., 1/2 FULL).



DATE	06	28	91
TIME	See Below		
PAGE	1	OF	1
PAGE			
PROJECT NO.	40921 02.08		

SAMPLE COLLECTION LOG

PROJECT NAME SKY HARBOR ANG
 SAMPLE NO. See Below
 SAMPLE LOCATION SKY HARBOR Air National Guard Base, Phoenix, AZ
 SAMPLE TYPE Water
 COMPOSITE YES NO
 COMPOSITE TYPE NA
 DEPTH OF SAMPLE NA
 WEATHER Sunny, Breeze, HOT (91°F)

CONTAINERS USED	AMOUNT COLLECTED
<u>See Below</u>	<u>See Below</u>

COMMENTS:	Sample #	Time	# Bottles	Comments
	MW4-01-02	0745	4	TPH, SVOA, Metals Residual / Sample Collected Yesterday
	QC-ER33	1025	8	VOA, Vials, TPH, SVOA, Metals Residual / MW4-01
	MW4-01-02-TB	0700	4	VOA, Vials, TPH TRIP BLANK
	<u>Relative Percentages</u> PH = 29.45% Temperature = 28.4 °C Conductivity = 10 µmhos/cm Turbidity = 0.40 NTU			
	MW5-04-02	1115	7	VOA, Vials, TPH, SVOA, TOPs
	MW3-02-02	1500	7	Same as above for MW5-04-02
	MW3-02-02-DW	1515	7	Same as above for MW3-02-02
	← LAST LINE →			

PREPARED BY: M. U. Humber



DAILY LOG	DATE	07	02	91
	NO.			
	SHEET	1	OF	1

FIELD ACTIVITY DAILY LOG

PROJECT NAME <u>Sky Harrier Av16</u>	PROJECT NO. <u>409721.02.05</u>
FIELD ACTIVITY SUBJECT: <u>Perman Sluic Tests and Logs; Continuous Logging, Site Office.</u>	
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:	
<p>0600: Arrive site, start paperwork. Review Data Logger Manual, Prep Equipment for Sluic Tests, Load Equip.</p> <p>0715: Pick up J. Boyd at Airport.</p> <p>0730: Return to site. Load Equip. Prep for IDO Tests.</p> <p>0830: Pick up Redox Truck to haul Drums.</p> <p>0930: Back of truck. Mobilize to MWS-01.</p> <p>0945: Set up at MWS-01. Docon Sluic. Prep Data Logger.</p> <p>1000: Start Tests.</p> <p>1300: Repeated Problems of Logger suggest that affecting the WSRUmp. Could not duplicate 1st test, lost all data in RAM, Extraneous Data Printing even after clearing memory. Return to office, call Steve Stone & Knorrman. Summary meeting advise rest of today - that is problem.</p> <p>1700: Pick up Drums at THREE WOOD SITE. Return to office.</p> <p>1800: Depart site. Stop.</p>	
VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
<u>NA</u>	<u>NA</u>
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
<u>Sunny, Low Blue, very HOT, N 110°F</u>	<u>NA</u>
IT PERSONNEL ON SITE: <u>Mark Gansin, John Boyd</u>	
SIGNATURE <u>Mark Gansin</u>	DATE: <u>7/2/91</u>

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-01-01</u>
Installation: <u>Sky House Area Box</u>		WELL NO.: <u>MWS-01</u>
HAZWRAP Contractor: <u>IT Construction</u>		Site: <u>Durham Waste</u>
Purge Start: (Date) <u>4/27/91</u> (Time) <u>1010</u>	Purge End: (Date) <u>4/27/91</u> (Time) <u>1300</u>	Project No.: <u>409821.02.05</u>
Purged by: <u>Gardner, Boyd, Turman</u>		

Depth Measurement Ref. Point*: T.O.C. Well Csg ID: 2" 6" Other _____
 Well Hspace/Odor: ND LNAPL Check (Y/N) ~~DNAPL Check (Y/N)~~
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLINST INTERFACE PROBE Model 121

Depth to Top and Bottom of Screen Interval: 50 / 100
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 73.28 Final DTW: 73.30
 LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 49.80
 (-) Orig. DTW: 26.52 73.28
 (-) Wtr Col. Thick.: 26.52 (x) 2" - 0.16 4" - 0.65 6" - 1.47 9" - 1.91 Gals/ft (=) 50.6 Gals/Csg Vol. (x) 3 Csg Vol. (=) 151.8 Total Purge Gals.

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Centrifugal Pump Tef PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) REINERT 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg. Purge Rate: ~ 2 gpm
 Weather: Sunny, Breezy, Warm (w 80 °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (umhos/m)	Turbidity (NTa)	Other	Comment
1017	7	10	73	95	23.4	7.98	1190	6.05		
1024		20			22.8	7.15	1180	7.11		
1035		40			23.0	7.16	1190	2.41		
1046		60			22.9	7.14	1180	1.06		
1057		80			23.1	7.20	1180	0.95		
1110		100			22.9	7.15	1180	0.38		
1120		120			22.9	7.25	1170	0.32		
1131		140		↓	22.9	7.30	1190	0.64		
1134		150		95	22.8	7.31	1190	0.65		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MWS-01-01</u>
Installation: <u>City Home Ar 16 Base</u>		WELL NO.: <u>MWS-01</u>
HAZWRAP Contractor: <u>IT Construction</u>		Site: <u>Backyard Well</u>
Sample Start: (Date) <u>4/3/91</u> (Time) <u>12:10</u>	Sample End: (Date) <u>4/3/91</u> (Time) <u>12:55</u>	Project No.: <u>409321.02.05</u>
Sampled by: <u>Gardner, Boyd, Turner</u>		

Orig. SWL: 73.28 ft BTOC* Final SWL: 73.30 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>7.08</u>			
<u>23.4</u>	<u>7.11</u>	<u>1180</u>	<u>50.3</u>

Are parameters 20% of purge values? Y N (Except Turbidity)

Repurge Y N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Terf Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, Warm (~ 80 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VINYL CHLORIDE, NITRATE/NITRITE, TOPB

Metals: (Circle) Filtered Unfiltered Both

Field Dups.: Y N Referee Dups.: Y N

Comments:

Sample collected at 12:55. Filtered metals subsequent

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-01-01A</u>
Installation: <u>Sky Harbor</u>	Coordinates	WELL NO.: <u>MWS-01</u>
HAZWRAP Contractor: <u>JT Corp</u>		Site:
Purge Start: (Date) <u>4-15-91</u> (Time) <u>1035</u>	Purge End: (Date) <u>4-15-91</u> (Time)	Project No.: <u>409721.02.05</u>
Purged by: <u>Tyburski/Darr/Boyd</u>		

Depth Measurement Ref. Point*: Top of Casing Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: NA LNAPL Check (Y/N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
Solinst Interface Probe Model 21

Depth to Top and Bottom of Screen Interval: 50' to 100'
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 68.82 Final DTW: Not recorded
 LNAPL/DNAPL Thickness: NA LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.80
 (-) Orig. DTW: 68.82

(-) Wtr Col. Thick.: 3098(x) Gals/ft (=) 59.2 Gals/Csg Vol. (x) (3) Csg Vol. (=) 177 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 8" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett Pump 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: 2.5 gpm
 Weather: hazy, breezy (85°F)

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake(ft)	Temp (°C)	pH (s.a)	Cond. (umhos/m)	Turbidity (NTa)	Other	Comment
1035		-								
1046		20			23.6	6.80	1240	1.25		
1100		40			23.4	6.65	1240	1.20		
1110		60			23.2	6.65	1230	1.02		
1120		80			23.2	6.67	1240	1.16		
1133		100			23.2	6.70	1240	1.46		
1143		120			23.2	6.65	1240	1.82		
1155		140			23.1	6.91	1240	1.40		Compressor out of gas
1225		160			23.3	6.87	1260	1.40		
1236		180			23.3	6.89	1240	2.01		

* All Depths in Feet Below Ref. Point on wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

FIGURE 5-6 b

MONITORING WELL SAMPLING LOG		Sample ID No.:
Installation: <u>BY BAKER</u> Coordinates:		WELL NO.: <u>MWS-01-1A</u>
HAZWRAP Contractor: <u>J T Corp</u>		Site: <u>ANGL</u>
Sample Start: (Date) <u>4-15-91</u> (Time) <u>1300</u>	Sample End: (Date) <u>4-15-91</u> (Time) <u>1325</u>	Project No.: <u>409721</u>
Sampled by: <u>Tyburski/Darr/Boyd</u>		

Orig. SWL: 68.82 ft BTOC* Final SWL: 68.28 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.5</u>	<u>6.85</u>	<u>1250</u>	<u>46</u>

Are parameters 20% of purge values? (Y) N

Repurge Y/N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Ter Centrifugal Pump PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) gear pump used for ful heavy metals

Sample Equipment Decon'd? (Y) N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: warm, calm (85 °F)

Lab Analyses: (Circle)

(VOA) (SVOA) (METALS) PEST/PCBS (TPH) CATIONS ANIONS TC

Others: _____

Metals: (Circle) (Filtered) Unfiltered Both

Field Dups.: Y/N Referee Dups.: Y/N

Comments:

Sample MWS-01 at 1300 hrs.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-02-02</u>
Installation: <u>SEA HARDER ANCH BASE</u>		WELL NO.: <u>MWS-02</u>
HAZWRAP Contractor: <u>IT CORPORATION</u>		Site: <u>DEEP BEACH WASH</u>
Purge Start: (Date) <u>4/12/91</u> (Time) <u>0820</u>	Purge End: (Date) <u>4/12/91</u> (Time) <u>1040</u>	Project No.: <u>409221-02.05</u>
Purged by: <u>GARDNER / BOYD / TRUBBEN</u>		

Depth Measurement Ref. Point*: T.O.C Well Csg ID: 2" 6" Other: _____
 Well Hdspace/Odor: 70 ppm w/HAH at well head L NAPL Check (Y) N ~~DNAPL~~ Check ~~(Y/N)~~
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLINGIT WATER FLOW PUMPS MODEL 121

Depth to Top and Bottom of Screen Interval: 50/100
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 68.20 Final DTW: 68.18
 LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.98
 (-) Orig. DTW: 68.20

(-) Wtr Col. Thick.: 31.78 (x) 31.78 Gals/ft (=) 60.7 Gals/Csg Vol. (x) 3 Csg Vol. (=) 182 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 9 3/4" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Centrifugal Pump
 Tef PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BENNETT 1800 Purge Equipment Decon'd? (Y) N

Purge Wtr Containerized? (Y) N Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, BREEZY, HOT (°F)

Actual Time	Elapsed Time	Vols. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (umhos/m)	Turbidity (NTa)	Other	Comment
0826	6	10	68.20	95	22.1	6.85	1220	2.36		
0832		20			22.1	6.95	1220	1.96		
0844		40			22.2	6.95	1220	1.12		
0855		60			22.4	6.97	1220	1.20		
0906		80			22.4	7.14	1220	1.02		
0918		100			22.5	7.21	1220	1.06		
0930		120			22.6	7.22	1220	0.98		
0940		140			22.6	7.20	1220	1.07		
0952		160	68.18	95	22.6	7.20	1210	0.96		
1040		167			22.5	7.32	1140	14.20		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MWS-02-01</u>
Installation: <u>IT Corporation, Six Horizon Ave</u>		WELL NO.: <u>MWS-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Basement Well</u>
Sample Start: (Date) <u>4/12/91</u> (Time) <u>1015</u>		Project No.: <u>409821-02-05</u>
Sample End: (Date) <u>4/12/91</u> (Time) <u>1040</u>		
Sampled by: <u>Goodin / Bond / Hester</u>		

Orig. SWL: 68.20 ft BTOC* Final SWL: 68.18 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>22.5</u>	<u>7.32</u>	<u>1140</u>	<u>14.50</u>

Are parameters 20% of purge values? Y / N Except Turbidity

Repurge Y / N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Tef PVC Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y / N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, HOT WARM (75 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: Vaniln Chloride, Nitrate/Nitrite, TO ? b

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y / N Referee Dups: Y / N

Comments: IT 4-16-91
SAMPLE MWS-02-01 AT 1030 HOURS & Duplicate MWS-02-01-Dup AT 1130 HOURS.
06-ER-26 IT 4-16-91

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>MWS-03-01</u>
Installation:		WELL NO: <u>MWS-03</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Back ground</u>
Purge Start: (Date) <u>4/5/91</u> (Time) <u>1435</u>	Purge End: (Date) <u>4/5/91</u> (Time) <u>1616</u>	Project No: <u>409721.02.05</u>
Purged by: <u>Gardiner / Boyd / Tyburki</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2' (4) 6' Other _____
 Well Hdspace/Odor: ND LNAPL Check (Y/N) _____ DNAPL Check (Y/N) _____
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc) _____

Depth to LNAPL: ND Depth to Top and Bottom of Screen Interval 50/100
 Depth to DNAPL: _____ Orig. DTW: 71.75 Final DTW: 76.41
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 91.80
 (-) Orig. DTW: 71.75

(-) Wtr Col. Thick: 28.05 (x) 2 - 0.16 Gals/ft (-) 5358 Gals/Csg Vol. (x) 3 Csg Vol. (-) 160.73 Total Purge Gals.
4 - 0.65
6 - 1.47
9 1/2 - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett 1800 Purge Equipment Decon'd? Y/N

Purge Wtr Containerized? (Y) N Avge Purge Rate: 2 gpm
 Weather: Sunny, Breezy, Hot (42 OF)
1455

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTA)	Other	Comment
1459	4	10	71.75	95	23.1	7.06	1490	1.71		
1508		20			23.0	7.04	1510	1.05		
1516		40			23.1	7.02	1490	0.94		
1522		60			23.1	7.05	1480	0.94		
1538		80			23.0	7.01	1490	0.81		
1550		100			23.1	7.02	1490	0.99		
1600		120			23.0	7.06	1510	1.23		
1610		140		N	23.0	7.05	1490	0.71		
1616		150	71.41	95	22.9	7.04	1500	1.20		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MWS-03-01</u>
Installation: <u>SW Home A/C</u>		WELL NO.: <u>MWS-03</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Backyard Well</u>
Sample Start: (Date) <u>4/8/91</u> (Time) <u>1645</u>	Sample End: (Date) <u>4/5/91</u> (Time)	
Sampled by: <u>Garrison/Treadan/Beo</u>		

Orig. SWL: 71.75 ft BTOC* Final SWL: 71.41 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.0</u>	<u>6.87</u>	<u>1410</u>	<u>130.1</u>

Are parameters 20% of purge values? Y N Except Turbidity
 Repurge Y/ N
 No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y N
 If pump or discrete baller; Depth(s) where pump set: _____ ft. BTOC
 Weather: Sunny, Breezy, HOT (79.5 °F)

Lab Analyses: (Circle)
 VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: NITRATE/NITRATE, VOLATILE COMPOUNDS, TO Ph
 Metals: (Circle) Filtered Unfiltered Both
 Field Dups: Y/ N Referee Dups: Y/ N

Comments:
Similar MWS-03-01 ; 1645

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-03-01A</u>
Installation: <u>See HAZWRAP A-26</u>		WELL NO.: <u>MWS-03</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Background Well</u>
Purge Start: (Date) <u>4/10/91</u> (Time) <u>1430</u>	Project No.: <u>409721-02.05</u>	
Purge End: (Date) <u>4/10/91</u> (Time) <u>1705</u>		
Purged by: <u>Gordon / Boto / T. G. ...</u>		

Depth Measurement Ref. Point* T.O.C Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: _____ LNAPL Check (Y/N) DNAPL Check (Y/N) _____
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc.)
SOUNST INTERFACE PROBE Model 121

Depth to Top and Bottom of Screen Interval 50/100
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 69.82 Final DTW: 69.74
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.80
 (-) Orig. DTW: 69.82

(-) Wtr Col. Thick: 29.98 (x) 29.98 Gals/ft (=) 57.3 Gals/Csg Vol. (x) 3 Csg Vol. (=) 171.8 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 9 3/4" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailer SS
 Centrifugal Pump Tef PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett 1800 Purge Equipment Decon'd? (N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 1 1/2 gpm
 Weather: Sunny, Hot, 24-34 (90 °F)
1430

Actual Time	Elapsed Time	Vois Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTa)	Other	Comment
1436	6	10	69.82	95	23.1	6.96	1340	2.64		
1442		20			22.9	7.00	1340	2.29		
1457		40			22.9	7.00	1350	2.06		
1520		60			22.9	6.97	1350	1.59		
1525		80			22.9	7.01	1350	1.51		
1539		100			22.8	6.98	1340	1.57		
1554		120			22.8	6.97	1360	1.35		
1607		140			22.6	7.00	1340	1.73		
1621		160		↓	22.6	7.01	1350	1.40		
1705		167	69.74	95	22.5	6.94	1280	16.60		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

REV. DATE: MAY 1990

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MWS-03-01A</u>
Installation: <u>IT San Antonio A106</u>		WELL NO.: <u>MWS-03</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Base camp well</u>
Sample Start: (Date) <u>4/10/91</u> (Time) <u>1645</u>		Project No.: <u>40921.02.01</u>
Sampled by: <u>GARDIN / BOND / TRAVIS</u>		Sample End: (Date) <u>4/10/91</u> (Time) <u>1905</u>

Orig. SWL: 69.82 ft BTOC* Final SWL: 69.74 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>22.5</u>	<u>6.94</u>	<u>1280</u>	<u>16.60</u>

Are parameters 20% of purge values? Y N (Except Turbidity)

Repurge Y N

No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) 1 1/2" Teflon Baller

Sample Equipment Decon'd? Y N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breeze, HOT (95 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VOLATILE ORGANICS, NITRATES/NITRITES, TOPB

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y N Referee Dups: Y N

Comments:

SAMPLES COLLECTED AT 1700 HOURS, MWS-03-01A (THIS IS
A RIGID SAMPLE OF MWS-03-01A)
KINOSTATE QC-ER24 COLLECT AT THIS WELL AT 1715 HOURS

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-04-01</u>
Installation: <u>Sex Hazard Area</u>		WELL NO.: <u>MWS-04</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Brockton Mass</u>
Purge Start: (Date) <u>4/11/91</u> (Time) <u>0845</u>	Purge End: (Date) <u>4/11/91</u> (Time) <u>1055</u>	Project No.: <u>407821.0205</u>
Purged by: <u>Berman/Burd/Tizabi</u>		

Depth Measurement Ref. Point: T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: Yes 40 ppm of H₂S and H₂O LNAPL Check (Y/N) DNAPL Check (Y/N) _____
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
Sonnet Interface Probe Model 121

Depth to Top and Bottom of Screen Interval 50/100
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 71.05 Final DTW: 71.02
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.82
 (-) Orig. DTW: 71.05

(-) Wtr Col. Thick: 28.77 (x) 4 - 0.65 Gals/ft (=) 54.95 Gals/Csg Vol. (x) 3 Csg Vol. (=) 164.8 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 9" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: Sunny, Breezy, Hot Warm (80 °F)

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake(ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTa)	Other	Comment
0850	5	10	71.05	95	22.0	6.98	1250	4.63		
0855		20			21.9	7.02	1250	2.15		
0907		40			22.1	7.05	1250	1.96		
0913		60			22.1	7.14	1250	1.91		
0928		80			22.3	7.13	1240	1.97		
0939		100			22.2	7.14	1250	1.79		
0950		120			22.3	7.14	1250	1.81		
1001		140		✓	22.5	7.16	1250	1.56		
1013		150	71.02	95	22.5	7.15	1250	1.63		
1050		160			22.9	7.03	1190	35.1		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MWS-04-01</u>
Installation: <u>Spr House Area</u>		WELL NO.: <u>MWS-04</u>
HAZWRAP Contractor: <u>IT Construction</u>		Site: <u>Base Camp Well</u>
Sample Start: (Date) <u>4/11/91</u> (Time) <u>1030</u>		Project No.: <u>409210205</u>
Sample End: (Date) <u>4/11/91</u> (Time) <u>1035</u>		
Sampled by: <u>Garcia / Bero / TVZ/...</u>		

Orig. SWL: 71.05 ft BTOC* Final SWL: 71.02 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>22.9</u>	<u>8.03</u>	<u>1190</u>	<u>35.1</u>

Are parameters 20% of purge values? Y (Except Turbidity)

Repurge Y/N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Ter PVC Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) 1 1/2" Terlon Bailer

Sample Equipment Decon'd? Y N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, Not Windy (80 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: Visual Observations

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y/N Referee Dups: Y/N

Comments:

Sample MWS-04-01 Taken at 1050 Hours

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL SAMPLING LOG		Sample ID No: PS-2-01
Installation: <u>Sax Hazard Area</u>		WELL NO.: PS-2
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>4099 Bunkers Point</u>
Sample Start: (Date) <u>9/9/91</u> (Time) <u>1200</u>		Project No.: <u>409921-02.05</u>
Sample End: (Date) <u>9/9/91</u> (Time) <u>1200</u>		
Sampled by: <u>G. Smith / B. ... / T. ...</u>		

Orig. SWL: 92.92 ft BTOC* Final SWL: _____ ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
22.2	7.1	1320	31.0

Are parameters 20% of purge values? Y N EXCEPT TURBIDITY

Repurge Y N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 PVC Tef Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) DISPOSABLE 1" after Bailor

Sample Equipment Decon'd? Y N

If pump or discrete bailor; Depth(s) where pump set: _____ ft BTOC

Weather: SUNNY, BREEZY, HOT (90 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VINYL CHLORIDE, TOP6

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y N Referee Dups: Y N

Comments:

SAMPLE PS-2-01 TAKEN AT 1200 HOURS
EQUIP. REVERSE Q.C. ER 23 TAKEN AT 1205 HOURS

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No.: <u>MW1-02-01</u>
Installation: <u>Sky Harbor Air Base</u>		WELL NO.: <u>MW1-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Project No.: <u>909721.02.05</u>
Purge Start: (Date) <u>4/2/91</u> (Time) <u>1105</u>	Purge End: (Date) <u>4/2/91</u> (Time) <u>1340</u>	
Purged by: <u>Gardner Boyd Trivani</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2" 4" 6" Other NA
 Well Hdspace/Odor: ND LNAPL Check N) DNAPL Check N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLINST INTERFACE PROBE Model 121

Depth to LNAPL: ND Depth to Top and Bottom of Screen Interval TOP = 50, Bottom =
 Depth to DNAPL: ND Orig. DTW: 75.39 Final DTW: 77.60
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: ND

Measured Well TD: 99.33
 (-) Orig. DTW: 23.94 or 76.39

(-) Wtr Col. Thick: 23.94 (x) 4 - 0.65 Gals/ft (=) 45.73 Gals/Csg Vol. (x) 1 Csg Vol. (=) 137.18 Total Purge Gals.
 6" - 1.47
 9 3/4" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett 1800 Purge Equipment Decon'd? Y) N

Purge Wtr Containerized? Y) N) Avg Purge Rate: ~ 2 gpm
 Weather: Sunny, Breeze, 12:00pm (~ 80 °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTa)	Other	Comment
1110	5	10		95 ft	23.1	6.95	1110	6.2		
1117		20			23.0	7.00	1110	2.3		
1123		30			23.3	7.06	1100	1.2		
1135		50			24.0	7.04	1120	0.31		
1147		70			23.2	7.05	1120	1.21		
1159		90			22.9	7.07	1130	0.05		
1213		110			23.3	7.01	1080	0.06		
1225		130		✓	23.0	7.01	1120	0.41		
1237		150	77.60	95 ft	23.1	7.02	1130	0.43		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: MWJ1-02-01
Installation: Sky Harbor AN6 Base		WELL NO: MWJ1-02
HAZWRAP Contractor: IT Corporation		Site: 1
Sample Start: (Date) 9/17/91 (Time) 1300		Project No: 409921-02-05
Sample End: (Date) 9/2/91 (Time) 1340		
Sampled by: Graham, BORD, TRUMAN		

Orig. SWL: 75.39 ft BTOC* Final SWL: 77.60 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.4	7.04	1120	64

Are parameters 20% of purge values? Y N *fixat Turbidity (stream around well)*
 Repurge Y N
 No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) 1 1/2" Terumi Baller

Sample Equipment Decon'd? Y N
 If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC
 Weather: SUNNY, BREEZY, WARM (W 20 °F)

Lab Analyses: (Circle)
 VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VINYL CHLORIDE

Metals: (Circle) Filtered Unfiltered Both
 Field Dups: Y N Referee Dups: Y N

Comments:
All samples collected at 1335. Collected an Equipment Purge at this well.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG

Sample ID No.: MW1-02-D1A
 WELL NO.: MW1-02
 Installation: Sky Harbor ANG Site: 1
 HAZWRAP Contractor: J.T. Corp Project No.: 409521
 Purge Start: (Date) 4-18-91 (Time) 0810 Purge End: (Date) 4-18-91 (Time) 1000
 Purged by: John Boyd / Linda Darn

Depth Measurement Ref. Point*: TOC Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: ND LNAPL Check (Y/N) DNAPL Check (Y/ND)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
Solinst Inductance Probe Model 121

Depth to Top and Bottom of Screen Interval 50/100
 Depth to LNAPL: - ND Depth to DNAPL: NA Orig. DTW: 71.25 Final DTW: 71.19
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 99.33
 (-) Orig. DTW: 71.25

(-) Wtr Col. Thick.: 28.08 (x) 28.08 Gals/ft (=) 53.6 Gals/Csg Vol. (x) 3 Csg Vol. (=) 162 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 8" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennet Pump 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) _____ Avge Purge Rate: 116 gpm
 Weather: Sunny, Cool (75 °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (umhos/m)	Turbidity (NTa)	Other	Comment
0810										
0824		20			22.7	6.98	1110	228		
0839		40			22.9	6.92	1120	.92		
0850		60			23.2	7.03	970	.43		
0901		80			23.6	6.95	1140	.36		
0914		100			23.6	6.96	980	.50		
0939		120			23.6	6.94	1150	.20		
0940		140			23.7	7.01	1070	.39		
0953		161			23.4	6.94	1070	.26		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: MW1-02-01A
Installation: SKV Harbor A06	WELL NO: MW1-02	Site: 1
HAZWRAP Contractor: J.T. Corp	Project No: 409721	
Sample Start: (Date) 4-18-91 (Time) 10:20	Sample End: (Date) 4-18-91 (Time) 11:40	
Sampled by: John Boyd / Cindy [unclear]		

Orig. SWL: 71.25 ft BTOC* Final SWL: 21.9 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
24.9	7.08	110	8.15

Are parameters 20% of purge values? Y / N

Repurge Y / N

No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Tef PVC Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) 1 1/2" Teflon Bailer

Sample Equipment Decon'd? Y / N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: High clouds, slight breeze (65 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: Vinyl Chloride

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y / N Referee Dups: Y / N

Comments:

Noted sheen on surface but H2S detector didn't detect anything - Total amount purged for MW1-02 = 165 gallons

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No.: <u>MW2-02-01</u>
Installation: <u>Sky Hanger Area</u>		WELL NO.: <u>MW2-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>2</u>
Purge Start: (Date) <u>4/25/91</u> (Time) <u>0816</u>	Purge End: (Date) <u>4/10/91</u> (Time) <u>1130</u>	Project No.: <u>401921-02-01</u>
Purged by: <u>Gardner / Bono / T. F. ...</u>		

Depth Measurement Ref. Point*: T.O.C. Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: ND LNAPL Check (Y/N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SQUIBET INTELLINE PAPER MODEL 121

Depth to LNAPL: ND Depth to Top and Bottom of Screen Interval: 50/100
 Depth to DNAPL: _____ Orig. DTW: 71.78 Final DTW: 71.06
 LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: N/A
 Measured Well TD: 100.02
 (-) Orig. DTW: 71.78

(-) Wtr Col. Thick.: 28.24 (x) 1 1/2" - 1.91 Gals/ft (=) 33.9 Gals/Csg Vol. (x) 3 Csg Vol. (=) 161.8 Total Purge Gals.

2" - 0.16
 4" - 0.65
 6" - 1.47
1 1/2" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Centrifugal Pump
 Tef
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BENNETT 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avge Purge Rate: ~ 2 gpm
 Weather: Sunny, Breezy, HOT (90 °F)
0816

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTA)	Other	Comment
0826	10	10	71.78	95	21.7	6.80	1280	7.29		
0833	17	20			21.5	6.91	1280	2.83		
0847		40			21.8	6.83	1280	3.12		
0901		60			21.9	6.94	1300	1.31		
0915		80			22.0	6.96	1300	2.49		
0930		100			22.2	6.98	1300	0.84		
0945		120			22.3	7.05	1300	1.50		
1000		140			22.4	6.93	1300	1.05		
1008		150		✓	22.4	6.96	1300	0.95		
1130		162	71.06	95	23.0	6.97	1180	39.0		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: <u>MW2-02-01</u>
Installation: <u>Sky Harbor Ave</u>		WELL NO.: <u>MW2</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>2</u>
Sample Start: (Date) <u>4/12/91</u> (Time) <u>1040</u>	Project No.: <u>401721-02.05</u>	
Sample End: (Date) <u>4/12/91</u> (Time) <u>1100</u>		
Sampled by: <u>Green / Bond / Truman</u>		

Orig. SWL: 71.78 ft BTOC* Final SWL: 71.06 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.0	6.97	1190	39.0

Are parameters 20% of purge values? N except Turbidity
 Repurge Y/ N
 No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS Tef PVC Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y / N

If pump or discrete bailer; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, HOT (90 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: Vinyl Chloride

Metals: (Circle) Filtered Unfiltered Both

Field Dups.: Y / N Referee Dups.: Y/ N

Comments:

Sample MW2-02-01 AT 1100 Hours. ALSO TOOK MATRIX SLIME & MATRIX SAMP DUPS HERE: MW2-02-01 - MS AT 1115 Hours
MW2-02-01 - MSD AT 1130 Hours

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>MW3-01-01--</u>
Installation: <u>Sky-House A/V</u>		WELL NO: <u>MW3-01</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>?</u>
Purge Start: (Date) <u>4/11/91</u> (Time) <u>1434</u>		Project No.: <u>409921.02.05</u>
Purge End: (Date) <u>4/11/91</u> (Time) <u>1607</u>		
Purged by: <u>Gardner / Bono / Travers</u>		

Depth Measurement Ref. Point*: T.O.C. Well Csg ID: 2" 4" 6" Other _____
 Well Hdspace/Odor: _____ LNAPL Check (Y/N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLIX INTERFACE PUMP MODEL 121

Depth to Top and Bottom of Screen Interval: 50/100
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 71.72 Final DTW: 71.73
 LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.42
 (-) Orig. DTW: 71.72

(-) Wtr Col. Thick: 27.70 (x) 4 - 0.65 Gals/ft (-) 52.9 Gals/Csg Vol. (x) 3 Csg Vol. (-) 158.7 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 8" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BINWATT 1800 Purge Equipment Decon'd? N

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, BREEZY, HOT WATER (USE OF)

Actual Time	Elapsed Time	Vols. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTa)	Other	Comment
1440		10	71.72	95	22.6	7.13	1240	5.52		
1446		20			22.8	7.19	1240	2.58		
1457		40			22.5	7.19	1230	1.27		
1509		60			22.4	7.20	1240	1.01		
1520		80			22.6	7.21	1230	0.71		
1537		100			22.3	7.21	1240	0.66		
1549		120			22.4	7.21	1230	0.61		
1600		140			22.5	7.20	1230	0.62		
1607		150	71.73	95	22.4	7.22	1230	0.73		
1640		157			22.5	7.27	1230	51.5		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC).
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: MW 3-01-01
Installation: <u>Sky Harbor Ave</u>		WELL NO.: <u>MW3-01</u>
HAZWRAP Contractor: <u>IT Construction</u>		Site: <u>3</u>
Sample Start (Date): <u>4/11/91</u> (Time) <u>1630</u>	Project No.: <u>409P21-02-05</u>	
Sample End (Date): <u>4/11/91</u> (Time) <u>1645</u>		
Sampled by: <u>Green/Bold/Rowan</u>		

Orig. SWL: 71.72 ft BTOC* Final SWL: 71.0 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
22.5	7.22	1230	51.5

Are parameters 20% of purge values? Y / N EXCEPT TURBIDITY

Repurge Y / N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor ^{SS} Tef PVC Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) 1 1/2" Teflon Bailor

Sample Equipment Decon'd? Y / N

If pump or discrete bailor; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, HOT WINDY (~80 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VINYL CHLORIDE, TO Ph

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y / N Referee Dups: Y / N

Comments:

Sample MW3-01-01 taken AT 1630 Hours
Equip Rinsate QC-FR25 TAKEN AT 1720 Hours

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No.: MW3-21-07A
Installation: Sky Harbor	Coordinates	WELL NO.: MW3-01
HAZWRAP Contractor: JTCORP		Site: 3
Purge Start: (Date) 4-7-91 (Time) 1040	Purge End: (Date) 4-16-91 (Time) 1225	Project No.: 409721
Purged by: John Boyd / Candie Dan		

Depth Measurement Ref. Point*: TOC Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: _____ LNAPL Check (Y/N) DNAPL Check (Y N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc.)
Solinst Interface Probe

Depth to Top and Bottom of Screen Interval: 0/100
 Depth to LNAPL: NA Depth to DNAPL: NA Orig. DTW: 68.35 Final DTW: 99.69
 LNAPL/DNAPL Thickness: NA LNAPL/DNAPL Sample and Volume: _____
 Measured Well TD: 99.69
 (-) Orig. DTW: 68.35

(-) Wtr Col. Thick.: 31.34 (x) 31.34 Gals/ft (=) 59.9 Gals/Csg Vol. (x) 3 Csg Vol. (=) 180 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 9 3/4" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailer Tef Centrifugal Pump
 SS
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett Pump Model 100 Purge Equipment Decon'd? Y N

Purge Wtr Containerized? (Y) N Avg Purge Rate: 2.6 gpm
 Weather: Slight breeze, high clouds (80 of)

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (umhos/m)	Turbidity (NTa)	Other	Comment
1040		-								
1046		20			23.1	6.89	1270			
1100		40			22.7	6.86	1250			
1115		60			22.7	7.01	1300	.25		
1129		80			23.1	6.89	1320	.34		
1139		100			23.6	6.89	1330	.32		
1150		120			23.2	6.86	1330	.46		
1201		140		230	23.2	6.95	1290	.48		
1212		160			23.0	6.94	1340	.51		
1225		180			23.1	6.93	1340	1.29		Sample taken

* All Depths in Feet Below Ref. Point on wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

FIGURE 5-6 b

MONITORING WELL SAMPLING LOG		Sample ID No: MW3-02-04A
Installation: Sky Harbor Coordinates		WELL NO: MW3-02
HAZWRAP Contractor: JT Corp		Site: 3
Sample Start (Date) 4-17-91 (Time) 1250		Project No: 409521
Sample End (Date) 4-17-91 (Time) 1330		
Sampled by: John Bayl/Cynthia Dora/Sas Tyburski		

Orig. SWL: 65.35 ft BTOC* Final SWL: 68.26 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.1	6.93	1340	1.29
24.2	6.88	1340	55.2 - after sampling

Are parameters 20% of purge values? Y N
 Repurge Y/ N
 No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) 1 1/2" Teflon bailer

Sample Equipment Decon'd? Y N
 If pump or discrete bailer; Depth(s) where pump set: _____ ft BTC
 Weather: Hot, breezy (87 °F)

Lab Analyses: (Circle)
 VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TD
 Others: Total Organic Pb, Vinyl Chloride

Metals: (Circle) Filtered Unfiltered Both
 Field Dups.: Y N Referee Dups.: Y/ N

Comments:
Turbidity change on last sample
MW3-01 - sampled at 1250 - duplicates taken

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

FIGURE 5-6a

REV. DATE: MAY 1995

MONITORING WELL PURGING LOG		Sample ID No.: <u>MW3-02-01 (Purged)</u>
Installation: <u>Sky Harbor</u>	Coordinates	WELL NO.: <u>MW3-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>3</u>
Purge Start: (Date) <u>4/5/91</u>	(Time) <u>0945</u>	Project No.: <u>40721.02.05</u>
Purge End: (Date) <u>4/5/91</u>		(Time) <u>1245</u>
Purged by: <u>Gordon/Dave/Tyler</u>		

Depth Measurement Ref. Point*: T.O.C. Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: N/A Head at well head LNAPL Check (N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc.)
SOLNET INFILTRATE PUMP MODEL 121

Depth to LNAPL: ND Depth to Top and Bottom of Screen Interval: 50/100
 Depth to DNAPL: _____ Orig. DTW: 71.37 Final DTW: 71.29
 LNAPL/DNAPL Thickness: NA LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.61
 (-) Orig. DTW: 71.37

(-) Wtr Col. Thick.: 22.32 (x) 4 - 0.65 Gals/ft (=) 34.1 Gals/Csg Vol. (x) 3 Csg Vol. (=) 162.3 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 8" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BRANIFF MODEL 1800 Purge Equipment Decon'd? N

Purge Wtr Containerized? (N) Avg Purge Rate: 2 gpm
 Weather: Sunny, Breezy, HOT (~95 °F)
0945

Actual Time	Elapsed Time	Vols. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTu)	Other	Comment
<u>0945</u>	<u>4</u>	<u>10</u>	<u>71.37</u>	<u>95</u>	<u>22.8</u>	<u>7.13</u>	<u>1340</u>	<u>15.71</u>		
<u>0155</u>		<u>20</u>			<u>22.9</u>	<u>7.12</u>	<u>1360</u>	<u>5.31</u>		
<u>1006</u>		<u>40</u>			<u>22.9</u>	<u>7.12</u>	<u>1360</u>	<u>7.73</u>		
<u>1016</u>		<u>60</u>			<u>23.0</u>	<u>7.12</u>	<u>1370</u>	<u>2.15</u>		
<u>1029</u>		<u>80</u>			<u>22.9</u>	<u>7.12</u>	<u>1360</u>	<u>1.55</u>		
<u>1040</u>		<u>100</u>			<u>23.0</u>	<u>7.11</u>	<u>1360</u>	<u>2.66</u>		
<u>1051</u>		<u>120</u>			<u>22.9</u>	<u>7.11</u>	<u>1370</u>	<u>1.75</u>		
<u>1101</u>		<u>140</u>		↓	<u>23.0</u>	<u>7.10</u>	<u>1360</u>	<u>0.95</u>		
<u>1107</u>		<u>150</u>	<u>71.29</u>	<u>45</u>	<u>23.0</u>	<u>7.11</u>	<u>1360</u>	<u>1.08</u>		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

FIGURE 5-6 b

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MW3-02-01 (Rev D)</u>
Installation: <u>Key Harbor</u> Coordinates		WELL NO.: <u>MW3-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>	Site: <u>3</u>	
Sample Start: (Date) <u>4/5/91</u> (Time) <u>1145</u>	Project No.: <u>40172102.05</u>	
Sample End: (Date) <u>4/5/91</u> (Time) <u>1245</u>		
Sampled by: <u>Caroline / BMD / TROUSE</u>		

Orig. SWL: 71.37 ft BTOC* Final SWL: 76.72 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.1	7.07	1330	31.0

Are parameters 20% of purge values? N (Except Turbidity)

Repurge Y/ N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? N

If pump or discrete baller; Depth(s) where pump set: _____ ft BT

Weather: SUNNY, BREEZY, HOT (~95 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS T.
 Others: TO Pb, Volatile Chlorides

Metals: (Circle) Filtered Unfiltered Both

Field Dups.: Y N Referee Dups.: Y N

Comments:

Field Dup completed (MW3-02-02-DUP) : 1245 1250

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No: <u>MWY-01-01</u>
Installation: <u>PAPA's Maintenance & Restoration</u>		WELL NO: <u>MWY-01</u>
HAZWRAP Contractor: <u>IT Construction</u>		Site: <u>4</u>
Purge Start: (Date) <u>4/4/91</u> (Time) <u>0900</u>	Purge End: (Date) <u>4/8/91</u> (Time) <u>1400</u>	Project No: <u>40972.0205</u>
Purged by: <u>Graham/Bell/Treuman</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2' 4 6" Other _____
 Well Hdspace/Odor: NR LNAPL Check (Y/N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLINST INTELLIG PROBE Model 121

Depth to LNAPL: NR Depth to Top and Bottom of Screen Interval 22.5 - 42.5
 Depth to DNAPL: _____ Orig. DTW: 34.43 Final DTW: DRY
 LNAPL/DNAPL Thickness NR LNAPL/DNAPL Sample and Volume: NR
 Measured Well TD: 42.87
 (-) Orig. DTW: 34.43

(-) Wtr Col. THICK: 8.44 (x) 4 - 0.65 Gals/ft (=) 16.1 Gals/Csg Vol. (x) 3 Csg Vol. (=) 16.1 Total Purge Gals.
 2' - 0.16
 4' - 0.65
 6' - 1.47
 8' - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Ter Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) 3 1/2 inch PVC Baller Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: << 0.5 gpm
 Weather: Sunny, Breezy, Hot (190 OF)

Actual Time	Elapsed Time	Vols. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTU)	Other	Comment
0900		2.5	34.43	NA	25.3	6.97	2820	97.0		
0903		5.0			25.2	7.13	2830	145.1		
0906		10.0			25.1	7.06	2830	7200		
0915								HT		Purged Dry
0923		12.0			26.3	7.18	2910	115.9		
0935										Purged Dry
1400		12.5	DRY	↓						Purged Dry
4/8/91										
1400		13.5			25.6	6.95	2840	12.22		Sampling on 4/8/91 due to low summer flow from this well.

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: <u>MW4-01-01</u>
Installation: <u>PAPER MILITARY RESERVATION</u>		WELL NO.: <u>MW4-01</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>4</u>
Sample Start: (Date) <u>4/2/91</u> (Time) <u>1345</u>		Project No.: <u>409221.02.05</u>
Sampled by: <u>Garcia / Bob Fitzmaurice</u>		Sample End: (Date) <u>4/2/91</u> (Time) <u>1415</u>

Orig. SWL: 34.43 ft BTOC* Final SWL: Dry ft BTOC
 Screen Interval: 21 - 41 ft BTOC

Temp	pH	Cond.	Turbidity

Well dry could not collect sample JRT 4-26-91
 field parameters

Are parameters 20%
 of purge values? Y/N

Repurge Y/N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Tef Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y/N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, HOT (~ 90 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS

Others: _____

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y/ N Referee Dups: Y/ N

Comments:

Sample was collected on 4/2/91, 1400 hours (MW4-01-01) & RINATE (QC-ER22) at 1415 hours. THE DELAY BETWEEN PURGE & SAMPLING WAS DUE TO EXTREMELY LOW RICHARDS RATES (< 1/2 gal/DAY) OF THE WELL.

Mark Hester

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>MW4-02-01</u>
Installation: <u>ST PETERS MOUNTAIN RESERVOIR</u>		WELL NO.: <u>MW4-02</u>
HAZWRAP Contractor: <u>LT CONSULTING</u>		Site: <u>4</u>
Purge Start: (Date) <u>4/4/91</u> (Time) <u>1020</u>	Project No: <u>409421-02.05</u>	
Purge End: (Date) <u>4/4/91</u> (Time) <u>1400</u>		
Purged by: <u>GARDIN / BOYD / TRUBEN</u>		

Depth Measurement Ref. Point*: T.O.C. Well Csg ID: 2' (4) 6' Other _____
 Well Hdspace/Odor: ND LNAPL Check (Y) N DNAPL Check (Y) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLIMET INTERFACE PROBE MODEL 121

Depth to Top and Bottom of Screen Interval: ∞/100
 Depth to LNAPL: ND Depth to DNPL: NA Orig. DTW: 27.44 Final DTW: DRY
 LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 44.40
 (-) Orig. DTW: 27.44

(-) Wtr Col. Thick: 16.96 (x) 4 - 0.65 Gals/ft (=) 32.4 Gals/Csg Vol. (x) 3 Csg Vol. (=) 32.4 Total Purge Gals.
 2' - 0.16
 4' - 0.65
 6' - 1.47
 9' - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) NA Purge Equipment Decon'd? Y/N

Purge Wtr Containerized? (Y) N Avg Purge Rate: _____ gpm
 Weather: Sunny, BREEZY, HOT (90 °F)
1029

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTU)	Other	Comment
1030	1 min	2.5	27.44	NA	26.6	7.15	1080	82.1		
1033		5.0			26.6	7.17	1090	130.3		
1039		10.0			26.6	7.12	1100	100.6		
1044		15.0			26.3	7.13	1100	154.1		
1050		20.0			26.2	7.16	1100	70.8		
1058		25.0			26.3	7.23	1090	79.3		1108 - Pump Dry
1120		27.5		↓	26.6	7.29	1090	7.91		
1210		30.0	DRY	NA	27.0	7.46	1090	7.01		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MW4-02-01</u>
Installation: <u>PURAO Military Reservation</u>		WELL NO.: <u>MW4-02</u>
HAZWRAP Contractor: <u>IT CORPORATION</u>		Site: <u>4</u>
Sample Start: (Date) <u>4/4/91</u> (Time) <u>1230</u>		Project No.: <u>409 821.02.05</u>
Sample End: (Date) <u>4/4/91</u> (Time) <u>1400</u>		
Sampled by: <u>GARDNER / BOND / TRONSKI</u>		

Orig. SWL: 27.44 ft BTOC* Final SWL: DRY ft BTOC
 Screen Interval: 50-24 - 44 ft BTOC

Temp	pH	Cond.	Turbidity
<u>28.3</u>	<u>7.54</u>	<u>1080</u>	<u>2.3</u>

Are parameters 20% of purge values? (Y) N

Repurge Y (N)

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? (Y) N

If Pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: SUNNY, BREEZY, HOT (~ 90 °F)

Lab Analyses: (Circle)

(VOA) (SVOA) (METALS) PEST/PCBS (TPH) CATIONS ANIONS TDS

Others: _____

Metals: (Circle) (Filtered) Unfiltered Both

Field Dups.: Y/(N) Referee Dups.: Y/(N)

Comments:

Finished Sampling AT 1400

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

FIGURE 5-6a

REV. DATE: MAY 199

MONITORING WELL PURGING LOG		Sample ID No.: <u>MW4-02-CHA</u>
Installation: <u>Sky Harbor</u>	Coordinates	WELL NO.: <u>MW4-02</u>
HAZWRAP Contractor: <u>J.T. Corp</u>		Site: <u>4</u>
Purge Start: (Date) <u>4-16-91</u> (Time) <u>0740</u>	Purge End: (Date) <u>4-16-91</u> (Time) <u>1130</u>	Project No.: <u>407921</u>
Purged by: <u>John Boyd</u>		

Depth Measurement Ref. Point*: Northside of Casing TOC Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: - ND LNAFL Check (Y/N) DNAPL Check (Y/)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

Depth to LNAPL: NA Depth to Top and Bottom of Screen Interval 24' to 44'
 Depth to DNAPL: NA Orig. DTW: 27.90 Final DTW: _____
 LNAPL/DNAPL Thickness: NA LNAPL/DNAPL Sample and Volume: _____

Measured Well TD: 44.40
 (-) Orig. DTW: 27.90

(-) Wtr Col. Thick: 6.5 (x) 4 - 0.65 Gals/ft (=) 31.5 Gals/Csg Vol. (x) 3 Csg Vol. (=) 31.5 Total Purge Gals.
2 - 0.16
6 - 1.47
9 3/4 - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor Ter Centrifugal Pump
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) 3 1/2" Bailor Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: 2.5 gpm
 Weather: Light Drizzle (65 °F)

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake(ft)	Temp (°C)	pH (s.a)	Cond. (umhos/m)	Turbidity (NTa)	Other	Comment
0800		-								
0801					25.2	6.96	1060	5?		
0805		6			25.9	6.68	1000	60.5		
0810		10			25.7	6.59	1020	62.7		
0815		14			25.4	6.54	1040	60.0		
0823		20			25.9	6.58	1020	25.0		
0829		25			25.7	6.51	1000	17.5		Well going dry
0920		29			26.0	7.06	1050	16.00		
1046		35			26.8	7.01	1121	10.50		
1130					27.2	6.96	960	9.50		End of Sample

* All Depths in Feet Below Ref. Point on wellhead - generally Top of Casing (TOC)
 DTW = Depth To water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

FIGURE 5-6 b

MONITORING WELL SAMPLING LOG		Sample ID No.: MW4-07-01A
Installation: Sky Harbor	Coordinates	WELL NO.: MW4-07
HAZWRAP Contractor: JT Corp		Site: 4 (Pump)
Sample Start: (Date) 4-16-91 (Time) 1115	Sample End: (Date) 4-16-91 (Time) 1130	Project No.: 409721
Sampled by: John Boyd / Camie Davis		

Orig. SWL: 26.9 ft BTOC* Final SWL: 43.21 ft BTOC
 Screen Interval: 24 - 44 ft BTOC

Temp	pH	Cond.	Turbidity
27.2	6.86	960	9.5

Are parameters 20% of purge values? (Y) / N

Repurge Y / (N)

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Ter Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) 1 1/2" Teflon Bailor

Sample Equipment Decon'd? (Y) / N

If pump or discrete bailor; Depth(s) where pump set: _____ ft BT

Weather: High clouds, slight breeze (70 OF)

Lab Analyses: (Circle)

(VOA) (SVOA) (METALS) PEST/PCBS (TPH) CATIONS ANIONS T:

Others: _____

Metals: (Circle) (Filtered) Unfiltered Both

Field Dups.: Y / (N) Referee Dups.: Y / (N)

Comments:

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No: <u>MWS-01-01</u>
Installation: <u>Sky Harbor Air Base</u>		WELL NO.: <u>MWS-01</u>
HAZWRAP Contractor:		Site: <u>5</u>
Purge Start: (Date) <u>4/3/91</u> (Time) <u>1530</u>		Project No.:
Purge End: (Date) <u>4/3/91</u> (Time) <u>1800</u>		
Purged by: <u>GARDNER / BOWEN / TRUMAN</u>		

Depth Measurement Ref. Point* T.O.C Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: ND LNAPL Check (Y/N) ~~DNAPL~~ Check (Y/N) _____
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLINST INTERFACE PROBE MODEL 121

Depth to Top and Bottom of Screen Interval 50 / 100
 Depth to LNAPL: ND Depth to DNAPL: _____ Orig. DTW: 73.00 Final DTW: 72.98

LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.82 99.84 ⁴⁻⁵⁻⁹¹

(-) Orig. DTW: 73.00
 (-) Wtr Col. Thick.: 26.74 31.13 ⁴⁻⁵⁻⁹¹ Gals/ft (=) 51.2 Gals/Csg Vol. (x) Csg Vol. (=) 153.6 ⁴⁻⁵⁻⁹¹ Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 8" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Centrifugal Pump
 Tef
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BENNETT 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, WINDY, BREEZY (WIND OF)

Actual Time	Elapsed Time	Volts Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTU)	Other	Comment
1343	15	10	78.00	95	23.1	7.13	1230	19.89		
1348		20			22.7	7.12	1250	7.03		
1600		40			22.8	7.15	1250	7.90		
1610		60			22.7	7.12	1240	2.22		
1621		80			22.6	7.13	1240	1.12		
1654		100			22.4	7.13	1240	1.03		
1704		120			22.7	7.14	1240	0.44		
1715		140			22.5	7.12	1240	0.69		
1721		150		95	22.5	7.12	1240	0.35		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: <u>MW5-01-01</u>
Installation: <u>SPY HAWK ANK BASE</u>		WELL NO: <u>MW5-01</u>
HAZWRAP Contractor: <u>IT CORPORATION</u>		Site: <u>5</u>
Sample Start: (Date) <u>4/2/91</u> (Time) <u>1740</u>		Project No: <u>409721-02.05</u>
Sample End: (Date) <u>4/2/91</u> (Time) <u>1800</u>		
Sampled by: <u>GARDIN / BOYD / TYBURN</u>		

Orig. SWL: 73.00 ft BTOC* Final SWL: 72.98 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.3</u>	<u>7.15</u>	<u>1240</u>	<u>31.5</u>

Are parameters 20% of purge values? Y N Except Turbidity

Repurge Y N

No. repurge volumes: NA

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) 1/4" Teflon Boller

Sample Equipment Decon'd? Y N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: SUNNY, BREEZY, WINDY (~ 85 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: NITRATE / NITRITE

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y N Referee Dups: Y N

Comments:

COLLECTED SAMPLES AT 1745. COLLECTED EDGE POINTS (ALSO AT 1745) AT THIS WELL.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

FIGURE 5-6a

REV. DATE: MAY 1991

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-01-01A</u>
Installation: <u>Sky Harbor</u>	Coordinates	WELL NO.: <u>MWS01</u>
HAZWRAP Contractor: <u>JTC</u>		Site:
Purge Start: (Date) <u>4-16-91</u> (Time)	Purge End: (Date) <u>4-16-91</u> (Time) <u>1535</u>	Project No.: <u>409721</u>
Purged by: <u>John Beard, Curtis Davis</u>		

Depth Measurement Ref. Point*: TOC Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: ND LNAPL Check (Y/N) DNAPL Check (Y/ND)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
Solinst Interface Probe

Depth to LNAPL: NA Depth to Top and Bottom of Screen Interval: 50/100
 Depth to DNAPL: NA Orig. DTW: 68.95 Final DTW: 68.85
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.74
 (-) Orig. DTW: 68.95

(-) Wtr Col. Thick.: 30.74 (x) 2" - 0.16 Gals/ft (-) 58.8 Gals/Csg Vol. (x) 3 Csg Vol. (-) 176 Total Purge Gals.
4" - 0.65
6" - 1.47
9 1/2" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC SS
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Bennett Pump 180 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: 1.6 gpm
 Weather: Partly Cloudy, Slight Humidity (80 °F)

Actual Time	Elapsed Time	Vols. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Conc. (µmhos/m)	Turbidity (NTa)	Other	Comment
1350										
1400		20			23.3	6.92	1300	69		
1414		40			23.9	6.79	1290	20		
1425		60			23.8	6.89	1280	20		
1438		80			23.0	6.86	1280	20		
1449		100			23.5	6.85	1270	29		
1459		120			23.5	6.82	1250	11		
1509		140			23.5	6.80	1260	30		
1521		160			23.4	6.80	1240	15		
1531		178			23.2	6.86	1260	13		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

FIGURE 5-6 b

MONITORING WELL SAMPLING LOG		Sample ID No.: mws-01-01A
Installation: Sky Harbor		WELL NO.: mws-01
HAZWRAP Contractor: J Corp		Site: 3
Sample Start (Date): 4-16-91	(Time): 1545	Project No.: 409721
Sampled by: John Boyd, Cindy Dam		Sample End (Date): 4-16-91
		(Time): 1605

Orig. SWL: 68.95 ft BTOC* Final SWL: 66.85 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.5	6.90	120	6.34

Are parameters 20% of purge values? Y/N

Repurge Y/N

No. repurge volumes: NA

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) 1 1/2" Teflon Baller

Sample Equipment Decon'd? Y/N

If pump or discrete baller; Depth(s) where pump set: 95 ft BTOC

Weather: cloudy, humid (85 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TC

Others: Nitrate/Nitrite

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y/N Referee Dups: Y/N

Comments:

mws-01, field duplicates and rinseate samples taken
samples and dup taken at 1545
Rinseate - 1630

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG

Sample ID No: MWS-01-02
 WELL NO: MWS-01
 Installation: Sky Harbor ANG Site: Base Ground Water
 HAZWRAP Contractor: TI Corporation Project No: 409721-02.05
 Purge Start: (Date) 6/25/91 (Time) 1402 Purge End: (Date) 6/27/91 (Time) 1615
 Purged by: GARDNER/SANDERS

Depth Measurement Ref. Point: T.O.C. Well Csg ID: 2' (4) 6' Other _____
 Well Hdspace/Odor: ~0.2m (Mn Pb-10) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLVENT INTERFACIAL PHASE MODEL

Depth to Top and Bottom of Screen Interval ~SD/100 ft
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 72.88 Final DTW: 72.90
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 79.78
 (-) Orig. DTW: 72.88

(-) Wtr Col. Thick: 26.9 (x) Gals/ft (-) 51.4 Gals/Csg Vol. (x) 3 Csg Vol. (-) 15.4 Total Purge Gals.
 2' - 0.16
 4' - 0.65
 6' - 1.47
~10' - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BEAWEET MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm

Weather: Sunny, Breezy, HOT (°F)

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTU)	Other	Comment
1401		10	72.88	~80 ft	23.8	6.87	1080	4.24		
1414		20			23.7	6.90	1080	4.31		
1425		40			23.6	6.89	1080	3.30		
1438		60			23.7	6.89	1080	3.43		
1450		80			23.7	6.89	1070	2.58		
1502		100			23.9	6.91	1070	2.56		Change Air Solids At 150'
1515		120			23.8	6.96	1070	2.40		
1529		140			23.7	6.91	1070	1.60		
1532		150			23.7	6.91	1070	1.30		
1615		157			23.6	6.91	1080	16.76		Post Sample Gals

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: <u>MWS-01-02</u>
Installation: <u>Sky Harbor Area</u>		WELL NO.: <u>MWS-01</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>PACIFIC WAREHOUSE</u>
Sample Start (Date) <u>6/25/91</u> (Time) <u>1555</u>	Sample End (Date) <u>6/25/91</u> (Time) <u>1615</u>	Project No.: <u>409321.02.01</u>
Sampled by: <u>GARDNER / SAMUEL</u>		

Orig. SWL: 72.90 ft BTOC* Final SWL: 72.90 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.6	6.91	1000	16.76

Are parameters 20% of purge values? Y/N (EXCEPT TURBIDITY)

Repurge Y/N

No. repurge volumes: _____

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y/N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: SWAMPY, BREEZY, HOT (≈ °F)

Lab Analyses: (Circle)
VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TC
 Others: VINYL CHLORIDE, NITRATE/NITRITE, TOPb

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y/N Referee Dups: Y/N

Comments:
Sample MWS-01-02 COLLECTED AT 1555 HOURS.
CONDUCTED EQUIPMENT FAILURE QC-BASD COLLECTED AT 1630 HOURS.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>ALWS-02-02</u>
Installation: <u>Sky Harbor ANG</u>		WELL NO: <u>ALWS-02</u>
HAZWRAP Contractor: <u>TT Corporation</u>		Site: <u>San Antonio Well</u>
Purge Start: (Date) <u>6/29/91</u> (Time) <u>1016</u>	Purge End: (Date) <u>6/29/91</u> (Time) <u>1255</u>	Project No: <u>409321-02-05</u>
Purged by: <u>GARDINER / SANCHEZ</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well HdSPACE/Odor: NO.4 PEN (4.4% PI-10) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLINST INTERFAS PROBE MODEL

Depth to Top and Bottom of Screen Interval: 4 SD-100A
 Depth to LNAPL: N/A Depth to DNAPL: N/A Orig. DTW: 70.99 Final DTW: N/A - Meas
 LNAPL/DNAPL Thickness: NO LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 99.89

(-) Orig. DTW: 70.99

(-) Wtr Col. Thick: 28.9 (x) 2" - 0.16 4" - 0.65 6" - 1.47 10" - 1.91 Gals/ft (-) 55.2 Gals/Csg Vol. (x) 3 Csg Vol. (-) ~156 Total Purge Gals.

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Centrifugal Pump Tef PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Purging Equipment (Make, Model, etc.) BENNETT MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm

Weather: Sunny, Breezy, Hot (100°F)

1016

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond (µmhos/cm)	Turbidity (NTU)	Other	Comment
1024		10	70.99	~80.4	23.5	7.16	1160	0.28		
1029		20			23.4	7.12	1160	0.51		
1041		40			23.3	7.11	1160	0.93		
1053		60			23.3	7.12	1170	0.51		
1105		80			23.3	7.12	1160	0.91		
1116		100			23.4	7.12	1170	0.40		1117 - Sample Collected
1129		120			23.4	7.10	1170	0.54		
1141		140			23.4	7.14	1170	0.44		
1154		160			23.4	7.12	1170	0.48		
1255		165			23.7	7.14	1130	57.4		POST-SAMPLE GALS

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

SAC - ALD

REV. DATE: MAY 198

MONITORING WELL SAMPLING LOG

Sample ID No: MUS-02-02

WELL NO: MUS-02

Installation: Sky Hoopoe Arch

Site: DeWitts Mill

HAZWRAP Contractor: IT Corporation

Project No.: 409321.02.05

Sample Start: (Date) 6/29/91 (Time) 1220

Sample End: (Date) 6/29/91 (Time) 1255

Sampled by: GARDNER / SAMUEL

Orig. SWL: 30.99 ft BTOC* Final SWL: N/A - water out ft BTOC

Screen Interval: ~ 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.9</u>	<u>7.14</u>	<u>115</u>	<u>59.4</u>

Are parameters 20% of purge values? Y/N (EXCEPT TURBIDITY)

Repurge Y/N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Tef Centrifugal Pump PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y/N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: SUNNY, BREEZY, HOT (= 105 °F)

Lab Analyzes: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS

Others: VINYL CHLORIDE; NITRATE/NITRITE; TOTP

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y/N Referee Dups: Y/N

Comments:

Sample MUS-02-02 COLLECTED AT 1220 HOURS.
FIELD DUPLICATE SAMPLE COLLECTED AT 1240 HOURS.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No: <u>MWS-03-02</u>
Installation: <u>Sky Harbor ANG</u>		WELL NO: <u>MWS-03</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Barron's Well</u>
Purge Start: (Date) <u>6/27/91</u> (Time) <u>0635</u>	Purge End: (Date) <u>6/29/91</u> (Time) <u>0900</u>	Project No: <u>409721-02-05</u>
Purged by: <u>GARDNER / SANCHEZ</u>		

Depth Measurement Ref. Point: T.O.C. Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: 11.0cm (Max 1-100) LNAPL Check (Y/N) ~~DNAPL Check (Y/N) N~~
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc.)
SOLINET INTERLINE PROBE MODEL

Depth to Top and Bottom of Screen Interval: 50/100 ft.
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 72.30 Final DTW: NA - Meter - Pump - Property
 LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.80
 (-) Orig. DTW: 72.30

(-) Wtr Col. Thick: 27.5 (x) 2" - 0.16 4" - 0.65 6" - 1.47 10" - 1.91 Gals/ft (=) 52.5 Gals/Csg Vol. (x) 3 Csg Vol. (=) 158 Total Purge Gals.

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BEANETT MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg. Purge Rate: ~ 2 gpm
 Weather: Sunny, Breeze, Hot (Summer) (= 85° F)
0635

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTs)	Other	Comment
0647		10	72.30	~80 ft.	22.6	6.95	1170	1.49		
0648		20			22.6	7.11	1180	0.99		
0700		40			22.5	7.05	1180	0.81		
0711		60			22.5	7.08	1170	1.04		
0713		80			22.6	7.10	1190	0.59		ALL - Large Clumps
0726		100			22.7	7.10	1190	0.50		
0748		120			22.5	7.10	1190	0.68		
0800		140			22.5	7.11	1190	0.74		
0812		160			22.5	7.10	1190	0.73		
0900		163			22.7	7.03	1160	97.5		Post-Sample Lead

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

0635 - SAT. A.M. 7

REV. DATE: MAY 19

MONITORING WELL SAMPLING LOG

Sample ID No: MWS-03-02

WELL NO: MWS-03

Installation: Sky Harbor Area

Site: Background Well

HAZWRAP Contractor: LY Corporation

Project No: 409721.02.01

Sample Start: (Date) 6/29/01 (Time) 0835

Sample End: (Date) 6/29/01 (Time) 0900

Sampled by: Gardner / Samirza

Orig. SWL: 72.30 ft BTOC Final SWL: N/A - screen not from program ft BTOC
Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
22.7	7.03	1160	97.5

Are parameters 20% of purge values? Y / N (Except Turbidity)

Repurge Y / N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
Tef Centrifugal Pump
PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y / N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC

Weather: Sunny, Breezy, Hot (= 90 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
Others: Vanil Chloride, Nitrate/Nitrite, TOPb

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y / N Referee Dups: Y / N

Comments:

Sample MWS-03-02 Collected at 0835 Hours.

*BTOC = Below Top of Casing (or other measurement reference point)
SWL = Static Water Level

MONITORING WELL PURGING LOG		Sample ID No.: <u>MWS-04-02</u>
Installation: <u>Sky Harbor ANG</u>		WELL NO.: <u>MWS-04</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>Background Well</u>
Purge Start: (Date) <u>6/29/81</u> (Time) <u>0720</u>	Purge End: (Date) <u>6/29/81</u> (Time) <u>01130</u>	Project No.: <u>409721-02.05</u>
Purged by: <u>GARDNER / SANCHEZ</u>		

Depth Measurement Ref. Point = T.O.C. Well Csg ID: 2" 4 6" Other _____
 Well Hdspace/Odor: ~72 feet (HWS-15-10) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLINGT INSTRUMENTS PROBE MODEL

Depth to Top and Bottom of Screen Interval ~ 0-100 ft.
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 72.45 Final DTW: 72.77
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.82
 (-) Orig. DTW: 72.45

(-) Wtr Col. Thick: 27.37 (x) 72.45 Gals/ft (=) 52.3 Gals/Csg Vol. (x) 3 Csg Vol. (=) ~157 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
~ 12" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BEANJET MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, BREEZ, HOT (~ 95°F)
0730

Actual Time	Elapsed Time	Vois Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond (µmhos/cm)	Turbidity (NTs)	Other	Comment
0720		15	72.45	~ 80 ft.	23.3	7.02	1120	1.50		
0936		30			23.1	7.16	1190	0.82		
0947		50			22.0	7.08	1180	1.33		
1000		70			23.0	7.10	1180	0.90		
1011		90			23.0	7.13	1180	1.25		1021 - <u>Cond. & Turbidity</u>
1024		110			23.1	7.09	1180	0.29		
1038	135	125			23.1	7.13	1180	1.43		
1057		150			23.0	7.12	1180	0.92		
1056		155			23.0	7.13	1180	0.62		
1130		158			23.5	7.07	1190	26.7		Pos. Sample Cont.

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG

Installation: <u>Six Hoop Ash</u>	Sample ID No.: <u>MWS-04-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>	WELL NO.: <u>MWS-04</u>
Sample Start: (Date) <u>6/20/91</u> (Time) <u>1115</u>	Site: <u>Barrow L250</u>
Sample End: (Date) <u>6/20/91</u> (Time) <u>1130</u>	Project No.: <u>409321.02.02</u>
Sampled by: <u>GARDNER / SAMUEL</u>	

Orig. SWL: 72.45 ft BTOC* Final SWL: 72.93 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.3</u>	<u>8.07</u>	<u>190</u>	<u>26.7</u>

Are parameters 20% of purge values? Y / N (Except Turbidity)

Repurge Y / N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y / N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTO

Weather: SUNNY, BREEZE, HOT (≈ 95 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VIOL CHEMICALS; TDPb

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y / N Referee Dups: Y / N

Comments:

Sample MWS-04-02 COLLECTED AT 1115 HOURS

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: PS-02-02
Installation: <u>SEY HARBOR ANG</u>		WELL NO.: PS-02
HAZWRAP Contractor: <u>TY CORPORATION</u>		Site: <u>Brown Ground Pinnacles</u>
Purge Start: (Date) <u>6/30/91</u> (Time) <u>0730</u>	Purge End: (Date) <u>6/30/91</u> (Time) <u>1720</u>	Project No: <u>409321.02.05</u>
Purged by: <u>GARDNER / SORVEDA</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: ~50 ppm (Mn PI-10) LNAPL Check (Y/N) DNAPL Check (Y/N) NA
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLINET INTERPRETATION PRIZE MODEL

Depth to Top and Bottom of Screen Interval ~50-100 ft.
 Depth to LNAPL: A/D Depth to DNAPL: NA Orig. DTW: 71.40 Final DTW: NA
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 99.86

(-) Orig. DTW: NA 99.86
71.40

(-) Wtr Col. Thick: 28.46 (x) Gals/ft (= 54.4) Gals/Csg Vol. (x) 3 Csg Vol. (=) 163 Total Purge Gals.
~10" = 1.91
 2" - 0.16
 4" - 0.65
 6" - 1.47

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Ter Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/Displacement Pump Other _____

Purging Equipment (Make, Model, etc.) Beckett Model 1200 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Aveg Purge Rate: ~2 NA gpm
 Weather: Sunny, Breezy, Hot (95°F)

Actual Time	Elapsed Time	Vois. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/m)	Turbidity (NTs)	Other	Comment
0750		5	71.40	NA	22.1	6.68	1230	127.7		
0815		10			22.2	6.90	1240	181.2		
0826		25			22.2	6.90	1250	NA (2000)		
0855	0855	20			22.3	6.90	1250	2000		
0914		25			22.2	6.76	1240	7300		
0959		35			22.3	6.97	1260	93.1		
1026		45			22.3	6.97	1250	7200		
1101		55			22.3	6.98	1240	7300		
1120		57			22.6	6.98	1250	7200		Post Sample Gals

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

REV. DATE: MAY 199

MONITORING WELL SAMPLING LOG

Sample ID No.: PS-02-02
WELL NO.: PS-02
Installation: Sky Harbor Airb
Site: Bremner Piers
HAZWRAP Contractor: IT Construction
Project No.: 40921.02.02
Sample Start: (Date) 6/30/91 (Time) 1110
Sample End: (Date) 6/30/91 (Time) 1120
Sampled by: Gardner / Samir

Orig. SWL: 71.40 ft BTOC* Final SWL: N/A (near out) ft BTOC
 Screen Interval: ~ 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
22.6	6.98	1150	> 200

Are parameters 20% of purge values? Y / N

Repurge Y / N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Ter Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y / N

If pump or discrete bailer; Depth(s) where pump set: _____ ft BTOC

Weather: SWIFT, BREEZY, HOT (≈ 105 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: Vinyl Chloride ; TO Pb

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y / N Referee Dups: Y / N

Comments:

PS-02-02
~~SAMPLE PS-02-02~~ COLLECTED AT 1110 HOURS
 RINSATE QC-EP 35 COLLECTED AT 1130 HOURS
 PIERMETER WITH BALLER OF APPROX ONE WELL VOLUME PER VARIANCE
 ALLOWED BY HAZWRAP - THIS IS DUE TO SMALL DIAMETER OF PIERMETER (~2")
 & QUICK STOPPING/FIELD PARAMETERS (BASED ON 1-INCH I.D. BALLER)

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>MW1-02-02</u>
Installation: <u>SKY HARBOUR ANG</u>		WELL NO.: <u>MW1-02</u>
HAZWRAP Contractor: <u>TI CORPORATION</u>		Site: <u>1</u>
Purge Start: (Date) <u>6/25/91</u> (Time) <u>0830</u>	Project No.: <u>409721.02.05</u>	
Purge End: (Date) <u>6/25/91</u> (Time) <u>1210</u>		
Purged by: <u>GARDINER / SANCHEZ</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2' (4) 6' Other _____
 Well Hdspace/Odor: 40.2 cm (15.8") (PE-101) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLVENT INTERFACIAL PROBE MODEL

Depth to Top and Bottom of Screen Interval 50/100 ft
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 73.34 Final DTW: 73.40
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 99.32
 (-) Orig. DTW: 73.34

(-) Wtr Col. Thick: 25.98(x) 2' - 0.16 4' - 0.65 6' - 1.47 10' - 1.91 Gals/ft (=) 49.6 Gals/Csg Vol. (x) 3 Csg Vol. (=) ~149 Total Purge Gals.
 1
2
3
4
5

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BEANETT MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, BREEZY, HOT (at 100 OF)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.p)	Cond. (µmhos/cm)	Turbidity (NTU)	Other	Comment
0830	2 Start		73.34	~ 80 ft	NA					Empty water at 0930 - L.C.M. A.R.L.
1018	7	10			23.7	6.90	1130	0.45		
1023		20			23.5	7.02	1130	0.48		
1025		40			23.5	7.03	1130	0.51		
1049		60			23.6	7.05	1130	0.56		
1100		80			23.5	7.02	1130	0.34		
1114		100			23.6	6.99	1130	0.34		1104 - CHMICAL CONTAMINATION
1126		120			23.6	7.03	1130	0.32		
1137		140			23.5	6.99	1130	0.31		
1143		150			23.5	7.00	1130	0.30		
1210		160			23.4	7.01	1150	0.401		1200 - Sample 1210 - GARD SANCHEZ

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No: <u>MW1-02-02</u>
Installation: <u>Sky Harbor Avila</u>		WELL NO: <u>MW1-02</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>1</u>
Sample Start: (Date) <u>6/25/91</u> (Time) <u>1200</u>	Project No.: <u>409321.02.05</u>	
Sampled by: <u>GARDNER / SAMUELO</u>		Sample End: (Date) <u>6/25/91</u> (Time) <u>1210</u>

Orig. SWL: 73.34 ft BTOC* Final SWL: 73.40 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.7</u>	<u>7.01</u>	<u>1150</u>	<u>4.81</u>

Are parameters 20% of purge values? Y N (EXCEPT TURBIDITY)
 Repurge Y/ N
 No. repurge volumes: _____

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y N
 If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC
 Weather: SNOWY, BREEZY, HOT (≈ 100 °F)

Lab Analyses: (Circle)
 VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VINYL CHLORIDE

Metals: (Circle) Filtered Unfiltered Both
 Field Dups: Y/N Reference Dups: Y/ N

Comments:
SAMPLE MW1-02-02 COLLECTED AT 1200 HOURS.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG

Sample ID No: MW2-02-02
 WELL NO: MW2-02
 Installation: SKY HARBOUR ANG Site: 2
 HAZWRAP Contractor: TI CORPORATION Project No: 409721-02-05
 Purge Start: (Date) 6/26/91 (Time) 1330 Purge End: (Date) 6/26/91 (Time) 1610
 Purged by: GARDNER/SANDERSON

Depth Measurement Ref. Point: T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: ~0.2 ppm (yuck fluid) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLVENT INTERFERE PROBE MODEL

Depth to Top and Bottom of Screen Interval: 50 - 100 ft
 Depth to LNAPL: NP Depth to DNAPL: N/A Orig. DTW: 71.64 Final DTW: WATER TABLE AS FOUND - 71.64
 LNAPL/DNAPL Thickness: N/A LNAPL/DNAPL Sample and Volume: N/A
 Measured Well TD: 99.86
 (-) Orig. DTW: 71.64

(-) Wtr Col. Thick: 28.22 (x) Gals/ft (-) 53.9 Gals/Csg Vol. (x) 3 Csg Vol. (x) 162 Total Purge Gals.
 2" - 0.16
 4" - 0.65
 6" - 1.47
 ~ 10" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BEAUMONT MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, BREEZY, HOT (of)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.s.)	Cond (µmhos/cm)	Turbidity (NTU)	Other	Comment
1337		10	71.64	~ 80 ft	23.0	6.99	1170	2.49		
1344		20			22.9	7.03	1180	2.09		
1355		40			22.8	7.05	1180	1.97		
1407		60			22.8	7.06	1190	1.55		
1419		80			22.8	7.04	1180	1.40		
1431		100			22.9	7.05	1180	1.38		1432 - Check and retest
1441		120			22.4	7.06	1180	1.98		
1455		140			22.7	7.06	1190	1.36		
1506		160			22.9	7.06	1180	1.40		
1610		166			23.0	7.01	1100	126.5		Top: HIGH pH Salinity

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

REV. DATE: MAY 199

MONITORING WELL SAMPLING LOG

Sample ID No.: MW2-02-02

WELL NO.: MW2-02

Installation: Sky Harbor Area

Site: 2

HAZWRAP Contractor: IT Corporation

Project No.: 409321.02.05

Sample Start: (Date) 6/25/91 (Time) 1515

Sample End: (Date) 6/26/91 (Time) 1610

Sampled by: GARDNER / SANCHEZ

Orig. SWL: 71.64 ft BTOC* Final SWL: \approx 71.8 ft BTOC

Screen Interval: \sim 50 - \sim 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.0	7.01	1100	126.5

Are parameters 20% of purge values? N EXCEPT TURBIDITY

Repurge Y/ N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS Ter PVC Centrifugal Pump

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y/ N

If pump or discrete bailer; Depth(s) where pump set: _____ ft BTOC

Weather: SWAMP, BREEZE, HOT (\approx °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS

Others: VINYL CHLORIDE

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y/ N Referee Dups: Y/ N

Comments:

SAMPLE MW2-02-02 COLLECTED AT 1515 HOURS.
ALSO COLLECTED MATRIX SPIKE (MW2-02-02-M) AT 1530 HOURS AND
MATRIX SPIKE DUPLICATE (MW2-02-02-MSD) AT 1545 HOURS FROM THE
WELL.

*BTOC = Below Top of Casing (or other measurement reference point)
SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>MW3-01-02</u>
Installation: <u>Sky Harbor ANG</u>		WELL NO.: <u>MW3-01</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>3</u>
Purge Start: (Date) <u>6/22/91</u> (Time) <u>1456</u>	Project No: <u>409721-02.05</u>	
Purge End: (Date) <u>6/27/91</u> (Time) <u>1705</u>		
Purged by: <u>GARDINER / SANCHEZ</u>		

Depth Measurement Ref. Point = T.O.C. Well Csg ID: 2" 6" Other _____
 Well Hdspace/Odor: ✓ 56.2m (HWS-10) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLINT INTERFERE PROBE MODEL

Depth to LNAPL: ND Depth to Top and Bottom of Screen Interval ~50-100 ft
 Depth to DNAPL: NA Orig. DTW: 72.64 Final DTW: 72.90
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 98.00
 (-) Orig. DTW: 72.64

(-) Wtr Col. Thick: 26.00(x) 2" - 0.16 4" - 0.65 6" - 1.47
 Gals/ft (=) 56.2 Gals/Csg Vol. (x) 3 Csg Vol. (=) 168.6 Total Purge Gals.

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BENNETT MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: SUNNY, BREEZY, HOT (°F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTU)	Other	Comment
1503		10	72.64	~ 80 ft	23.6	7.01	1150	0.85		
1509		20			23.4	7.02	1150	0.82		
1521		40			23.4	7.02	1160	0.31		
1533		60			23.4	7.03	1170	0.41		
1545		80			23.3	7.02	1170	0.38		
1600		100			23.3	7.04	1180	NA		NA → 1536 - Contaminated
1611		120			23.2	7.04	1180	0.57		
1623		140			23.2	7.05	1170	0.87		
1631		155			23.3	7.03	1170	0.58		
1700		157			23.6	7.06	1150	10.54		POST-SOURCE GALS

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

SAT PM

REV. DATE: MAY 19

MONITORING WELL SAMPLING LOG

Sample ID No: MW3-01-02

Installation: Sky Harbor Area

WELL NO.: MW3-01

Site: 3

HAZWRAP Contractor: IT Corporation

Project No.: 409721.02.0F

Sample Start: (Date) 6/29/91 (Time) 16:55 Sample End: (Date) 6/29/91 (Time) 17:00

Sampled by: Gardner / Samir

Orig. SWL: 72.64 ft BTOC* Final SWL: 72.90 ft BTOC

Screen Interval: ~ 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
27.6	7.06	1150	10.54

Are parameters 20% of purge values? N (except Turbidity)

Repurge Y N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
Ter Centrifugal Pump
PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y N

If pump or discrete baller; Depth(s) where pump set: _____ ft BTO

Weather: Sunny, Breezy, HOT (≈ 100°F)

Lab Analytes: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TOE

Others: Volatile Organics; TO Pb

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y N Referee Dups: Y N

Comments:

Sample MW3-01-02 collected at 16:55 hours
Four replicate samples collected here at 17:15 hours. (01-6234)

*BTOC = Below Top of Casing (or other measurement reference point)
SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No: <u>MW3-02-02</u>
Installation <u>Sky Harbor ANG</u>		WELL NO: <u>MW3-02</u>
HAZWRAP Contractor: <u>T Corporation</u>		Site: <u>3</u>
Purge Start: (Date) <u>6/20/91</u> (Time) <u>1310</u>	Purge End: (Date) <u>6/20/91</u> (Time) <u>1530</u>	Project No: <u>409721-02-05</u>
Purged by: <u>GARDINER / SANDERSON</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: W1-B2m (Hwy/PS-10) LNAPL Check (Y/N) DNAPL Check (Y/N) N
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLINOT INTERFERE PROBE MODEL

Depth to Top and Bottom of Screen Interval ~ 80-100 ft
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 70.31 Final DTW: 70.50

LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 99.64

(-) Orig. DTW: 70.31

(-) Wtr Col. Thick: 29.38 (x) 2" - 0.16 4" - 0.65 6" - 1.47 ~ 10" - 1.91 Gals/ft (-) 56.1 Gals/Csg Vol. (x) 3 Csg Vol. (-) ~ 168 Total Purge Gals.

Purge Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Tef Centrifugal Pump
 PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Purging Equipment (Make, Model, etc.) BEANETT MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm

Weather: SUNNY, BREEZY, HOT (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130)

Actual Time	Elapsed Time	Voils Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond (µmhos/m)	Turbidity (NTs)	Other	Comment
1318		10	72.77	~ 80 ft	23.2	7.12	1170	0.75		
1324		20			23.1	7.11	1170	1.03		
1335		40			23.1	7.12	1170	1.00		
1347		60			23.1	7.09	1170	0.43		
1359		80			23.2	7.10	1170	0.40		1406 Count Est. 2000
1412		100			23.1	7.09	1170	0.55		
1420		120			23.2	7.12	1170	0.48		
1432		140			23.2	7.09	1170	0.62		
1448		160			23.2	7.09	1170	0.46		
1452		165			23.1	7.10	1170	0.44		
1457		168			23.4	7.08	1180	19.65		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG

Sample ID No.: MW3-02-02

WELL NO.: MW3-02

Installation: Sky Harbor Ar16

Site: 3

HAZWRAP Contractor: IT Corporation

Project No.: 409321.02.05

Sample Start: (Date) 6/20/91 (Time) 1500

Sample End: (Date) 6/20/91 (Time) 1530

Sampled by: GARDNER / SANCHEZ

Orig. SWL: 70.31 ft BTOC* Final SWL: 70.50 ft BTOC

Screen Interval: ~ 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
23.4	7.08	1150	17.65

Are parameters 20% of purge values? N (EXCEPT TURBIDITY)

Repurge Y N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Ter Centrifugal Pump PVC

Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____

Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y N

If pump or discrete baller; Depth(s) where pump set: _____ ft BT.

Weather: SUNNY, BREEZE, HOT (≈ 100 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TC

Others: VINYL CHLORIDE; TO Pb

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y N Referee Dups: Y N

Comments:

Sample MW3-02-02 COLLECTED AT 1500 HOURS.
FIELD PURGE SAMPLE MW3-02-02-DUP COLLECTED AT 1515 HOURS.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

MONITORING WELL PURGING LOG

Sample ID No.: MW4-01-02
 WELL NO.: MW4-01
 Installation: Sky Harbor ANG Site: 4
 HAZWRAP Contractor: IT CORPORATION Project No.: 40921.02.05
 Purge Start: (Date) 6/29/91 (Time) 1025 Purge End: (Date) 6/29/91 (Time) 0955
 Purged by: GARDINES / SANCHEZ

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: 0.2 ft LNAPL Check (Y/N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLVENT INTERFERENCE PROBE MODEL

Depth to Top and Bottom of Screen Interval _____
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 23.43 Final DTW: _____

LNAPL/DNAPL Thickness: ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 42.86

(-) Orig. DTW: 23.43

(-) Wtr Col. Thick: 19.43 (x) 4 - 0.16 Gals/ft (=) 39.1 Gals/Csg Vol. (x) 3 Csg Vol. (=) 111.9 Total Purge Gals.
 6" = 1.47
 2" = 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Booster Model 6/29/91 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: no 1.1 NA gpm
 Weather: Sunny, Breeze, Hot (95°F)

Actual Time	Elapsed Time	Vols. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTs)	Other	Comment
1028		32.5	23.43	NA	25.2	7.02	2710	75.4		
1032		5			24.8	7.14	2730	7100		
1034		14			24.8	7.13	2700	7100		
1044		20			24.9	7.12	2660	7100		
1052		27			25.0	7.20	2580	71000		1053 - DRY
1056		27.5								DRY (1/2 gal)
1135										Sample Collected
6/29/91 0745		28			24.8	7.10	2650	27.2		Collect Sample at 1053 sample in

* All Depths in Feet Below Ref. Point on wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

Transmittance

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MW4-01-02</u>
Installation: <u>Sky Harbor Area</u>		WELL NO.: <u>MW4-01</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>4</u>
Sample Start: (Date) <u>6/29/91</u> (Time) <u>1235</u>	Project No.: <u>409321.02.02</u>	
Sample End: (Date) <u>6/29/91</u> (Time) <u>0935</u>		
Sampled by: <u>GARDNER / SAMUEL</u>		

Orig. SWL: 23.43 ft BTOC* Final SWL: 11A (DB) ft BTOC
 Screen Interval: _____ - _____ ft BTOC

Temp	pH	Cond.	Turbidity
<u>24.8</u>	<u>7.10</u>	<u>2650</u>	<u>24.2</u>

Are parameters 20% of purge values? Y / N (EXCEPT TURBIDITY)
 Repurge Y N
 No. repurge volumes: _____

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y / N
 If pump or discrete bailor; Depth(s) where pump set: _____ ft BTC
 Weather: SUNNY, BREEZY, HOT (= 95 °F)

Lab Analyses: (Circle)
 VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TD:
 Others: VENTIL CARBONATE
 Metals: (Circle) Filtered Unfiltered Both
 Field Dups: Y / N Referee Dups: Y / N

Comments:
Sample MW4-01-02 - Collected at 1235 Home (VOA & VENTIL CARBONATE ONLY - Resampler checked on 6/29/91). Sample MW4-01-0 Resampler collected at 0245 Home, 6/28/91.

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 199X

Sample ID No: MW4-02-02
 WELL NO.: MW4-02
 Installation: Sky Harbor ANG Site: 4
 HAZWRAP Contractor: IT Corporation Project No: 40921.02.05
 Purge Start: (Date) 6/29/91 (Time) 0908 Purge End: (Date) 6/29/91 (Time) 1012
 Purged by: GARDNER/SANDERS

Depth Measurement Ref. Point: T.O.C. Well Csg ID: 2' (4) 6' Other _____
 Well Hdspace/Odor: _____ LNAPL Check (Y/N) DNAPL Check (Y/N)
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)
SOLINST INTERLINE PROBE MODEL

Depth to Top and Bottom of Screen Interval _____
 Depth to LNAPL: N/D Depth to DNAPL: N/A Orig. DTW: 27.14 Final DTW: N/A (Dry)
 LNAPL/DNAPL Thickness: N/D LNAPL/DNAPL Sample and Volume: NA
 Measured Well TD: 50.61
 (-) Orig. DTW: 27.14

(-) Wtr Col. Thick: 23.77(x) Gals/ft (-) 44.83 Gals/Csg Vol. (x) 3 Csg Vol. (-) 134.5 Total Purge Gals.
 2' - 0.16
 4' - 0.65
 6' - 1.47
 8' - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) Briggs Model 1000 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: 28 L NA gpm
 Weather: Sunny, Breezy, Hot (at 95°F)
0908

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (s.a)	Cond. (µmhos/cm)	Turbidity (NTs)	Other	Comment
0911		2 1/2	27.14	NA	26.6	7.04	1050	21.9		
0914		6			26.1	7.20	1050	28.0		
0921		16 1/2			26.1	7.21	1050	64.0		
0934		25			25.8	7.28	1060	23.8		Well Head Dry - Water Sample Sec. out.
0959		27 1/2			26.3	7.38	1050	15.45		0940 RESTED WATER DRY 0950 RESTED DONT DRY POST SAMPLE WTR
1135		28			26.6	7.38	1050	6.50		

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

MONITORING WELL SAMPLING LOG		Sample ID No.: MW4-02-02
Installation: Sky Harbor Air 6		WELL NO.: MW4-02
HAZWRAP Contractor: IT Corporation		Site: 4
Sample Start: (Date) 6/27/91 (Time) 1135	Project No.: 409321.02.05	
Sampled by: GARDNER / SANCHEZ		Sample End: (Date) 6/27/91 (Time) 1145

Orig. SWL: 27.14 ft BTOC* Final SWL: N/A (28 ft BTOC)
 Screen Interval: _____ - _____ ft BTOC

Temp	pH	Cond.	Turbidity
26.6	8.38	1050	6.50

Are parameters 20% of purge values? Y N (EXCEPT TURBIDITY)

Repurge Y N

No. repurge volumes: _____

Sampling Method:

Submersible Pump Dedicated Bladder Pump Bladder Pump Bailor SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y N

If pump or discrete bailor; Depth(s) where pump set: _____ ft BTOC

Weather: SWIFT, BREEZY, HOT (≈ 95 °F)

Lab Analyses: (Circle)

VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: VINYL CHLORIDE

Metals: (Circle) Filtered Unfiltered Both

Field Dups: Y N Referee Dups: Y N

Comments:

SAMPLE MW4-02-02 COLLECTED AT 1135 HOURS
RESISTANCE CV-ER32 COLLECTED AT 1210 HOURS

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

REV. DATE: MAY 1990

MONITORING WELL PURGING LOG		Sample ID No.: <u>MLW5-01-02</u>
Installation: <u>Sky Harbor ANG</u>		WELL NO.: <u>MLW5-01</u>
HAZWRAP Contractor: <u>IT Corporation</u>		Site: <u>5</u>
Purge Start: (Date) <u>6/26/91</u> (Time) <u>0830</u>	Project No.: <u>409721.02.05</u>	
Purge End: (Date) <u>6/26/91</u> (Time) <u>1100</u>		
Purged by: <u>GARDNER / SWEENEY</u>		

Depth Measurement Ref. Point* T.O.C. Well Csg ID: 2" (4) 6" Other _____
 Well Hdspace/Odor: ✓ Clean (Max PI-100) LNAPL Check (Y/N) ~~DNAPL~~ Check (Y/N) ~~NA~~
 Equipment Used To Measure Thickness and Sample Free Product (Make, Model, etc)

SOLINOT INTERFERE PROBE MODEL

Depth to Top and Bottom of Screen Interval ~ 50-100 ft
 Depth to LNAPL: ND Depth to DNAPL: NA Orig. DTW: 72.27 Final DTW: 72.43
 LNAPL/DNAPL Thickness ND LNAPL/DNAPL Sample and Volume: NA

Measured Well TD: 100.68
 (-) Orig. DTW: 72.27

(-) Wtr Col. Thick: 20.41 (x) 4" - 0.65 Gals/ft (-) 54.3 Gals/Csg Vol. (x) 3 Csg Vol. (-) ~ 163 Total Purge Gals.
6" - 1.47
8" - 1.91

Purge Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Tef Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Purging Equipment (Make, Model, etc.) BRANIFF MODEL 1800 Purge Equipment Decon'd? (Y/N)

Purge Wtr Containerized? (Y/N) Avg Purge Rate: ~ 2 gpm
 Weather: Sunny, Breezy, Hot (°F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth To Wtr (ft)	Depth Of Pump Intake (ft)	Temp (°C)	pH (S.S)	Cond. (µmhos/cm)	Turbidity (NTU)	Other	Comment
0840		10	72.27	~ 20 ft	23.1	6.82	1070	0.76		
0846		20			23.0	6.95	1110	0.70		
0858		40			22.9	6.93	1150	0.68		
0911		60			22.8	7.00	1160	0.72		
0924		80			22.8	7.03	1160	0.69		0930 - <u>Checked Air to Top</u>
0936		100			22.8	7.05	1160	0.70		
0951		120			22.9	7.01	1170	0.60		
1004		140			22.9	7.00	1160	0.65		
1021		160			22.9	7.02	1170	0.63		ok. <u>See Sample Labels</u>
1100		165			23.1	6.99	1170	3.20		Port Sample <u>OK</u>

* All Depths in Feet Below Ref. Point on Wellhead - generally Top of Casing (TOC)
 DTW = Depth To Water LNAPL/DNAPL = Light or Dense Non-Aqueous Phase Liquid

Wagner

REV. DATE: MAY 19

MONITORING WELL SAMPLING LOG		Sample ID No.: <u>MWS-01-02</u>
Installation: <u>Sky Harbor Area</u>		WELL NO.: <u>MWS-01</u>
HAZWRAP Contractor: <u>IT Construction</u>		Site: <u>5</u>
Sample Start (Date) <u>6/26/01</u> (Time) <u>1045</u>	Project No.: <u>409321-02.05</u>	
Sampled by: <u>GARDNER / SAMUEL</u>		Sample End (Date) <u>6/26/01</u> (Time) <u>1100</u>

Orig. SWL: 72.27 ft BTOC* Final SWL: 72.43 ft BTOC
 Screen Interval: 50 - 100 ft BTOC

Temp	pH	Cond.	Turbidity
<u>23.1</u>	<u>6.99</u>	<u>1070</u>	<u>3.20</u>

Are parameters 20% of purge values? Y/N (Except Turb. O.M.)
 Repurge Y/N
 No. repurge volumes: _____

Sampling Method:
 Submersible Pump Dedicated Bladder Pump Bladder Pump Baller SS
 Ter Centrifugal Pump
 PVC
 Peristaltic Pump Hand Pump Gas Lift/ Displacement Pump Other _____
 Sampling Equipment (Make, Model, etc.) _____

Sample Equipment Decon'd? Y/N
 If pump or discrete baller; Depth(s) where pump set: _____ ft BTOC
 Weather: SWAMP, BREEZE, HOT (≈ °F)

Lab Analyses: (Circle)
 VOA SVOA METALS PEST/PCBS TPH CATIONS ANIONS TDS
 Others: NITRATE / NITRITE
 Metals: (Circle) Filtered Unfiltered Both
 Field Dups: Y/N Referee Dups: Y/N

Comments:
Sample MWS-01-02 collected at 1045 Hours
Equipment Reused RC-624 Collected at 1100 Hours

*BTOC = Below Top of Casing (or other measurement reference point)
 SWL = Static Water Level

APPENDIX I
SLUG TESTS AND ANALYSIS



By SWS Date 8-3-91 Subject SLUG TEST ANALYSIS - SKY HARBOR Sheet No. 1 of 9
 Chkd. By SAL Date 10-30-91 ANG BASE, PHOENIX, AZ Proj. No. 409271.07.09

PROBLEM: DETERMINE HYDRAULIC CONDUCTIVITY OF ALLUVIAL AQUIFER USING RISING HEAD SLUG TEST

APPROACH: SOLVE SLUG TEST ANALYSIS FOR UNCONFINED AQUIFER USING METHOD OF BOWER AND RICE (1976), ATTACHMENT 1.

BOWER AND RICE EQUATION:

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2L_e} \left(\frac{1}{t}\right) \ln\left(\frac{y_0}{y_t}\right) \quad \text{EQ 1.}$$

where:

K = hydraulic conductivity (L/T)

r_c = radius of well casing (L)

L_e = length of well screen open to aquifer (L)

y_0 = drawdown at time, $t=0$ (L)

y_t = drawdown at some later time, $t(L), (T)$

$\ln(R_e/r_w)$ = calculated term describing effective head loss dissipation into aquifer.

$$\ln(R_e/r_w) = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{A+B \times \ln\left(\frac{H-L_w}{r_w}\right)}{(L_e/r_w)} \right]^{-1} \quad \text{EQ 2}$$

where:

r_w = radius of the borehole (L)

H = saturated thickness of the aquifer (L)

A and B = graphically derived constants (unitless)

L_w = length of well screen below the water table (L)



By SJS Date 8-3-91 Subject SLUG TEST ANALYSIS - SKY HARBOR Sheet No. 2 of 9
 Chkd. By SM Date 10-30-91 ANG BASE, PHOENIX, AZ Proj. No. 409321.02.09

It is determined from literature and is estimated to be 350 ft
 (BROWN AND POOL, 1989)

Because the water level fluctuates within the screened interval in all wells the terms L_e and L_w are equivalent (see Figure 1).

Because the water level is within the screened interval, r_c in equation 1 has to be adjusted to account for porosity of filter pack.

$$r_c = [r_c^2 + n(r_w^2 - r_c^2)]^{1/2} \quad \text{EQ 3}$$

where:

n = filter pack porosity.

$r_c = 0.16$ FE. (well construction logs)

$n = 0.35$ assumed

$r_w = 0.40$ FT

$$r_c = [0.16^2 + 0.35(0.4^2 - 0.16^2)]^{1/2} = \underline{0.27 \text{ FEET}}$$

The empirical constants A and B are derived from Bouwer and Rice Figure 3. The quotient L_e/r_w is calculated and the values are read from the x-axis to their respective curves, and over to each vertical axis,

MWS-01
 $L_e/r_w = 26.9 / 0.4 \text{ FT}$
 $= 67.25$

MW1-02
 $L_e/r_w = 25.98 / 0.4 \text{ FT}$
 $= 64.95$

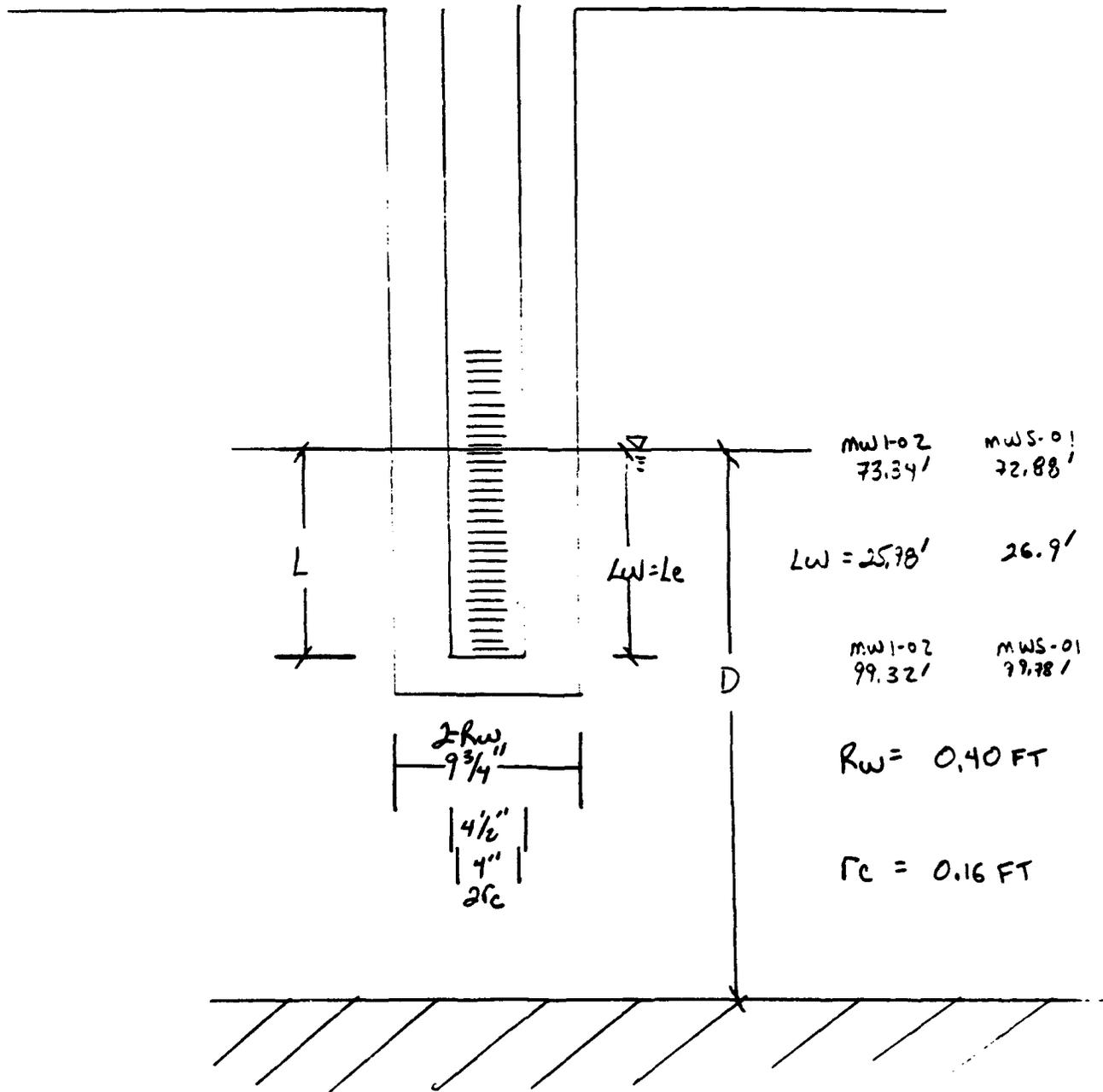
$A = 3.25$
 $B = 0.6$

$A = 3.25$
 $B = 0.6$



By SWS Date 8-3-91 Subject SLUG TEST ANALYSIS - SKY HARBOR Sheet No. 3 of 9
 Chkd. By SAL Date 10-30-91 ANK BASE, PHOENIX, AZ Proj. No. 409321.12.09

FIGURE 1





By SWS Date 8-3-91 Subject SLUG TEST ANALYSIS - SKY HARBOR Sheet No. 4 of 9
 Chkd. By SAL Date 10-10-91 AND BASE, PHOENIX, AZ Proj. No. 409721.02.00

To find y_0 , y_t , and t , a graph of logarithm drawdown (y) versus time is constructed, See FIGURES 2 AND 3.

USING EQUATION 2

$$\ln(R_e/r_w) = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{A+B \cdot \ln \left[\frac{H-L_w}{r_w} \right]}{(L_e/r_w)} \right]^{-1}$$

FOR MWS-01

$$\ln(R_e/r_w) = \left[\frac{1.1}{\ln(26.9/0.4)} + \frac{3.25 + 0.6 \times \ln \left[\frac{350 - 26.9}{0.4} \right]}{(26.9/0.4)} \right]^{-1}$$

7.26
67.25

$$\ln(R_e/r_w) = 2.70 \text{ unitless FOR MWS-01}$$

FOR MW1-02

$$\ln(R_e/r_w) = \left[\frac{1.1}{\ln(25.98/0.4)} + \frac{3.25 + 0.6 \times \ln \left[\frac{350 - 25.98}{0.4} \right]}{(25.98/0.4)} \right]^{-1}$$

0.26 0.11
64.95

$$\ln(R_e/r_w) = 2.70 \text{ unitless FOR MW1-02}$$



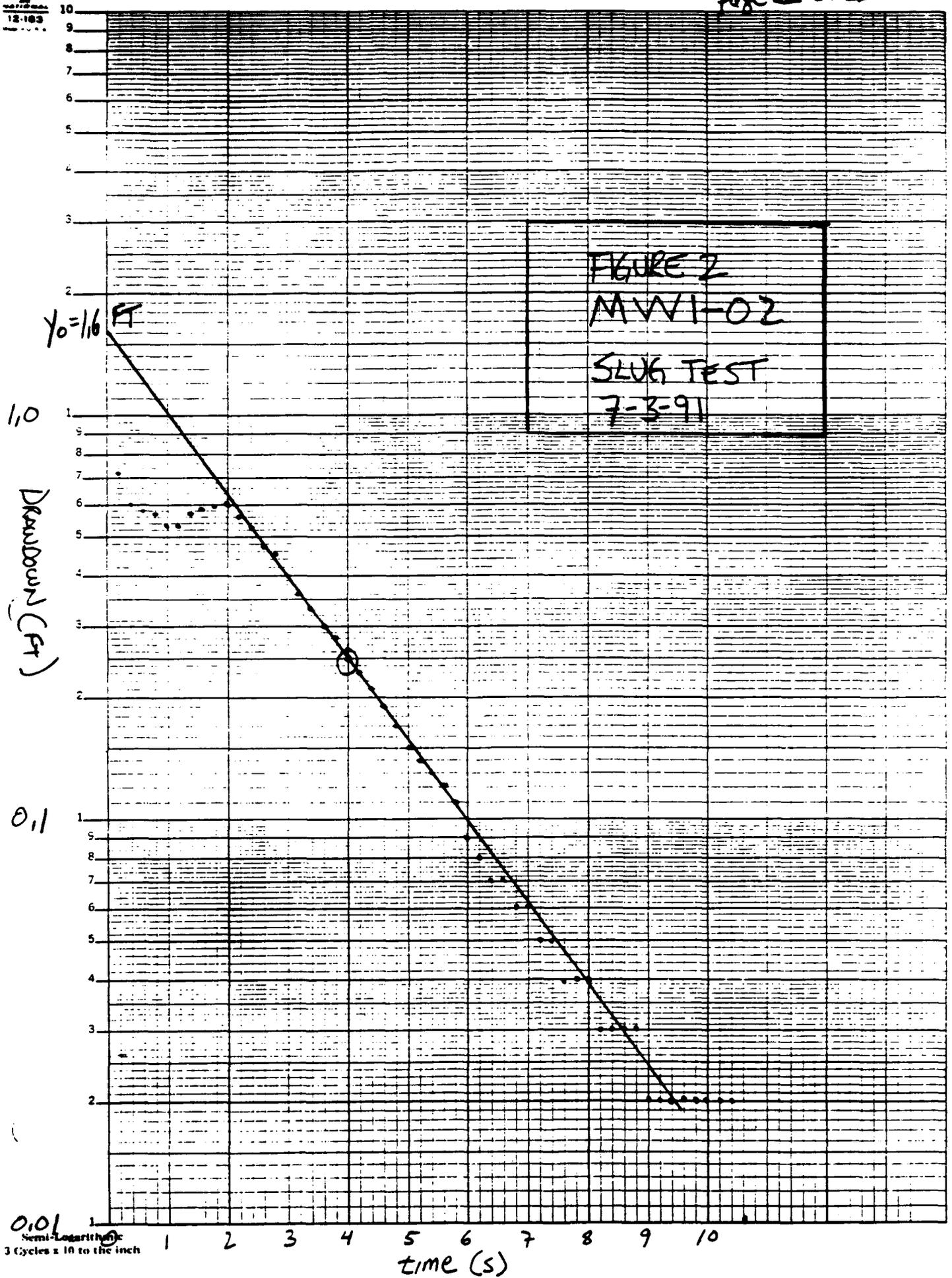
By SWS Date 8-3-91 Subject SLUS TEST ANALYSIS - SKY HARBOR Sheet No. 5 of 9
 Chkd. By SM Date 10-30-91 ANG BASE - PHOENIX, AZ Proj. No. 409721.02.09

MW1-02

Time	h (Ft)	drawdown (Ft)	time	h (Ft)	drawdown (Ft)
$t_0 = 10:53:12$	7.87		:19.0	7.70	0.17 .8
10:53:13.0	7.77	0.10	.2	7.72	0.15 5.0
13.2	7.52	0.35	.4	7.73	0.14 .2
13.4	7.29	0.58	.6	7.74	0.13 .4
13.6	7.16	0.71	.8	7.75	0.12 .6
begin 13.8	7.19	0.68	:20.0	7.76	0.11 .8
:14.0	7.16	0.71	.2	7.78	0.09 6.0
.2	7.04	0.83	.4	7.79	0.08 .2
.4	7.15	0.72	.6	7.80	0.07 .4
.6	7.27	0.60	.8	7.80	0.07 .6
.8	7.29	0.58	:21.0	7.81	0.06 .8
:15.0	7.30	0.57	.2	7.81	0.06 7.0
.2	7.34	0.53	.4	7.82	0.05 .2
.4	7.34	0.53	.6	7.82	0.05 .4
.6	7.30	0.57	.8	7.83	0.04 .6
.8	7.29	0.58	:22.0	7.83	0.04 .8
:16.0	7.28	0.59	.2	7.83	0.04 8.0
.2	7.27	0.60	.4	7.84	0.03 .2
.4	7.31	0.56	.6	7.84	0.03 .4
.6	7.35	0.52	.8	7.84	0.03 .6
.8	7.40	0.47	:23.0	7.84	0.03 .8
:17.0	7.44	0.43	.2	7.85	0.02 9.0
.2	7.47	0.40	.4	7.85	0.02 .2
.4	7.51	0.36	.6	7.85	0.02 .4
.6	7.54	0.33	.8	7.85	0.02 .6
.8	7.57	0.30	:24.0	7.85	0.02 .8
:18.0	7.59	0.28	.2	7.85	0.02 10.0
.2	7.62	0.25	.4	7.85	0.02 .2
.4	7.64	0.23	.6	7.85	0.02 .4
.6	7.66	0.21	.8	7.86	0.01 .6
.8	7.68	0.19			

Max drawdown test begin

0(t)



0.01
Semi-Logarithmic
3 Cycles x 10 to the inch

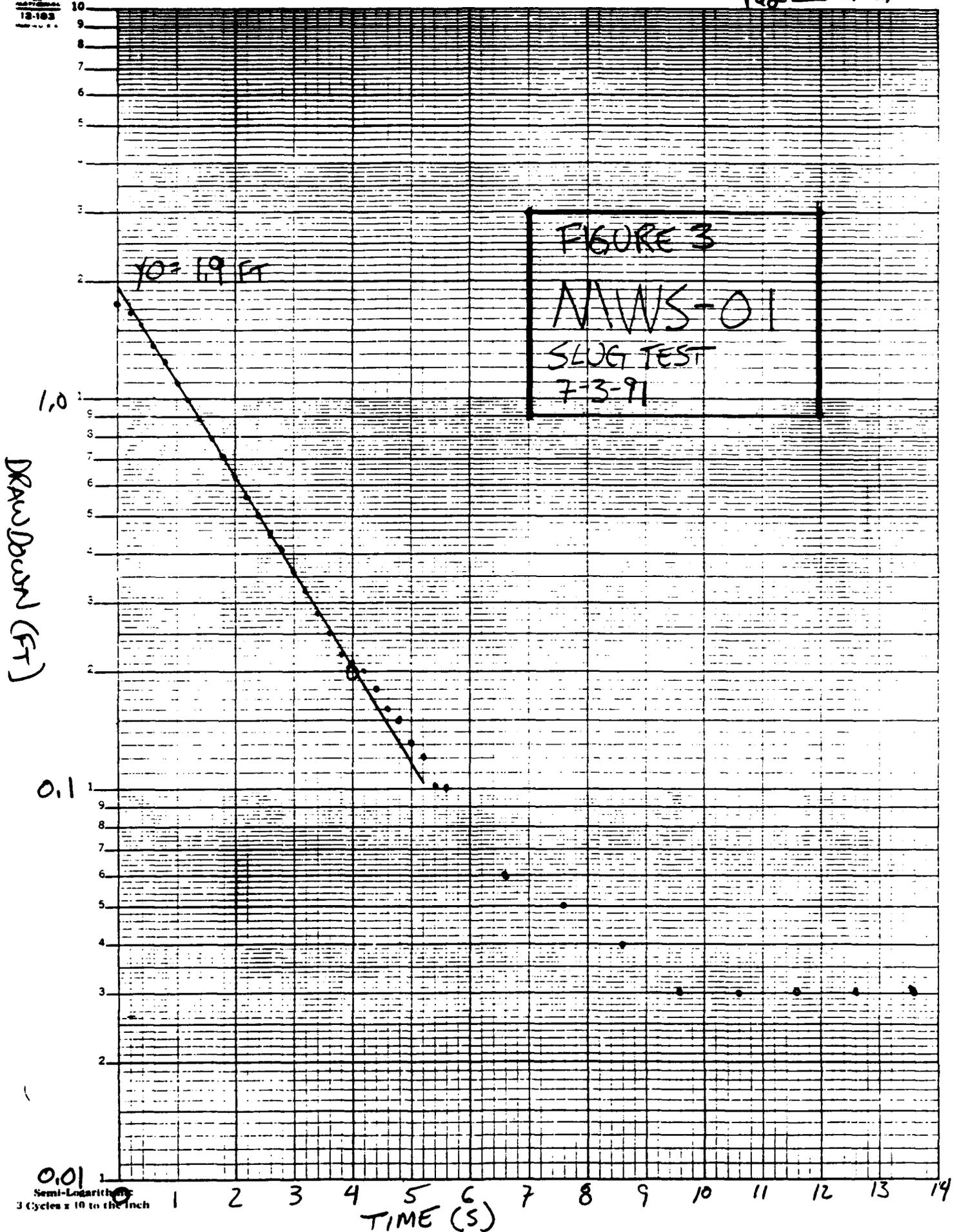


By SWS Date 8-3-91 Subject SLUG TEST ANALYSIS - SKY HARBOR Sheet No. 7 of 9
 Chkd. By SL Date 8-20-91 ANG BASE, PHOENIX, AZ Proj. No. 401721.02.09

MWS-01

time	h (Ft)	drawdown (Ft)	time	h (Ft)	drawdown (Ft)
	11.85				
11:04:56.2	11.69	0.16	.6	10.86	0.99 1.2
.4	11.33	0.52	.8	10.97	0.88 1.4
.6	10.89	0.96	11:05:03.0	11.06	0.79 1.6
.8	10.61	1.24	.2	11.14	0.71 1.8
.57.0	10.39	1.46	.4	11.22	0.63 2.0
.2	10.22	1.63	.6	11.29	0.56 2.2
.4	10.25	1.60	.8	11.35	0.50 2.4
.6	10.50	1.35	05:04.0	11.40	0.45 2.6
.8	11.10	0.75	.2	11.44	0.41 2.8
58.0	11.72	0.13	.4	11.49	0.36 3
.2	11.76	0.09	.6	11.53	0.32 3.2
.4	11.35	0.50	.8	11.57	0.28 3.4
.6	10.86	0.99	:05.0	11.60	0.25 3.6
.8	10.53	1.32	.2	11.63	0.22 3.8
:59.0	10.53	1.32	.4	11.64	0.21 4.0
.2	10.77	1.08	.6	11.65	0.20 4.2
.4	11.25	0.60	.8	11.67	0.18 4.4
.6	11.53	0.32	:06.0	11.69	0.16 4.6
.8	11.28	0.57	.2	11.70	0.15 4.8
11:05:00.0	10.99	0.86	.4	11.72	0.13 5.0
.2	10.98	0.87	.6	11.73	0.12 5.2
.4	10.63	1.22	.8	11.75	0.10 5.4
.6	10.68	1.17	:07.0	11.75	0.10 5.6
.8	10.58	1.27	08.0	11.79	0.06 6.6
:01.00	10.33	1.52	09.0	11.80	0.05 7.6
begin	10.34	1.51	10.0	11.81	0.04 8.6
.4	10.09	1.76	11.0	11.82	0.03 9.6
.6	10.18	1.67	12.0	11.82	0.03 10.6
.8	10.31	1.54	13.0	11.82	0.03 11.6
:02.0	10.48	1.37	14.0	11.82	0.03 12.6
.2	10.62	1.23	15.0	11.83	0.03 13.6
.4	10.75	1.10	16.0	11.83	0.03 14.6

Max drawdown
begin test
(t)



0.01
Semi-Logarithmic
3 Cycles x 10 to the Inch



By JWS Date 8-3-91 Subject SLUG TEST ANALYSIS - SKY HARBOR Sheet No. 9 of 9
 Chtd. By SM Date 10-30-91 ANG BASE, PHOENIX, AZ Proj. No. 409721.02.09

FOR MWS-01

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2L_e} \left(\frac{1}{t}\right) \ln\left(\frac{Y_0}{Y_t}\right)$$

$$r_c = 0.27 \text{ FT}$$

$$\ln(R_e/r_w) = 2.70$$

$$L_e = 26.9 \text{ FT}$$

$$Y_0 = 1.9 \text{ FT}$$

$$Y_t = 0.2 \text{ FT}$$

$$t = 4 \text{ S}$$

$$K = \frac{0.27^2 (2.70)}{2(26.9 \text{ FT})} \cdot \frac{1}{4 \text{ S}} \cdot \ln\left(\frac{1.9 \text{ FT}}{0.2 \text{ FT}}\right)$$

2.25

$$= 2.06 \cdot 10^{-3} \text{ FT/S}$$

$$\times 12 \text{ in/FT} \times 2.54 \text{ cm/in} = \boxed{6.3 \cdot 10^{-2} \text{ CM/S} = K}$$

FOR MW1-02

$$r_c = 0.27 \text{ FT}$$

$$\ln R_e/r_w = 2.70$$

$$L_e = 25.98 \text{ FT}$$

$$Y_0 = 1.6 \text{ FT}$$

$$Y_t = 0.25 \text{ FT}$$

$$t = 4 \text{ S}$$

$$K = \frac{0.27^2 (2.70)}{2(25.98)} \cdot \frac{1}{4 \text{ S}} \cdot \ln\left(\frac{1.6 \text{ FT}}{0.25 \text{ FT}}\right)$$

1.86

$$= 1.76 \cdot 10^{-3} \text{ FT/S}$$

$$\times 12 \text{ in/FT} \times 2.54 \text{ cm/in} = \boxed{5.3 \cdot 10^{-2} \text{ CM/S} = K}$$

A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers With Completely or Partially Penetrating Wells

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A procedure is presented for calculating the hydraulic conductivity of an aquifer near a well from the rate of rise of the water level in the well after a certain volume of water is suddenly removed. The calculation is based on the Thiem equation of steady state flow to a well. The effective radius R_e over which the head difference between the equilibrium water table in the aquifer and the water level in the well is dissipated was evaluated with a resistance network analog for a wide range of system geometries. An empirical equation relating R_e to the geometry of the well and aquifer was derived. The technique is applicable to completely or partially penetrating wells in unconfined aquifers. It can also be used for confined aquifers that receive water from the upper confining layer. The method's results are compatible with those obtained by other techniques for overlapping geometries.

With the slug test the hydraulic conductivity or transmissibility of an aquifer is determined from the rate of rise of the water level in a well after a certain volume or 'slug' of water is suddenly removed from the well. The slug test is simpler and quicker than the Theis pumping test because observation wells and pumping the well are not needed. With the slug test the portion of the aquifer 'sampled' for hydraulic conductivity is smaller than that for the pumping test even though with the latter, most of the head loss also occurs within a relatively small distance of the pumped well and the resulting transmissibility primarily reflects the aquifer conditions near the pumped well.

Essentially instantaneous lowering of the water level in a well can be achieved by quickly removing water with a bailer or by partially or completely submerging an object in the water, letting the water level reach equilibrium, and then quickly removing the object. If the aquifer is very permeable, the water level in the well may rise very rapidly. Such rapid rises can be measured with sensitive pressure transducers and fast-response strip chart recorders or x-y plotters. Also it may be possible to isolate portions of the perforated or screened section of the well with special packers for the slug test. This not only reduces the inflow and hence the rate of rise of the water level in the well, but it also makes it possible to determine the vertical distribution of the hydraulic conductivity. Special packer techniques may have to be developed to obtain a good seal, especially for rough casings or perforations. Effective sealing may be achieved with relatively long sections of inflatable stoppers or tubing. The use of long sections of these materials would also reduce leakage flow from the rest of the well to the isolated section between packers. This flow can occur through gravel envelopes or other permeable zones surrounding the casing. Sections of inflatable tubing may have to be long enough to block off the entire part of the well not used for the slug test. High inflation pressures should be used to minimize volume changes in the tubing due to changing water pressures in the isolated section when the head is lowered.

So far, solutions for the slug test have been developed only for completely penetrating wells in confined aquifers. Cooper *et al.* [1967] derived an equation for the rise or fall of the water level in a well after sudden lowering or raising, respectively. Their equation was based on nonsteady flow to a pumped,

completely penetrating well, and the solution was expressed as a series of 'type curves' against which observed rates of water level rises were matched. Values for the transmissibility and storage coefficient were then evaluated from the curve parameter and horizontal-scale position of the type curve showing the best fit with the experimental data. Skibitzke [1958] developed an equation for calculating transmissibility from the recovery of the water level in a well that was repeatedly bailed. The technique is limited to wells in confined aquifers with sufficiently shallow water levels to permit short time intervals between bailing cycles [Lohman, 1972].

To use the slug test for partially penetrating or partially perforated wells in confined or unconfined aquifers, some solutions developed for the auger hole and piezometer techniques to measure soil hydraulic conductivity [Bouwer and Jackson, 1974] may be employed. However, the geometry of most groundwater wells is outside the range in geometry covered by the existing equations or tables for the auger hole or piezometer methods. For this reason, theory and equations are presented in this paper for slug tests on partially or completely penetrating wells in unconfined aquifers for a wide range of geometry conditions. The wells may be partially or completely perforated, screened, or otherwise open along their periphery. While the solutions are developed for unconfined aquifers, they may also be used for slug tests on wells in confined aquifers if water enters the aquifer from the upper confining layer through compression or leakage.

THEORY

Geometry and symbols of a well in an unconfined aquifer are shown in Figure 1. For the slug test the water level in the well is suddenly lowered, and the rate of rise of the water level is measured. The flow into the well at a particular value of y can be calculated by modifying the Thiem equation to

$$Q = 2\pi KL \frac{y}{\ln(R_e/r_w)} \quad (1)$$

where Q is the flow into the well (length³/time), K is the hydraulic conductivity of the aquifer (length/time), L is the height of the portion of well through which water enters (height of screen or perforated zone or of uncased portion of well), y is the vertical distance between water level in well and equilibrium water table in aquifer, R_e is the effective radius over which y is dissipated, and r_w is the horizontal distance

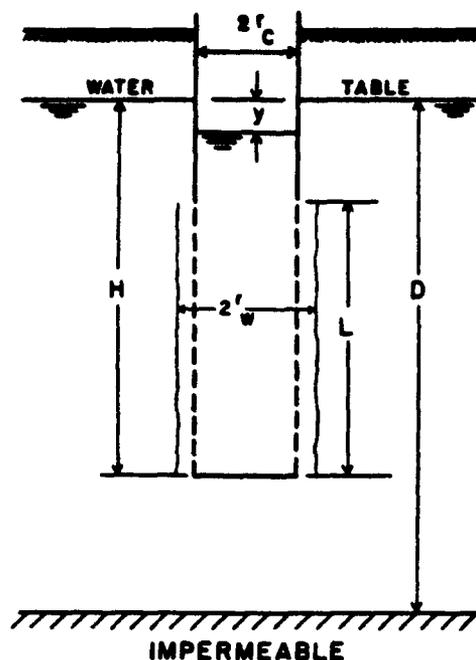


Fig. 1. Geometry and symbols of a partially penetrating, partially perforated well in unconfined aquifer with gravel pack or developed zone around perforated section.

from well center to original aquifer (well radius or radius of casing plus thickness of gravel envelope or developed zone).

The terms L , y , R_e , and r_w are all expressed in units of length. The effective radius R_e is the equivalent radial distance over which the head loss y is dissipated in the flow system. The value of R_e depends on the geometry of the flow system, and it was determined for different values of H , L , D , and r_w (Figure 1) with a resistance network analog, as will be discussed in the next section. Equation (1) is based on the assumptions that (1) drawdown of the water table around the well is negligible, (2) flow above the water table (in the capillary fringe) can be ignored, (3) head losses as water enters the well (well losses) are negligible, and (4) the aquifer is homogeneous and isotropic. These are the usual assumptions in the development of equations for pumped hole techniques [Bouwer and Jackson, 1974, and references therein].

The value of r_w in (1) represents the radial distance between the undisturbed aquifer and the well center. Thus r_w should include gravel envelopes or 'developed' zones if they are much more permeable than the aquifer itself (Figure 1).

The rate of rise, dy/dt , of the water level in the well after suddenly removing a slug of water can be related to the inflow Q by the equation

$$dy/dt = -Q/\pi r_c^2 \quad (2)$$

where πr_c^2 is the cross-sectional area of the well where the water level is rising. The minus sign in (2) is introduced because y decreases as t increases.

The term r_c is the inside radius of the casing if the water level is above the perforated or otherwise open portion of the well. If the water level is rising in the perforated section of the well, allowance should be made for the porosity outside the well casing if the hydraulic conductivity of the gravel envelope or developed zone is much higher than that of the aquifer. In that case the (open) porosity in the permeable zone must be included in the cross-sectional area of the well. For example, if the radius of the perforated casing is 20 cm and the casing is

surrounded by a 10-cm permeable gravel envelope with a porosity of 30%, r_c should be taken as $[20^2 + 0.30(30^2 - 20^2)]^{1/2} = 23.5$ cm to obtain the cross-sectional area of the well that relates Q to dy/dt . The value of r_w for this well section is 30 cm.

Combining (1) and (2) yields

$$\frac{1}{y} dy = -\frac{2KL}{r_c^2 \ln(R_e/r_w)} dt \quad (3)$$

which can be integrated to

$$\ln y = -\frac{2KLt}{r_c^2 \ln(R_e/r_w)} + \text{constant} \quad (4)$$

Applying this equation between limits y_0 at $t = 0$ and y_t at t and solving for K yield

$$K = \frac{r_c^2 \ln(R_e/r_w)}{2L} \frac{1}{t} \ln \frac{y_0}{y_t} \quad (5)$$

This equation enables K to be calculated from the rise of the water level in the well after suddenly removing a slug of water from the well. Since K , r_c , r_w , R_e , and L in (5) are constants, $(1/t) \ln y_0/y_t$ must also be constant. Thus field data should yield a straight line when they are plotted as $\ln y_t$ versus t . The term $(1/t) \ln y_0/y_t$ in (5) is then obtained from the best-fitting straight line in a plot of $\ln y$ versus t (see the example). The value of $\ln R_e/r_w$ is dependent on H , D , L , and r_w and can be evaluated from the analog results presented in the next section. The transmissibility T of the aquifer is calculated by multiplying (5) by the thickness D of the aquifer or

$$T = \frac{Dr_c^2 \ln(R_e/r_w)}{2L} \frac{1}{t} \ln \frac{y_0}{y_t} \quad (6)$$

This equation is based on the assumption that the aquifer is uniform with depth.

Equations (5) and (6) are dimensionally correct. Thus K and T are expressed in the same units as the length and time parameters in the equations.

EVALUATION OF R_e

Values of R_e , expressed as $\ln R_e/r_w$, were determined with an electrical resistance network analog for different values of r_w , L , H , and D (Figure 1), using the same assumptions as those for (1). An axisymmetric sector of 1 rad was simulated by a network of electrical resistors. The vertical distance between the nodes was constant, but the radial distance between nodes increased with increasing distance from the center line (Figure 2). This yielded a network with the highest node density near the well, where the head loss was greatest, and a decreasing node density toward the outer reaches of the system. For a more detailed discussion of graded networks for representing axisymmetric flow systems, see Liebmann [1950] and Bouwer [1960].

The radial extent of the medium represented on the analog was more than 60,000 times the largest r_w value used in the analyses. Thus the radial extent of the analog system was essentially infinite, as evidenced by the fact that a reduction in radial extent by several nodes did not have a measurable effect on the observed value of R_e .

The value of R_e for an infinitely deep aquifer ($D = \infty$) was determined by simulating an impermeable and then an infinitely permeable layer at a certain value of D . If this value of D is taken to be sufficiently large, the flow in the system when the layer at D is taken as being impermeable is only slightly

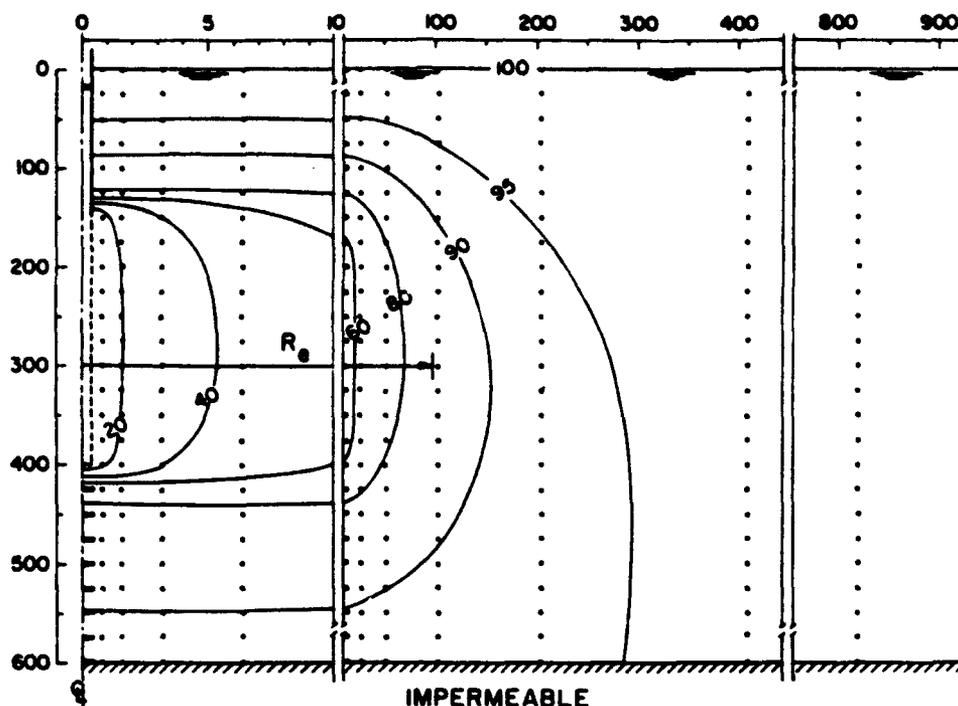


Fig. 2. Node arrangement (dots) for resistance network analog and potential distribution (indicated as percentages on equipotentials) for system with $L/r_w = 625$, $H/r_w = 1000$, and $D/r_w = 1500$. The numbers on the left and at the top of the figure are arbitrary length units (note breaks in horizontal scale).

less than the flow when the layer is taken as being infinitely permeable. The average of the two flows can then be taken as a good estimate of the flow that would occur if the aquifer were represented on the analog as being uniform to infinite depth [Bower, 1967]. This average flow was used to calculate R_e for $D = \infty$.

The analog analyses were performed by simulating a system with certain values of r_w , H , and D . The electrical current entering the 'well' was then measured for different values of L , ranging from near H to near 0. This was repeated for other values of r_w , H , and D . The condition where $L = H$ could not be simulated on the analog because it would mean a short between the water table as the source and the well as the sink. The electrical current flow in the analog was converted to volume per day, and $\ln R_e/r_w$ was evaluated with (1) for each combination of r_w , H , L , and D used in the analog.

For a given geometry described by r_w , H , and D , the current flow Q_i into the simulated well varied essentially linearly with L and could be described by the equation

$$Q_i = mL + n \quad (7)$$

Because of the linearity between Q_i and L the results of the analyses could be extrapolated to the condition $L = H$. The values of m in (7) appeared to vary inversely with $\ln H/r_w$. The values of n varied approximately linearly with $\ln [(D - H)/r_w]$, the slope A and intercept B in these relations being a function of L/r_w . This enabled the derivation of the following empirical equation relating $\ln R_e/r_w$ to the geometry of the system:

$$\ln \frac{R_e}{r_w} = \left[\frac{1.1}{\ln (H/r_w)} + \frac{A + B \ln [(D - H)/r_w]}{L/r_w} \right]^{-1} \quad (8)$$

In this equation, A and B are dimensionless coefficients that are functions of L/r_w , as shown in Figure 3. If $D \gg H$, an increase in D has no measurable effect on $\ln R_e/r_w$. The analog

results indicated that the effective upper limit of $\ln [(D - H)/r_w]$ is 6. Thus if D is considered infinity or $(D - H)/r_w$ is so large that $\ln [(D - H)/r_w]$ is greater than 6, a value of 6 should still be used for the term $\ln [(D - H)/r_w]$ in (8).

If $D = H$, the term $\ln [(D - H)/r_w]$ in (8) cannot be used. The analog results indicated that for this condition, which is the case of a fully penetrating well, (8) should be modified to

$$\ln R_e/r_w = \left(\frac{1.1}{\ln (H/r_w)} + \frac{C}{L/r_w} \right)^{-1} \quad (9)$$

where C is a dimensionless parameter that is a function of L/r_w as shown in Figure 3.

Equations (8) and (9) yield values of $\ln R_e/r_w$ that are within 10% of the actual value as evaluated by analog if $L > 0.4H$ and within 25% if $L \ll H$ (for example, $L = 0.1H$).

The analog analyses were performed for wells that were closed at the bottom. Occasionally, however, wells with open bottoms were also simulated. The flow through the bottom appeared to be negligible for all values of r_w and L used in the analyses. If L is not much greater than r_w (for example, $L/r_w \ll 4$), the system geometry approaches that of a piezometer cavity [Bower and Jackson, 1974], in which case the bottom flow can be significant. Equations (8) and (9) can also be used to evaluate $\ln R_e/r_w$ if a portion of the perforated or otherwise open part of the well is isolated with packers for the slug test.

Equipotentials for the flow system around a partially penetrating, partially perforated well in an unconfined aquifer after lowering the water level in the well are shown in Figure 2. The numbers along the symmetry axis and the water table represent arbitrary length units. The numbers on the equipotentials indicate the potential as a percentage of the total head difference between the water table (100%) and the open portion of the well (0%) shown as a dashed line.

The value of R_e for the case in Figure 2 is 96.7 length units. As shown in the figure, this corresponds approximately to the

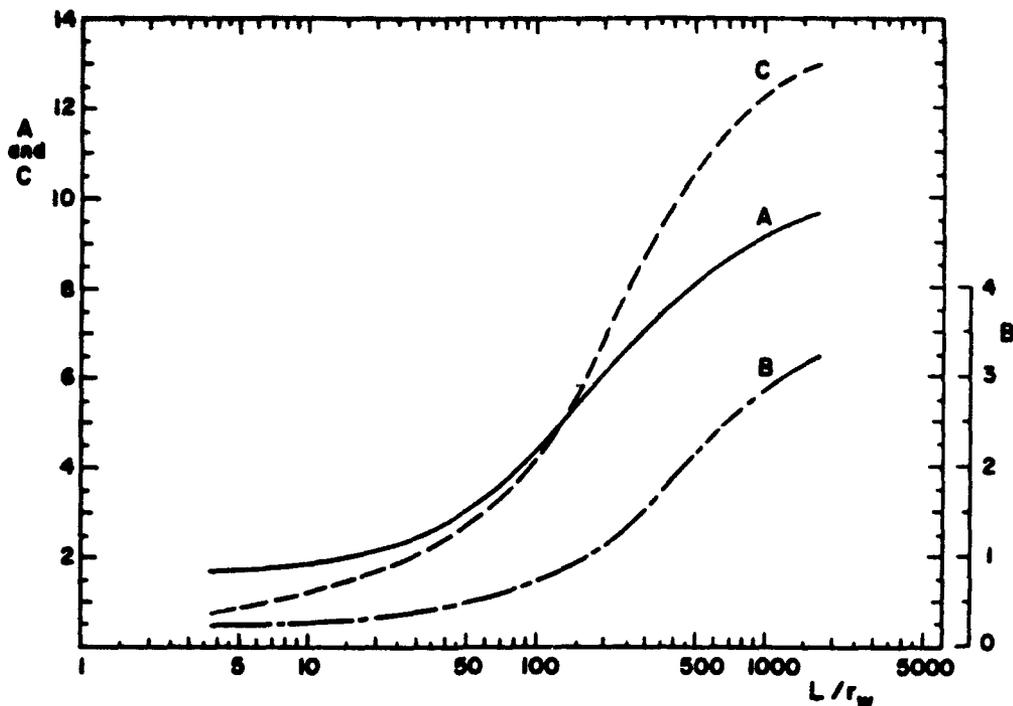


Fig. 3. Curves relating coefficients *A*, *B*, and *C* to L/r_w .

85% equipotential when R_e is laterally extended from the center of the open portion of the well. Thus most of the head loss in the flow system occurs in a cylinder with radius R_e , which is indicative of the horizontal extent of the portion of the aquifer sampled for K or T . The vertical extent is somewhat greater than L , as indicated by, for example, the 80% equipotential in Figure 2.

To estimate the rate of rise of the water level in a well after it is suddenly lowered, (5) can be written as

$$t = \frac{r_c^2}{2KL} \ln \frac{R_e}{r_w} \ln \frac{y_0}{y_i} \quad (10)$$

By taking $y_i = 0.9y_0$, (10) reduces to

$$t_{90\%} = 0.0527 \frac{r_c^2}{KL} \ln \frac{R_e}{r_w} \quad (11)$$

where $t_{90\%}$ is the time that it takes for the water level to rise 90% of the distance to the equilibrium level. By assuming a permeable aquifer with $K = 30$ m/day, a well with $r_c = 0.2$ m and $L = 10$ m, and $\ln(R_e/r_w) = 3$, (11) yields $t_{90\%} = 1.82$ s. Thus if y_0 is taken as 30 cm, it takes 1.8 s for the water level to rise 27 cm, another 1.8 s for the next 2.7 cm (90% of the remaining 3 cm), and another 1.8 s for the next 0.27 cm, or a total of 5.4 s for a rise of 29.97 cm. Measurement of this fast rise requires a sensitive and accurate transducer and a fast-response recorder. The rate of rise can be reduced by allowing groundwater to enter through only a portion of the open section of the well, as can be accomplished with packers.

For a moderately permeable aquifer with, for example, $K = 1$ m/day, a well with $r_c = 0.1$ m and $L = 20$ m, and $\ln(R_e/r_w) = 5$, (11) yields $t = 11.4$ s. In this case, it would take the water level 22.8 s to rise from 30 cm to 0.3 cm below static level.

EXAMPLE

A slug test was performed on a cased well in the alluvial deposits of the Salt River bed west of Phoenix, Arizona. The well, known as the east well, is located about 20 m east of six

rapid infiltration basins for groundwater recharge with sewage effluent [Bouwer, 1970]. The static water table was at a depth of 3 m, $D = 80$ m, $H = 5.5$ m, $L = 4.56$ m, $r_c = 0.076$ m, and r_w was taken as 0.12 m to allow for development of the aquifer around the perforated portion of the casing. A Statham PM131TC pressure transducer was suspended about 1 m below the static water level in the well (when trade names and company names are included, they are for the convenience of the reader and do not imply preferential endorsement of a particular product or company over others by the U.S. Department of Agriculture). A solid cylinder with a volume equivalent to a 0.32-m change in water level in the well was also placed below the water level. When the water level had returned to equilibrium, the cylinder was quickly removed. The transducer output, recorded on a Sargent millivolt recorder, yielded the $y-t$ relationship shown in Figure 4 with y plotted on a logarithmic scale. The straight-line portion is the valid part of the readings. The actual y_0 value of 0.29 m indicated by the straight line is close to the theoretical value of 0.32 m calculated from the displacement of the submerged cylinder.

Extending the straight line in Figure 4 shows that for the arbitrarily selected t value of 20 s, $y = 0.0025$ m. Thus $(1/t) \ln y_0/y_i = 0.238 \text{ s}^{-1}$. The value of $L/r_w = 38$, for which Figure 3 yields $A = 2.6$ and $B = 0.42$. Substituting these values into (8) and using the maximum value of 6 for $\ln[(D-H)/r_w]$ (since $\ln[(D-H)/r_w]$ for the well exceeds 6) yield $\ln(R_e/r_w) = 2.37$. Equation (5) then gives $K = 0.00036 \text{ m/s} = 31 \text{ m/day}$. This value agrees with K values of 10 and 53 m/day obtained previously with the tube method on two nearby observation wells [Bouwer, 1970]. These K values were essentially point measurements on the aquifer immediately around the well bottoms, which were at depths of 9.1 and 6.1 m, respectively.

COMPARISONS

Piezometer method. The geometry to which (8) and (9) and the coefficients in Figure 3 apply overlaps the geometry of the

piezometer method at the lower values of L/r_w . With the piezometer method a cavity is augered out in the soil below a piezometer tube. The water level in the tube is abruptly lowered, and K of the soil around the cavity is calculated from the rate of rise of the water level in the tube [Bouwer and Jackson, 1974]. The equation for K is

$$K = \frac{\pi r_w^4}{A_V t} \ln \frac{y_0}{y_t} \quad (12)$$

where A_V is a geometry factor with dimension of length. Values of A_V were evaluated with an electrolytic tank analog by Youngs [1968], whose results were expressed in tabular form as A_V/r_w for different values of L/r_w (ranging between 0 and 8), $(H - L)/r_w$, and $(D - H)/r_w$.

Taking a hypothetical case where $L/r_w = 8$, $H/r_w = 12$, and $D/r_w = 16$, K calculated with (5) is 18% below K calculated with (12). This is more than the 10% error normally expected with (8) and (9) for the L/H value of 0.67 in this case. The larger discrepancy may be due to the difference in methodology, or to the fact that the L/r_w value is close to the lower limit of the range covered on the resistance network analog.

An approximate equation for calculating K with the piezometer method was presented by Hvorslev [1951]. The equation, which is based on the assumptions of an ellipsoidal cavity or well screen and infinite vertical extent (upward and downward) of the flow system, contains a term $[1 + (L/2r_w)^2]^{1/2}$. For most well-slug-test geometries, $L/2r_w$ will be sufficiently large to permit replacement of this term by $L/2r_w$. In that case, however, Hvorslev's equation for Q yields $R_s = L$, which is not true. In reality, R_s is considerably less than L . For example, if $L = 40$ m, $r_w = 0.4$ m, $H = 80$ m, and $D = \infty$, (8) shows that $R_s = 11.9$ m, which is much less than the value of 40 m indicated by Hvorslev's equation. However, since the calculation of K is based on $\ln(R_s/r_w)$ as shown by (5), the error in K is less than the error in R_s (i.e., 36 and 236%, respectively, in this case).

If, for the above example, the top of the well screen or cavity had been taken at the same level as the water table ($H = 40$ m), R_s would have been 8.6 m and Hvorslev's equation would have yielded a K value that is 50% higher than K given by (5). The larger error is probably due to Hvorslev's assumption of infinite vertical (upward) extent of the flow system, which is not met when the cavity is immediately below the water table. Using Hvorslev's equation for cavities immediately below a confining layer would increase the error to 73%, but this, of course, is due to the fact that a water table is not a solid boundary. Hvorslev's equation for the confining layer case can be shown to yield $R_s = 2L$.

Auger hole method. The analog analyses for (8) and (9) and Figure 3 were performed for $L < H$, because short circuiting between the water table and the well prevented simulation of the case where $L = H$. If the analog results are extrapolated to $L = H$, however, the geometry of the system in Figure 1 becomes similar to that of the auger hole technique, for which a number of equations and graphs have been developed to calculate K from the rise of the water level in the well [Bouwer and Jackson, 1974]. Boast and Kirkham [1971], for example, developed the equation

$$K = C_{BK} \frac{\Delta y}{\Delta t} \quad (13)$$

where C_{BK} was determined mathematically and expressed in tabular form for various values of L/r_w , $(D - H)/r_w$, and y_0/H . Since the rate of rise of the water level in the hole after

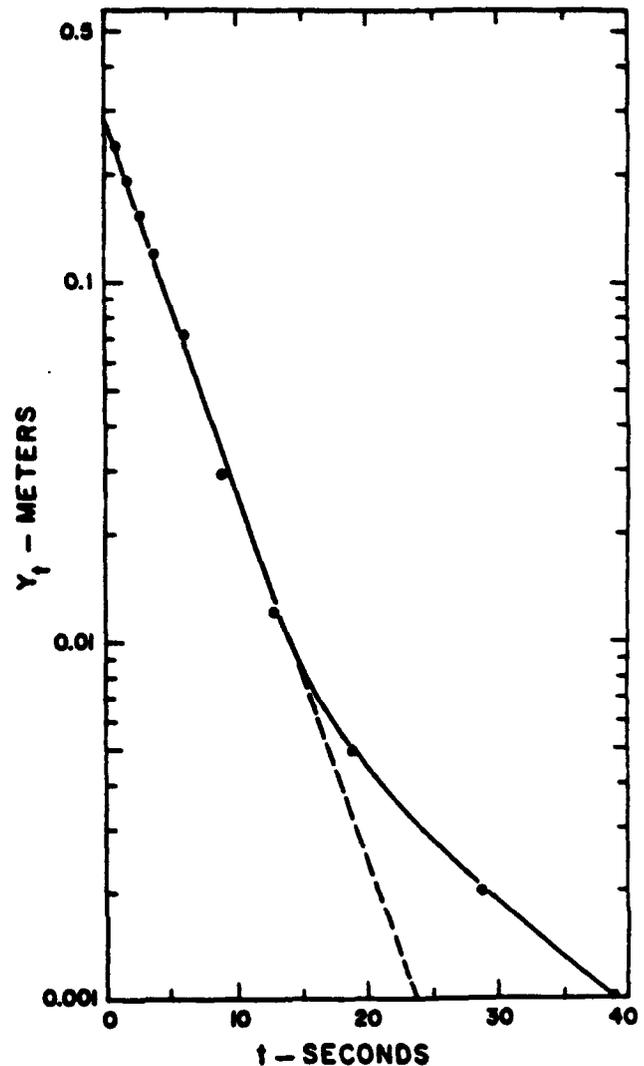


Fig. 4. Plot of y versus t for slug test on east well.

the removal of a slug of water decreases with decreasing y , $\Delta y/\Delta t$ is not a constant and the value of K obtained with this procedure depends on the magnitude of Δy used in the field measurements. The general rule is that Δy should be relatively small.

Taking a hypothetical case where $y_0 = 2.5$ m, $y_t = 2.4$ m, $\Delta t = 10$ s, $L = H = 5$ m, $D = 6$ m, and $r_w = 0.1$ m, (5) yields a K value that is 36% lower than K calculated with (13). However, if y_t is taken as 0.5 m, which should give $\Delta t = 394$ s according to the theory that $(1/t) \ln y_0/y_t$ is constant, the K value yielded by (5) is 26% higher than K obtained with (13). If y_t is taken as 0.9 m, (5) and (13) give identical results.

Slug test on wells in confined aquifers. The confined aquifer for which the slug test by Cooper et al. [1967] was developed is an aquifer with an internal water source, for example, recharge through aquitards or compression of confining layers or other material. This situation is similar to that of the unconfined aquifer presented in this paper because the water table is considered horizontal, like the upper boundary of a confined aquifer, and the water table is a plane source. Thus K or T calculated with (5) or (6) should be of the same order as K calculated with the procedure of Cooper et al. [1967], which involves plotting the rise of the water level in the well and finding the best fit on a family of type curves. Cooper et al. [1967] presented an example of the calculation of T for a well

with $r_c = r_w = 0.076$ m and $L = 98$ m. The resulting value of T was 45.8 m²/day. Values of D and H for this well were not given. However, since the well was 122 m deep and completely penetrating (at least theoretically), D and H must have been between 98 and 122 m. Assuming that both D and H were 100 m, (6) yields $T = 62.8$ m²/day, which is compatible with T obtained by Cooper et al.

CONCLUSIONS

The hydraulic conductivity of an aquifer near a well can be calculated from the rise of the water level in the well after a slug of water is suddenly removed. The calculation is based on the Thiem equation, using an effective radius R_e for the distance over which the head difference between the equilibrium water table in the aquifer and the water level in the well is dissipated. Values of R_e were evaluated by electrical resistance network analog. An empirical equation was then developed to relate R_e to the geometry of the system. This equation is accurate to within 10–25%, depending on how much of the well below the water table is perforated or otherwise open. The technique is applicable to partially or completely penetrating wells in unconfined aquifers. It can also be used to estimate the hydraulic conductivity of confined aquifers that receive water from the upper confining layer through recharge or compression.

The vertical distance between the rising water level in the well and the equilibrium water table in the aquifer must yield a straight line when it is plotted on a logarithmic scale against time. This can be used to check the validity of field measurements and to obtain the best-fitting line for calculating the hydraulic conductivity. Permeable aquifers produce rapidly rising water levels that can be measured with fast-response pressure transducers and strip chart recorders or x - y plotters. The portion of the aquifer sampled for hydraulic conductivity with the slug test is approximately a cylinder with radius R_e and a height somewhat larger than the perforated or otherwise open section of the well.

Hydraulic conductivity values obtained with the proposed slug test are compatible with those yielded by the auger hole and piezometer techniques where the geometries of the systems overlap, and by a slug test for completely penetrating wells in confined aquifers.

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**INTERNATIONAL
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September 11, 1992

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Report on Results of Additional Slug Tests at
Arizona Air National Guard Base (Sky Harbor ANGB)
and Papago Military Reservation, General Order
Number 12B-99886C, Task Order K-09; (A1T116)

Dear Fritz:

Enclosed are the results of the subject tests made during July 27 - 30, 1992. These tests were conducted to supplement existing data in the Draft Final Site Investigation (SI) Report dated August 1992. These results will be incorporated in the Final SI Report as explained below.

All remaining wells were slug tested except MWS-03. As discussed at the August 4, 1992 meeting in Phoenix, Arizona, this well was disturbed by construction activities in the area and could not be located. It is recommended that the Base locate the well and make any repairs as necessary to restore the well's integrity.

Table 3-0 provides the results of all slug tests. Groundwater flow velocity was calculated using the measured hydraulic conductivity (K; ft/yr) and applying the dimensionless values for hydraulic gradient ($i = 0.002$ (min); 0.005 (max))^{1/2} and porosity ($\eta = 0.50$ (min); 0.25 (max)) in the equation:

$$V = Ki/\eta$$

Velocities are expressed in ft/yr and cm/s as requested by the Air National Guard Readiness Center.

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Mr. Fritz Lebow

2

September 11, 1992

As a result of the additional tests and existing data, the minimum and maximum flow at the Base and Papago are calculated as follows:

	<u>Min.</u>	<u>Max.</u>
Base:	3.0×10^{-5} cm/s (31 ft/yr)	1.3×10^{-3} cm/s (1,304 ft/yr)
Papago:	6.0×10^{-8} cm/s (0.1 ft/yr)	5.6×10^{-6} cm/s (6 ft/yr)

$i = 0.001$ (min); 0.01 (max) for Papago.

The SI Report, Pages 3-2 through 3-4, will be changed to reflect the slug tests results as indicated in Attachment 1, and a new Table 3-0 will be added (Attachment 2).

Please call if you have any questions.

Sincerely,



Don Willen
Project Manager

DW:ltd
Attachments

depths ranging from 66 to 83 feet below land surface, depending on location and water table fluctuations. These depths correspond to water-table elevations of 1,048 to 1,032 feet msl. Samples of aquifer materials collected during drilling indicate that the uppermost portion of the aquifer consists of medium-to coarse-grained sand and gravel.

Appendix J contains a listing of water level measurements conducted during the investigation; hydrographs of monitoring wells at the Base are presented in Figures 3-2 and 3-3. The hydrographs depict a general rising trend in all wells and piezometers at the Base beginning between days 50 and 70 of the monitoring period (March to April); this is tentatively correlated with the occurrence of flow in the Salt River, south of the site. During the June 1991 measurement period, water levels remained above January through March levels. *Heavy rains increased water levels in March 1992.*

Figures 3-4 through 3-6 ^(A) present potentiometric maps for measurement dates of February 20, April 18-19, ^{AND} June 30, 1991, ^{AND March 26, 1992,} respectively. February measurements were taken at the completion of the first phase of field activities, prior to flow in the river. April measurements were collected prior to the first round of groundwater sampling. June measurements were collected prior to the confirmation groundwater sampling. The February map, in general, depicts a groundwater flow direction to the northwest and a hydraulic gradient of approximately 0.002 foot/foot. The April map depicts a similar northwest flow direction with a hydraulic gradient of approximately 0.005 foot per foot. The change in gradient is likely associated with river flow conditions. The June map also depicts a northwest groundwater flow direction and a hydraulic gradient of approximately 0.0025 foot per foot.

The gradient in March 1992 was approximately 0.005 foot per foot and the flow direction maintained a northwesterly direction.

Hydraulic conductivity of the upper alluvial unit has been measured to be approximately 180 to 1,700 feet per day or 6×10^{-2} to 6×10^{-1} cm/s (Brown and Pool, 1989). Slug tests at the Base also indicate high K values, ranging from 6×10^{-2} cm/s (MWS-01) to 5×10^{-2} cm/s (MW1-02). *7.4 x 10⁻³ cm/s (MW2-02) TO*

Review of boring logs contained in Appendix E indicates that the most prevalent aquifer materials are coarse sand and gravel. Published values of porosity for these materials range from 25 to 50 percent (Freeze and Cherry, 1979). Using the hydraulic gradients and K values previously discussed, an average interstitial groundwater flow velocity can be calculated using the following equation:

$$V = (Ki)/n$$

where:

- V = Average velocity (L/T)
- K = Hydraulic conductivity (L/T)
- i = Hydraulic gradient (dimensionless)
- n = Effective porosity (dimensionless)

The minimum groundwater flow velocity is thus calculated to be approximately 2.4×10^{-2} cm/s (~~2.4~~³¹ ft/yr) to a maximum of 1.2×10^{-2} cm/s (~~12,400~~¹³⁰⁴ ft/yr). These velocities represent an average rate through various materials along a selected flow path. Groundwater will flow at different rates and directions depending on local variations in grain size and hydraulic conductivity. *TABLE 3-0 PROVIDES THE HYDRAULIC CONDUCTIVITY AND GROUNDWATER VELOCITIES FOR THE BASE.*

3.1.2 Papago Military Reservation

3.1.2.1 Geology

As discussed in Section 1.5.4, Papago Military Reservation is set in an area of intermixed sedimentary and volcanic deposits. Borings from piezometers and monitoring wells indicate the presence of caliche to a depth of approximately 10 feet bgl and volcanic breccia underlying the caliche. These geologic data are consistent with the presence of Quaternary alluvium and colluvium and the Barnes Butte Member of the Tertiary Camels Head Formation underlying the site. A diagrammatic geological cross section of the Papago area is presented in Figure 3-7.

3.1.2.2 Hydrology

Two monitoring wells and three piezometers were installed during the SI at Papago Military Reservation (Figure 2-7). Groundwater occurs at a depth of approximately 27 to 37 feet below ground level, corresponding to an elevation of 1,211 to 1,214 feet msl. Water occurs under unconfined conditions in very low to moderately permeable bedrock. Figure 3-8 presents a hydrograph of monitoring wells and piezometers at Papago; individual water-level measurements are presented in Appendix J.

Observations made during drilling and development of piezometers and monitoring wells suggest that groundwater flow at Papago is primarily controlled by fractures in well-indurated deposits. As depicted in the hydrograph, PP-03 and MW4-01 required more than one week for water levels to recover to elevations similar to those observed in surrounding wells and their eventual static levels following development and sampling. Other wells and piezometers produce water readily.

Groundwater flow direction at Papago is generally northwesterly or southwesterly, depending on measurement points used to calculate the flow direction. A westerly-oriented wedge-like groundwater mound also causes groundwater to flow northwesterly and southwesterly. The hydraulic gradient is approximately 0.001 foot/foot to 0.01 foot/foot. Groundwater flow conditions for February and April 1991, ^{THROUGH} are provided in Figures 3-9 ^{AND} and 3-10 ^{ALSO} respectively.
 AND MARCH 1992

INSECT
①
Hydraulic conductivity at Papago was not measured during the SI due to field logistics. Slug tests were scheduled to be conducted after groundwater sampling was completed; however, due to the slowly recharging nature of the wells, water levels had not yet returned to pre-sampling or static conditions prior to demobilization of field crews.

3.2 Background Sampling Results

To evaluate the significance of concentrations of detected compounds at each investigation site, a background soil and groundwater characterization effort was conducted. Background soil samples were collected away from known waste management units and groundwater samples were collected from locations upgradient of facilities at both the 161AREFG and at Papago. Soil sampling depths varied due to the geology and are discussed in Section 3.2.1 (161AREFG) and Section 3.2.2 (Papago).

A
Analytical Data Discussion. The following sections discuss the results of chemical analytical data obtained as a result of soil and groundwater samples collected at the Base and Papago during the SI. Analytical data have been validated based on guidelines established by the U.S. EPA and described in the documents "Functional Guidelines for Evaluating Organic Analyses" (U.S. EPA, 1988a) and "Functional Guidelines for Evaluating Inorganic Analyses" (U.S. EPA, 1988b). Thus, results presented herein have been evaluated in conjunction with respective field and lab QC samples. The validation includes adding data qualifiers to alert data users of conditions in the laboratory setting that may have affected sample data. This might include conditions such as method blank contamination or instrument calibration inconsistencies. These conditions are not new to chemical analytical laboratories, but as a result of the data validation process, data users may be ensured that data are valid and accurate to the highest degree possible as indicated by the unique qualifiers. Following are definitions of the data qualifiers used by laboratories and in the validation process:

- U - The material was analyzed for, but was not detected. The associated value is the sample quantitation limit.
- J - The associated numerical value is an estimated quantity.

Insert 1 to Attachment 1

Hydraulic conductivity at Papago is extremely slow and slug tests required long recovery times. As indicated in Table 3-0, the minimum groundwater flow velocity is approximately 6.0×10^{-8} cm/s (0.1 ft/yr) to a maximum of 5.6×10^{-6} cm/s (6 ft/yr).

TABLE 3-0
 HYDRAULIC CONDUCTIVITIES AND GROUNDWATER
 VELOCITIES AT SKY HARBOR ANGB AND PAPAGO
 161 AREFG, PHOENIX, ARIZONA

WELL	HYDRAULIC CONDUCTIVITY FT/YR ^a	VELOCITY FT/YR	HYDRAULIC CONDUCTIVITY CM/S ^b	VELOCITY CM/S
SKY HARBOR				
MW1-02	54,836	1,097	5.3×10^{-2}	1.1×10^{-3}
MW2-02	7,674	31	7.4×10^{-3}	3.0×10^{-5}
MW3-01	57,711	1,154	5.5×10^{-2}	1.1×10^{-3}
MW3-02	46,989	940	4.5×10^{-2}	9.0×10^{-4}
MW5-01	17,502	350	1.7×10^{-2}	3.4×10^{-4}
MWS-01	65,183	1,304	6.3×10^{-2}	1.3×10^{-3}
MWS-02	29,234	585	2.8×10^{-2}	5.6×10^{-4}
MWS-03	^c			
MWS-04	28,908	578	2.8×10^{-2}	5.6×10^{-4}
PAPAGO				
MW4-01	148	6	1.4×10^{-4}	5.6×10^{-6}
MW4-02	31	0.1	3.0×10^{-5}	6.0×10^{-8}

^a FT/YR = feet/year

^b CM/S = centimeters/second

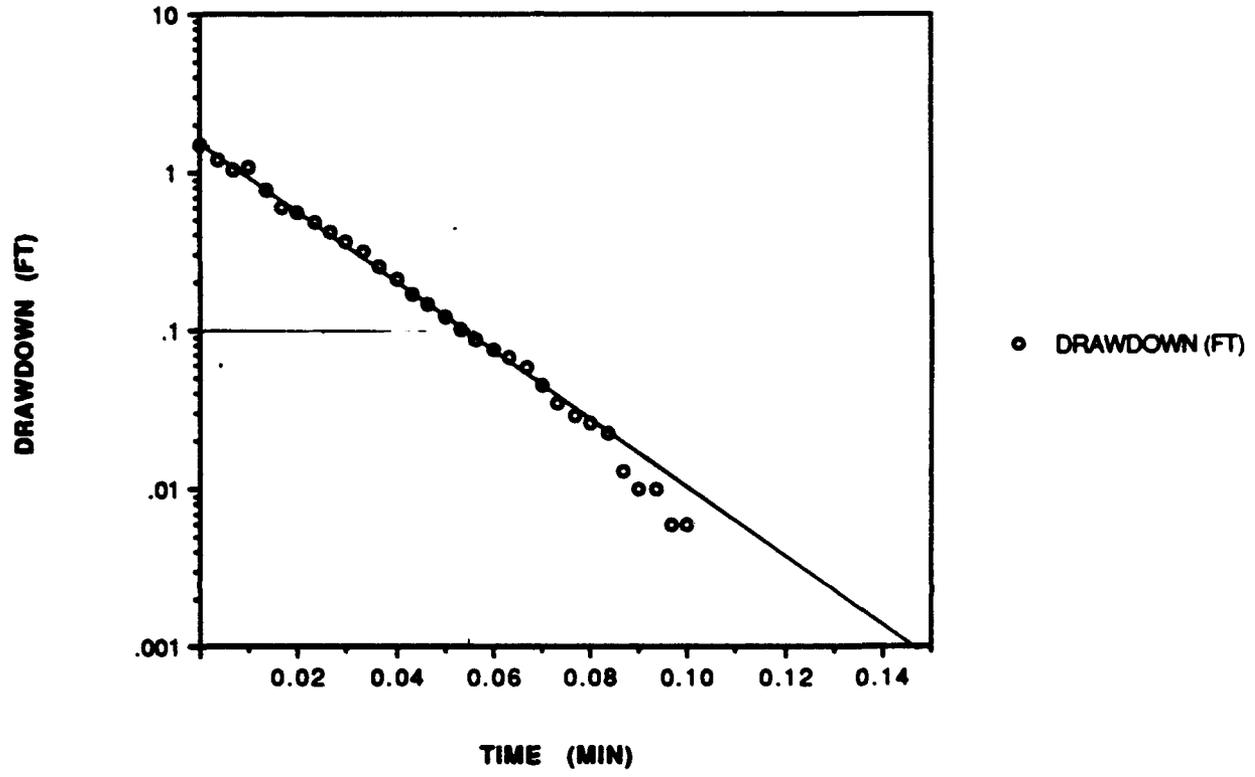
^c Note, MWS-03 was not slug tested due to construction disturbance.

WELL	SLUG IN/OUT	HYDRAULIC CONDUCTIVITY (FT/MIN)	HYDRAULIC CONDUCTIVITY (FT/SEC)
MW2-02	OUT	1.460E-02	2.433E-04
MW3-01	OUT	1.098E-01	1.830E-03
MW3-02	OUT	8.940E-02	1.490E-03
MW4-01	IN	2.810E-04	4.683E-06
MW4-01	OUT	8.980E-05	1.497E-06
MW4-02	IN	8.210E-05	1.368E-06
MW4-02	OUT	5.920E-05	9.867E-07
MW5-01	OUT	3.330E-02	5.550E-04
MWS-02	IN	5.562E-02	9.270E-04
MWS-04	OUT	5.500E-02	9.167E-04

MW202OUT.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	1.468
DRAWDOWN/BUILDUP AT TIME T, YT	0.1
TIME, T	0.55
SCREEN LENGTH, L	50
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	48.9
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	5
COEFFICIENT B	0.85
LN((D-H)/RW)	6.62373317
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	4.11217647
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.01459048

WELL MW2-02 SLUG OUT

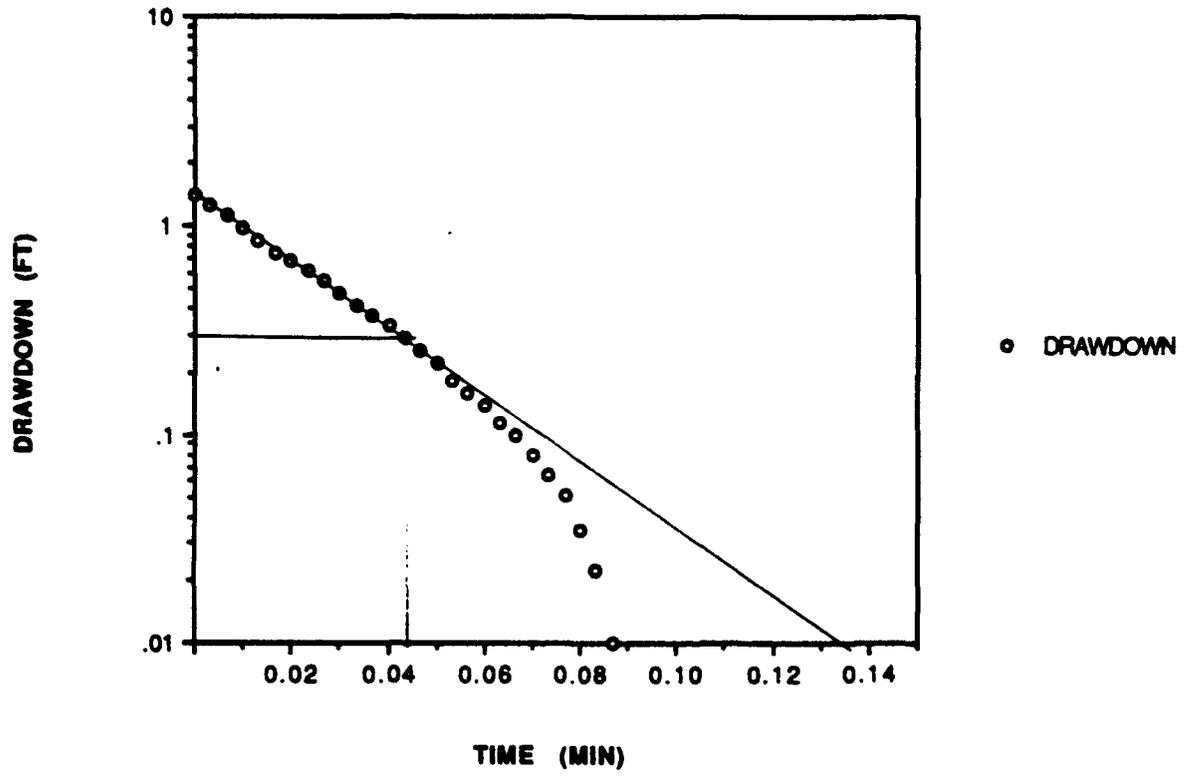


TIME	DRAWDOWN	TIME (MIN)	
1	0.0366	1.468	0.000
2	0.0400	1.181	0.003
3	0.0433	1.032	0.007
4	0.0466	1.080	0.010
5	0.0500	0.780	0.013
6	0.0533	0.592	0.017
7	0.0566	0.560	0.020
8	0.0600	0.481	0.023
9	0.0633	0.411	0.027
10	0.0666	0.366	0.030
11	0.0700	0.306	0.033
12	0.0733	0.252	0.037
13	0.0766	0.207	0.040
14	0.0800	0.169	0.043
15	0.0833	0.143	0.047
16	0.0866	0.121	0.050
17	0.0900	0.099	0.053
18	0.0933	0.086	0.057
19	0.0966	0.076	0.060
20	0.1000	0.067	0.063
21	0.1033	0.057	0.067
22	0.1066	0.045	0.070
23	0.1100	0.035	0.073
24	0.1133	0.029	0.077
25	0.1166	0.026	0.080
26	0.1200	0.022	0.083
27	0.1233	0.013	0.087
28	0.1266	0.010	0.090
29	0.1300	0.010	0.093
30	0.1333	0.006	0.097
31	0.1366	0.006	0.100

MW301OUT.BLU3

INITIAL DRAWDOWN/BUILDUP, Y0	1.404
DRAWDOWN/BUILDUP AT TIME T, YT	0.3
TIME, T	0.042
SCREEN LENGTH, L	50
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	49.88
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	5
COEFFICIENT B	0.85
LN((D-H)/RW)	6.62047313
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	4.11217647
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.10976101

WELL MW3-01 SLUG OUT

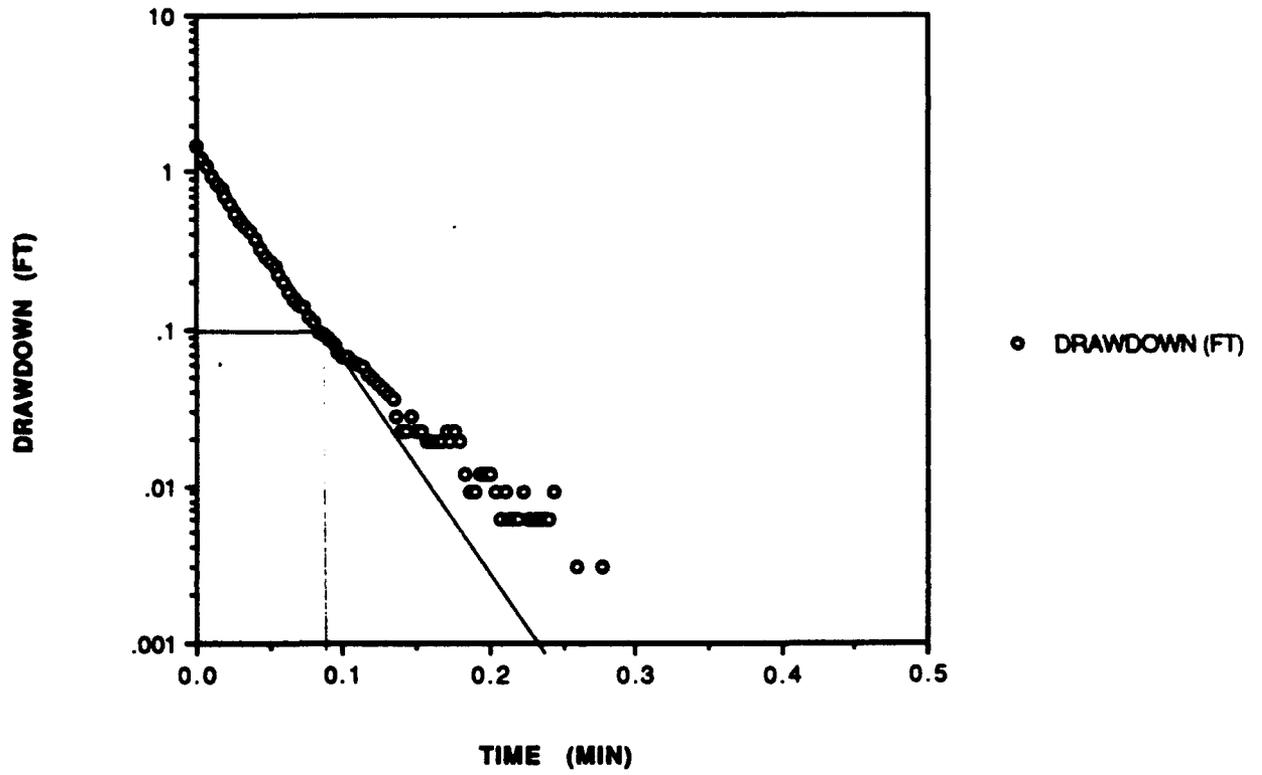


TIME	DRAWDOWN	TIME (MIN)	
1	0.0800	1.404	0.000
2	0.0833	1.267	0.003
3	0.0866	1.127	0.007
4	0.0900	0.981	0.010
5	0.0933	0.860	0.013
6	0.0966	0.751	0.017
7	0.1000	0.678	0.020
8	0.1033	0.615	0.023
9	0.1066	0.545	0.027
10	0.1100	0.484	0.030
11	0.1133	0.420	0.033
12	0.1166	0.369	0.037
13	0.1200	0.331	0.040
14	0.1233	0.293	0.043
15	0.1266	0.252	0.047
16	0.1300	0.220	0.050
17	0.1333	0.182	0.053
18	0.1366	0.159	0.057
19	0.1400	0.137	0.060
20	0.1433	0.115	0.063
21	0.1466	0.099	0.067
22	0.1500	0.080	0.070
23	0.1533	0.064	0.073
24	0.1566	0.051	0.077
25	0.1600	0.035	0.080
26	0.1633	0.022	0.083
27	0.1666	0.010	0.087

MW302OUT.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	1.48
DRAWDOWN/BUILDUP AT TIME T, YT	0.1
TIME, T	0.09
SCREEN LENGTH, L	50
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	49.96
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	5
COEFFICIENT B	0.85
LN((D-H)/RW)	6.62020653
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	4.11217647
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.08943423

WELL MW3-02 SLUG OUT



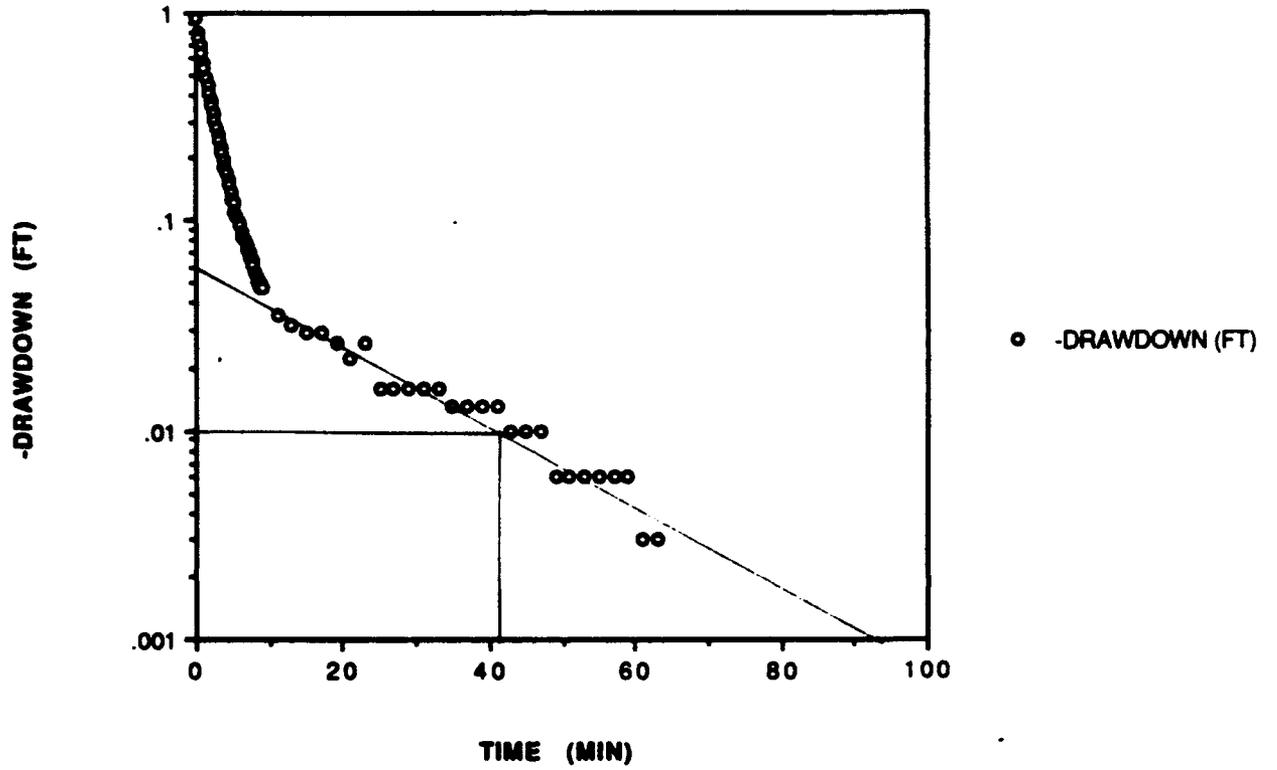
TIME	DRAWDOWN	TIME (MIN)	
1	0.0900	1.480	0.000
2	0.0933	1.206	0.003
3	0.0966	1.098	0.007
4	0.1000	0.961	0.010
5	0.1033	0.856	0.013
6	0.1066	0.783	0.017
7	0.1100	0.694	0.020
8	0.1133	0.621	0.023
9	0.1166	0.554	0.027
10	0.1200	0.496	0.030
11	0.1233	0.458	0.033
12	0.1266	0.417	0.037
13	0.1300	0.372	0.040
14	0.1333	0.328	0.043
15	0.1366	0.289	0.047
16	0.1400	0.267	0.050
17	0.1433	0.254	0.053
18	0.1466	0.229	0.057
19	0.1500	0.203	0.060
20	0.1533	0.175	0.063
21	0.1566	0.156	0.067
22	0.1600	0.146	0.070
23	0.1633	0.137	0.073
24	0.1666	0.121	0.077
25	0.1700	0.111	0.080
26	0.1733	0.095	0.083
27	0.1766	0.092	0.087
28	0.1800	0.086	0.090
29	0.1833	0.079	0.093
30	0.1866	0.073	0.097
31	0.1900	0.067	0.100
32	0.1933	0.067	0.103
33	0.1966	0.063	0.107
34	0.2000	0.060	0.110
35	0.2033	0.057	0.113
36	0.2066	0.051	0.117
37	0.2100	0.047	0.120
38	0.2133	0.044	0.123
39	0.2166	0.041	0.127
40	0.2200	0.038	0.130
41	0.2233	0.035	0.133
42	0.2266	0.028	0.137
43	0.2300	0.022	0.140
44	0.2333	0.022	0.143
45	0.2366	0.028	0.147
46	0.2400	0.022	0.150
47	0.2433	0.022	0.153
48	0.2466	0.019	0.157
49	0.2500	0.019	0.160
50	0.2533	0.019	0.163
51	0.2566	0.019	0.167
52	0.2600	0.022	0.170
53	0.2633	0.019	0.173
54	0.2666	0.022	0.177
55	0.2700	0.019	0.180
56	0.2733	0.012	0.183

TIME	DRAWDOWN	TIME (MIN)
57	0.2766	0.009 0.187
58	0.2800	0.009 0.190
59	0.2833	0.012 0.193
60	0.2866	0.012 0.197
61	0.2900	0.012 0.200
62	0.2933	0.009 0.203
63	0.2966	0.006 0.207
64	0.3000	0.009 0.210
65	0.3033	0.006 0.213
66	0.3066	0.006 0.217
67	0.3100	0.006 0.220
68	0.3133	0.009 0.223
69	0.3166	0.006 0.227
70	0.3200	0.006 0.230
71	0.3233	0.006 0.233
72	0.3266	0.006 0.237
73	0.3300	0.006 0.240
74	0.3333	0.009 0.243
75	0.3500	0.003 0.260
76	0.3666	0.003 0.277

MW401IN.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	0.06
DRAWDOWN/BUILDUP AT TIME T, YT	0.01
TIME, T	41
SCREEN LENGTH, L	20
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	19.73
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	3
COEFFICIENT B	0.5
LN((D-H)/RW)	6.71620123
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	3.54132447
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.00028105

WELL MW4-01 SLUG IN



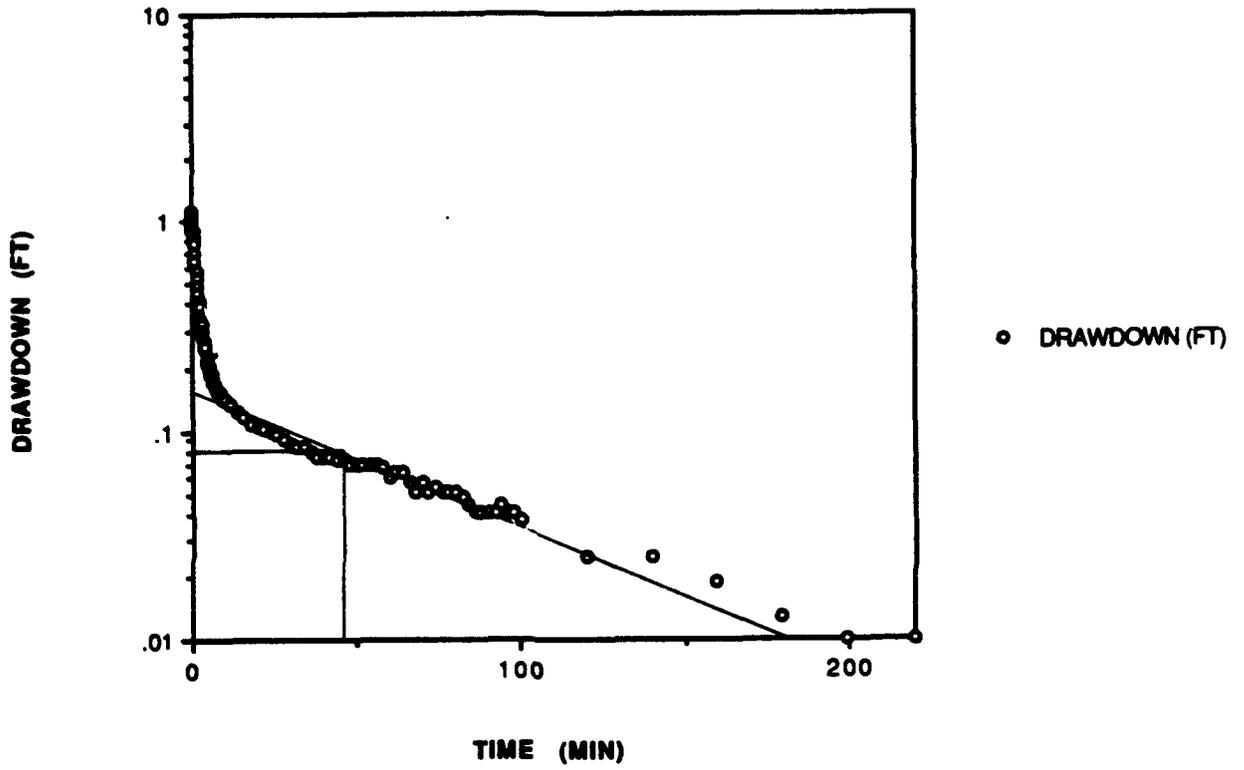
	TIME	DRAWDOWN	TIME (MIN)	-DRAWDOWN
1	1.0000	-0.936	0.000	0.936
2	1.2000	-0.806	0.200	0.806
3	1.4000	-0.767	0.400	0.767
4	1.6000	-0.697	0.600	0.697
5	1.8000	-0.637	0.800	0.637
6	2.0000	-0.583	1.000	0.583
7	2.2000	-0.538	1.200	0.538
8	2.4000	-0.494	1.400	0.494
9	2.6000	-0.452	1.600	0.452
10	2.8000	-0.417	1.800	0.417
11	3.0000	-0.385	2.000	0.385
12	3.2000	-0.357	2.200	0.357
13	3.4000	-0.328	2.400	0.328
14	3.6000	-0.306	2.600	0.306
15	3.8000	-0.280	2.800	0.280
16	4.0000	-0.261	3.000	0.261
17	4.2000	-0.242	3.200	0.242
18	4.4000	-0.226	3.400	0.226
19	4.6000	-0.210	3.600	0.210
20	4.8000	-0.194	3.800	0.194
21	5.0000	-0.182	4.000	0.182
22	5.2000	-0.169	4.200	0.169
23	5.4000	-0.156	4.400	0.156
24	5.6000	-0.147	4.600	0.147
25	5.8000	-0.137	4.800	0.137
26	6.0000	-0.127	5.000	0.127
27	6.2000	-0.121	5.200	0.121
28	6.4000	-0.111	5.400	0.111
29	6.6000	-0.105	5.600	0.105
30	6.8000	-0.099	5.800	0.099
31	7.0000	-0.096	6.000	0.096
32	7.2000	-0.089	6.200	0.089
33	7.4000	-0.083	6.400	0.083
34	7.6000	-0.080	6.600	0.080
35	7.8000	-0.076	6.800	0.076
36	8.0000	-0.073	7.000	0.073
37	8.2000	-0.070	7.200	0.070
38	8.4000	-0.067	7.400	0.067
39	8.6000	-0.064	7.600	0.064
40	8.8000	-0.061	7.800	0.061
41	9.0000	-0.057	8.000	0.057
42	9.2000	-0.054	8.200	0.054
43	9.4000	-0.051	8.400	0.051
44	9.6000	-0.051	8.600	0.051
45	9.8000	-0.048	8.800	0.048
46	10.0000	-0.048	9.000	0.048
47	12.0000	-0.035	11.000	0.035
48	14.0000	-0.032	13.000	0.032
49	16.0000	-0.029	15.000	0.029
50	18.0000	-0.029	17.000	0.029
51	20.0000	-0.026	19.000	0.026
52	22.0000	-0.022	21.000	0.022
53	24.0000	-0.026	23.000	0.026
54	26.0000	-0.016	25.000	0.016
55	28.0000	-0.016	27.000	0.016
56	30.0000	-0.016	29.000	0.016

	TIME	DRAWDOWN	TIME (MIN)	-DRAWDOWN
57	32.0000	-0.016	31.000	0.016
58	34.0000	-0.016	33.000	0.016
59	36.0000	-0.013	35.000	0.013
60	38.0000	-0.013	37.000	0.013
61	40.0000	-0.013	39.000	0.013
62	42.0000	-0.013	41.000	0.013
63	44.0000	-0.010	43.000	0.010
64	46.0000	-0.010	45.000	0.010
65	48.0000	-0.010	47.000	0.010
66	50.0000	-0.006	49.000	0.006
67	52.0000	-0.006	51.000	0.006
68	54.0000	-0.006	53.000	0.006
69	56.0000	-0.006	55.000	0.006
70	58.0000	-0.006	57.000	0.006
71	60.0000	-0.006	59.000	0.006
72	62.0000	-0.003	61.000	0.003
73	64.0000	-0.003	63.000	0.003

MW401OUT.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	0.15
DRAWDOWN/BUILDUP AT TIME T, YT	0.08
TIME, T	45
SCREEN LENGTH, L	20
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	19.73
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	3
COEFFICIENT B	0.5
LN((D-H)/RW)	6.71620123
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	3.54132447
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	8.9836E-05

WELL MW4-01 SLUG OUT



TIME	DRAWDOWN	TIME (MIN)	
1	0.3333	1.137	0.000
2	0.3500	1.124	0.017
3	0.3666	1.111	0.033
4	0.3833	1.099	0.050
5	0.4000	1.086	0.067
6	0.4166	1.073	0.083
7	0.4333	1.060	0.100
8	0.4500	1.048	0.117
9	0.4666	1.038	0.133
10	0.4833	1.025	0.150
11	0.5000	1.016	0.167
12	0.5166	1.006	0.183
13	0.5333	1.000	0.200
14	0.5500	0.987	0.217
15	0.5666	0.981	0.233
16	0.5833	0.971	0.250
17	0.6000	0.962	0.267
18	0.6166	0.952	0.283
19	0.6333	0.946	0.300
20	0.6500	0.936	0.317
21	0.6666	0.930	0.333
22	0.6833	0.920	0.350
23	0.7000	0.911	0.367
24	0.7166	0.904	0.383
25	0.7333	0.898	0.400
26	0.7500	0.888	0.417
27	0.7666	0.882	0.433
28	0.7833	0.876	0.450
29	0.8000	0.866	0.467
30	0.8166	0.860	0.483
31	0.8333	0.853	0.500
32	0.8500	0.847	0.517
33	0.8666	0.841	0.533
34	0.8833	0.831	0.550
35	0.9000	0.825	0.567
36	0.9166	0.818	0.583
37	0.9333	0.812	0.600
38	0.9500	0.806	0.617
39	0.9666	0.799	0.633
40	0.9833	0.793	0.650
41	1.0000	0.786	0.667
42	1.2000	0.701	0.867
43	1.4000	0.640	1.067
44	1.6000	0.586	1.267
45	1.8000	0.535	1.467
46	2.0000	0.494	1.667
47	2.2000	0.455	1.867
48	2.4000	0.420	2.067
49	2.6000	0.392	2.267
50	2.8000	0.344	2.467
51	3.0000	0.344	2.667
52	3.2000	0.322	2.867
53	3.4000	0.303	3.067
54	3.6000	0.287	3.267
55	3.8000	0.271	3.467
56	4.0000	0.261	3.667

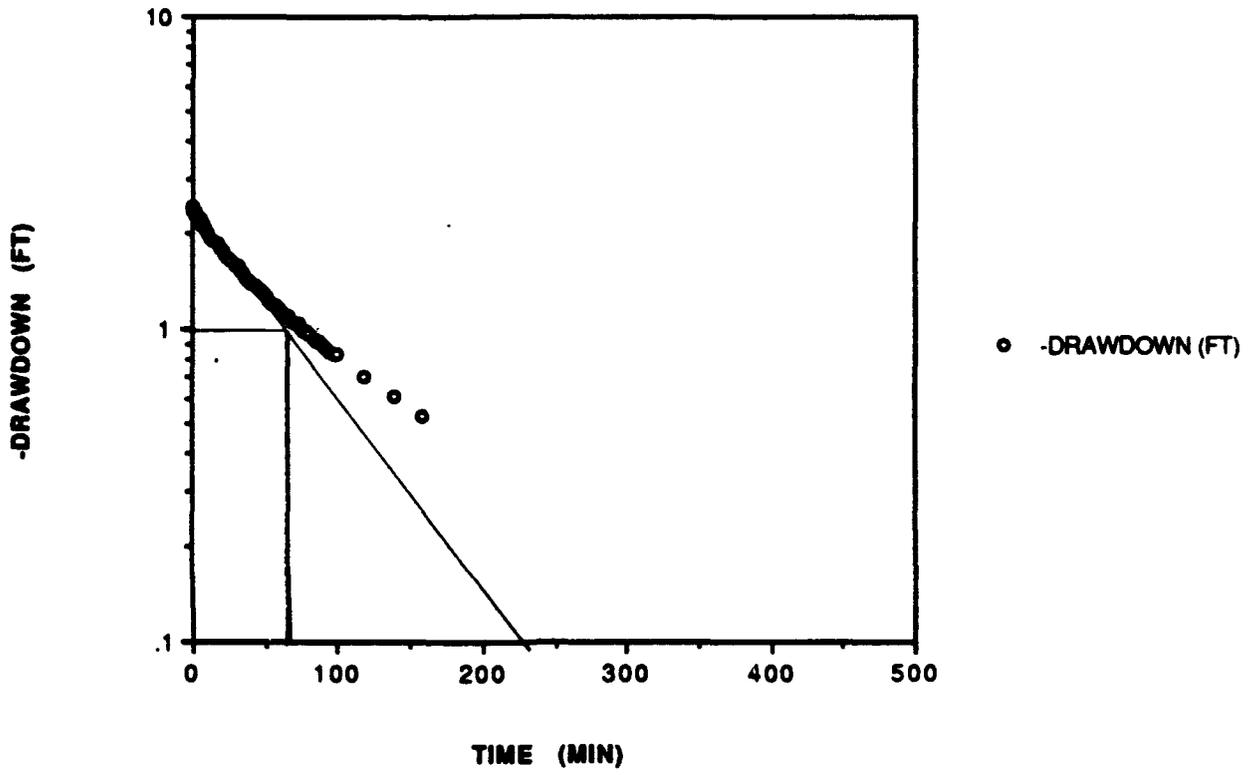
TIME	DRAWDOWN	TIME (MIN)	
57	4.2000	0.248	3.867
58	4.4000	0.252	4.067
59	4.6000	0.229	4.267
60	4.8000	0.220	4.467
61	5.0000	0.213	4.667
62	5.2000	0.210	4.867
63	5.4000	0.204	5.067
64	5.6000	0.197	5.267
65	5.8000	0.191	5.467
66	6.0000	0.188	5.667
67	6.2000	0.185	5.867
68	6.4000	0.182	6.067
69	6.6000	0.175	6.267
70	6.8000	0.172	6.467
71	7.0000	0.169	6.667
72	7.2000	0.166	6.867
73	7.4000	0.162	7.067
74	7.6000	0.162	7.267
75	7.8000	0.159	7.467
76	8.0000	0.159	7.667
77	8.2000	0.156	7.867
78	8.4000	0.156	8.067
79	8.6000	0.153	8.267
80	8.8000	0.150	8.467
81	9.0000	0.150	8.667
82	9.2000	0.146	8.867
83	9.4000	0.146	9.067
84	9.6000	0.146	9.267
85	9.8000	0.143	9.467
86	10.0000	0.143	9.667
87	12.0000	0.134	11.667
88	14.0000	0.124	13.667
89	16.0000	0.118	15.667
90	18.0000	0.108	17.667
91	20.0000	0.105	19.667
92	22.0000	0.102	21.667
93	24.0000	0.099	23.667
94	26.0000	0.096	25.667
95	28.0000	0.092	27.667
96	30.0000	0.086	29.667
97	32.0000	0.083	31.667
98	34.0000	0.083	33.667
99	36.0000	0.080	35.667
100	38.0000	0.076	37.667
101	40.0000	0.076	39.667
102	42.0000	0.076	41.667
103	44.0000	0.073	43.667
104	46.0000	0.073	45.667
105	48.0000	0.070	47.667
106	50.0000	0.070	49.667
107	52.0000	0.070	51.667
108	54.0000	0.070	53.667
109	56.0000	0.070	55.667
110	58.0000	0.067	57.667
111	60.0000	0.061	59.667
112	62.0000	0.064	61.667

TIME	DRAWDOWN	TIME (MIN)
113	64.0000	0.064 63.667
114	66.0000	0.057 65.667
115	68.0000	0.051 67.667
116	70.0000	0.057 69.667
117	72.0000	0.051 71.667
118	74.0000	0.054 73.667
119	76.0000	0.051 75.667
120	78.0000	0.051 77.667
121	80.0000	0.051 79.667
122	82.0000	0.048 81.667
123	84.0000	0.045 83.667
124	86.0000	0.041 85.667
125	88.0000	0.041 87.667
126	90.0000	0.041 89.667
127	92.0000	0.041 91.667
128	94.0000	0.045 93.667
129	96.0000	0.041 95.667
130	98.0000	0.041 97.667
131	100.0000	0.038 99.667
132	120.0000	0.025 119.667
133	140.0000	0.025 139.667
134	160.0000	0.019 159.667
135	180.0000	0.013 179.667
136	200.0000	0.010 199.667
137	220.0000	0.010 219.667
138	240.0000	0.010 239.667

MN402N.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	2.445
DRAWDOWN/BUILDUP AT TIME T, YT	1
TIME, T	70
SCREEN LENGTH, L	20
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	20.24
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	3
COEFFICIENT B	0.5
LN((D-H)/RW)	6.71465585
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	3.54132447
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	8.2138E-05

WELL MW4-02 SLUG IN



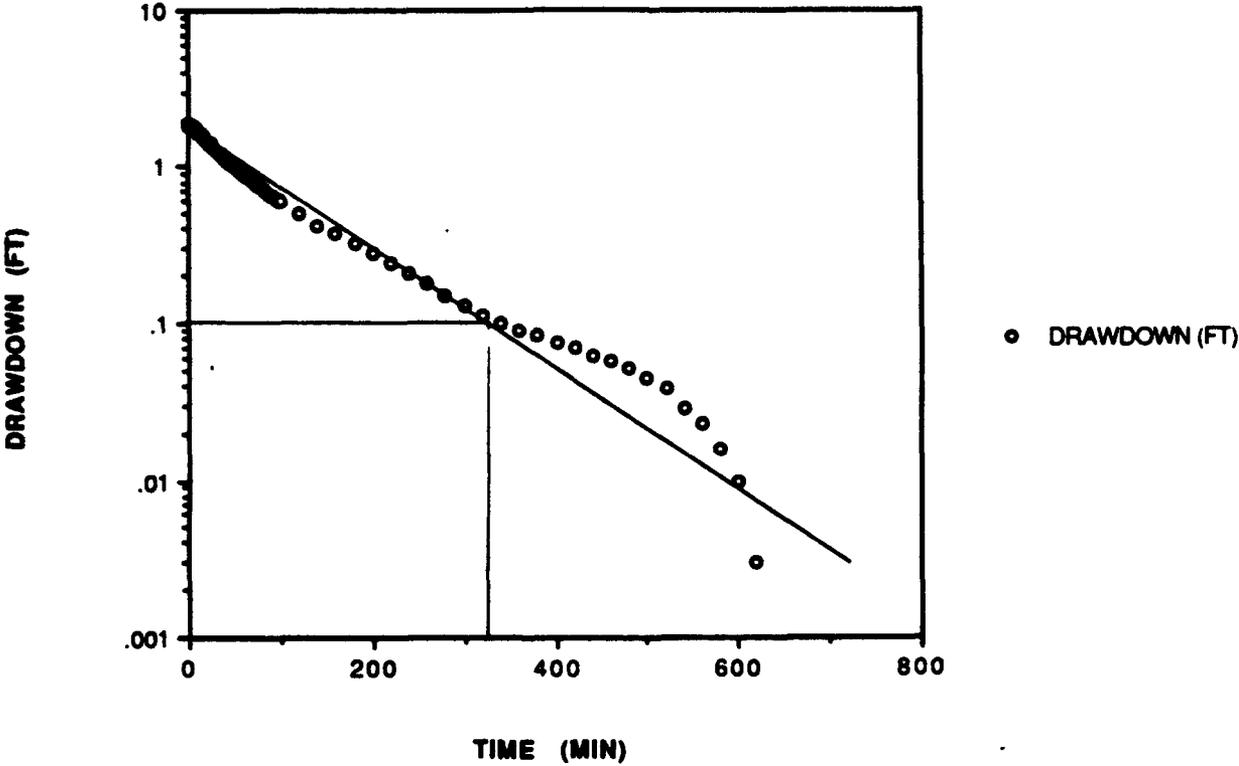
	TIME	DRAWDOWN	TIME (MIN)	-DRAWDOWN
1	1.2000	-2.445	0.000	2.445
2	1.4000	-2.432	0.200	2.432
3	1.6000	-2.416	0.400	2.416
4	1.8000	-2.404	0.600	2.404
5	2.0000	-2.391	0.800	2.391
6	2.2000	-2.381	1.000	2.381
7	2.4000	-2.372	1.200	2.372
8	2.6000	-2.359	1.400	2.359
9	2.8000	-2.353	1.600	2.353
10	3.0000	-2.343	1.800	2.343
11	3.2000	-2.327	2.000	2.327
12	3.4000	-2.314	2.200	2.314
13	3.6000	-2.308	2.400	2.308
14	3.8000	-2.305	2.600	2.305
15	4.0000	-2.295	2.800	2.295
16	4.2000	-2.289	3.000	2.289
17	4.4000	-2.279	3.200	2.279
18	4.6000	-2.273	3.400	2.273
19	4.8000	-2.279	3.600	2.279
20	5.0000	-2.270	3.800	2.270
21	5.2000	-2.260	4.000	2.260
22	5.4000	-2.251	4.200	2.251
23	5.6000	-2.238	4.400	2.238
24	5.8000	-2.228	4.600	2.228
25	6.0000	-2.222	4.800	2.222
26	6.2000	-2.216	5.000	2.216
27	6.4000	-2.209	5.200	2.209
28	6.6000	-2.203	5.400	2.203
29	6.8000	-2.193	5.600	2.193
30	7.0000	-2.184	5.800	2.184
31	7.2000	-2.174	6.000	2.174
32	7.4000	-2.165	6.200	2.165
33	7.6000	-2.155	6.400	2.155
34	7.8000	-2.149	6.600	2.149
35	8.0000	-2.142	6.800	2.142
36	8.2000	-2.139	7.000	2.139
37	8.4000	-2.136	7.200	2.136
38	8.6000	-2.127	7.400	2.127
39	8.8000	-2.120	7.600	2.120
40	9.0000	-2.111	7.800	2.111
41	9.2000	-2.104	8.000	2.104
42	9.4000	-2.098	8.200	2.098
43	9.6000	-2.091	8.400	2.091
44	9.8000	-2.085	8.600	2.085
45	10.0000	-2.082	8.800	2.082
46	12.0000	-2.015	10.800	2.015
47	14.0000	-1.958	12.800	1.958
48	16.0000	-1.913	14.800	1.913
49	18.0000	-1.859	16.800	1.859
50	20.0000	-1.818	18.800	1.818
51	22.0000	-1.760	20.800	1.760
52	24.0000	-1.719	22.800	1.719
53	26.0000	-1.678	24.800	1.678
54	28.0000	-1.633	26.800	1.633
55	30.0000	-1.598	28.800	1.598
56	32.0000	-1.572	30.800	1.572

	TIME	DRAWDOWN	TIME (MIN)	-DRAWDOWN
57	34.0000	-1.522	32.800	1.522
58	36.0000	-1.493	34.800	1.493
59	38.0000	-1.451	36.800	1.451
60	40.0000	-1.416	38.800	1.416
61	42.0000	-1.388	40.800	1.388
62	44.0000	-1.359	42.800	1.359
63	46.0000	-1.346	44.800	1.346
64	48.0000	-1.308	46.800	1.308
65	50.0000	-1.286	48.800	1.286
66	52.0000	-1.260	50.800	1.260
67	54.0000	-1.229	52.800	1.229
68	56.0000	-1.213	54.800	1.213
69	58.0000	-1.181	56.800	1.181
70	60.0000	-1.159	58.800	1.159
71	62.0000	-1.136	60.800	1.136
72	64.0000	-1.124	62.800	1.124
73	66.0000	-1.104	64.800	1.104
74	68.0000	-1.088	66.800	1.088
75	70.0000	-1.066	68.800	1.066
76	72.0000	-1.047	70.800	1.047
77	74.0000	-1.031	72.800	1.031
78	76.0000	-1.003	74.800	1.003
79	78.0000	-0.987	76.800	0.987
80	80.0000	-0.983	78.800	0.983
81	82.0000	-0.961	80.800	0.961
82	84.0000	-0.936	82.800	0.936
83	86.0000	-0.920	84.800	0.920
84	88.0000	-0.913	86.800	0.913
85	90.0000	-0.894	88.800	0.894
86	92.0000	-0.875	90.800	0.875
87	94.0000	-0.866	92.800	0.866
88	96.0000	-0.853	94.800	0.853
89	98.0000	-0.837	96.800	0.837
90	100.0000	-0.827	98.800	0.827
91	120.0000	-0.703	118.800	0.703
92	140.0000	-0.605	138.800	0.605
93	160.0000	-0.528	158.800	0.528

MW402OUT.BLUG

INITIAL DRAWDOWN/BUILDUP, Y0	1.898
DRAWDOWN/BUILDUP AT TIME T, YT	0.1
TIME, T	320
SCREEN LENGTH, L	20
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	20.24
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	3
COEFFICIENT B	0.5
LN((D-H)/RW)	6.71465585
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	3.54132447
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	5.9153E-05

WELL MW4-02 SLUG OUT



TIME	DRAWDOWN	TIME (MIN)	
1	0.31	1.90	0.00
2	0.32	1.90	0.00
3	0.32	1.90	0.01
4	0.32	1.90	0.01
5	0.33	1.90	0.01
6	0.33	1.90	0.02
7	0.33	1.89	0.02
8	0.35	1.89	0.04
9	0.37	1.89	0.05
10	0.38	1.89	0.07
11	0.40	1.89	0.09
12	0.42	1.89	0.10
13	0.43	1.89	0.12
14	0.45	1.89	0.14
15	0.47	1.89	0.15
16	0.48	1.89	0.17
17	0.50	1.89	0.19
18	0.52	1.89	0.20
19	0.53	1.89	0.22
20	0.55	1.88	0.24
21	0.57	1.88	0.25
22	0.58	1.88	0.27
23	0.60	1.87	0.29
24	0.62	1.87	0.30
25	0.63	1.87	0.32
26	0.65	1.87	0.34
27	0.67	1.87	0.35
28	0.68	1.87	0.37
29	0.70	1.87	0.39
30	0.72	1.87	0.40
31	0.73	1.87	0.42
32	0.75	1.87	0.44
33	0.77	1.87	0.45
34	0.78	1.87	0.47
35	0.80	1.87	0.49
36	0.82	1.87	0.50
37	0.83	1.87	0.52
38	0.85	1.87	0.54
39	0.87	1.87	0.55
40	0.88	1.87	0.57
41	0.90	1.86	0.59
42	0.92	1.86	0.60
43	0.93	1.86	0.62
44	0.95	1.86	0.64
45	0.97	1.86	0.65
46	0.98	1.86	0.67
47	1.00	1.86	0.69
48	1.20	1.85	0.89
49	1.40	1.85	1.09
50	1.60	1.85	1.29
51	1.80	1.84	1.49
52	2.00	1.84	1.69
53	2.20	1.84	1.89
54	2.40	1.84	2.09
55	2.60	1.84	2.29
56	2.80	1.84	2.49

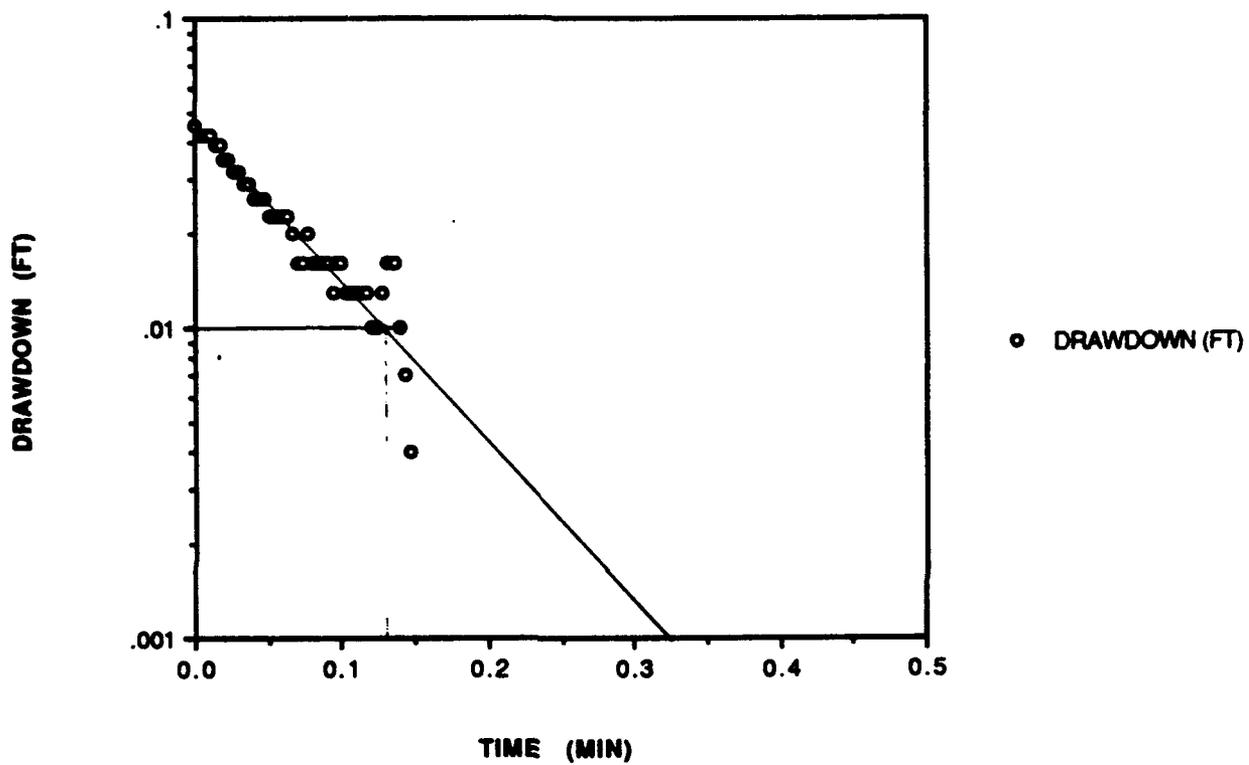
TIME	DRAWDOWN	TIME (MIN)	
57	3.00	1.84	2.69
58	3.20	1.83	2.89
59	3.40	1.83	3.09
60	3.60	1.83	3.29
61	3.80	1.83	3.49
62	4.00	1.82	3.69
63	4.20	1.82	3.89
64	4.40	1.82	4.09
65	4.60	1.82	4.29
66	4.80	1.82	4.49
67	5.00	1.81	4.69
68	5.20	1.81	4.89
69	5.40	1.81	5.09
70	5.60	1.81	5.29
71	5.80	1.81	5.49
72	6.00	1.81	5.69
73	6.20	1.80	5.89
74	6.40	1.80	6.09
75	6.60	1.80	6.29
76	6.80	1.80	6.49
77	7.00	1.80	6.69
78	7.20	1.79	6.89
79	7.40	1.79	7.09
80	7.60	1.78	7.29
81	7.80	1.77	7.49
82	8.00	1.77	7.69
83	8.20	1.77	7.89
84	8.40	1.77	8.09
85	8.60	1.76	8.29
86	8.80	1.76	8.49
87	9.00	1.75	8.69
88	9.20	1.75	8.89
89	9.40	1.74	9.09
90	9.60	1.73	9.29
91	9.80	1.73	9.49
92	10.00	1.72	9.69
93	12.00	1.67	11.70
94	14.00	1.62	13.70
95	16.00	1.57	15.70
96	18.00	1.52	17.70
97	20.00	1.49	19.70
98	22.00	1.44	21.70
99	24.00	1.40	23.70
100	26.00	1.36	25.70
101	28.00	1.32	27.70
102	30.00	1.29	29.70
103	32.00	1.26	31.70
104	34.00	1.24	33.70
105	36.00	1.20	35.70
106	38.00	1.18	37.70
107	40.00	1.15	39.70
108	42.00	1.11	41.70
109	44.00	1.10	43.70
110	46.00	1.07	45.70
111	48.00	1.04	47.70
112	50.00	1.02	49.70

TIME	DRAWDOWN	TIME (MIN)	
113	52.00	1.00	51.70
114	54.00	0.97	53.70
115	56.00	0.95	55.70
116	58.00	0.93	57.70
117	60.00	0.91	59.70
118	62.00	0.89	61.70
119	64.00	0.88	63.70
120	66.00	0.85	65.70
121	68.00	0.84	67.70
122	70.00	0.82	69.70
123	72.00	0.81	71.70
124	74.00	0.78	73.70
125	76.00	0.77	75.70
126	78.00	0.75	77.70
127	80.00	0.74	79.70
128	82.00	0.72	81.70
129	84.00	0.69	83.70
130	86.00	0.69	85.70
131	88.00	0.68	87.70
132	90.00	0.66	89.70
133	92.00	0.65	91.70
134	94.00	0.64	93.70
135	96.00	0.62	95.70
136	98.00	0.61	97.70
137	100.00	0.60	99.70
138	120.00	0.50	120.00
139	140.00	0.41	140.00
140	160.00	0.37	160.00
141	180.00	0.32	180.00
142	200.00	0.28	200.00
143	220.00	0.24	220.00
144	240.00	0.21	240.00
145	260.00	0.18	260.00
146	280.00	0.15	280.00
147	300.00	0.13	300.00
148	320.00	0.11	320.00
149	340.00	0.10	340.00
150	360.00	0.09	360.00
151	380.00	0.08	380.00
152	400.00	0.07	400.00
153	420.00	0.07	420.00
154	440.00	0.06	440.00
155	460.00	0.06	460.00
156	480.00	0.05	480.00
157	500.00	0.04	500.00
158	520.00	0.04	520.00
159	540.00	0.03	540.00
160	560.00	0.02	560.00
161	580.00	0.02	580.00
162	600.00	0.01	600.00
163	620.00	0.00	620.00

MW501OUT.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	0.045
DRAWDOWN/BUILDUP AT TIME T, YT	0.01
TIME, T	0.135
SCREEN LENGTH, L	50
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	49.99
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	5
COEFFICIENT B	0.85
LN((D-H)/RW)	6.62010654
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	4.11217647
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.03328005

WELL MW5-01 SLUG OUT



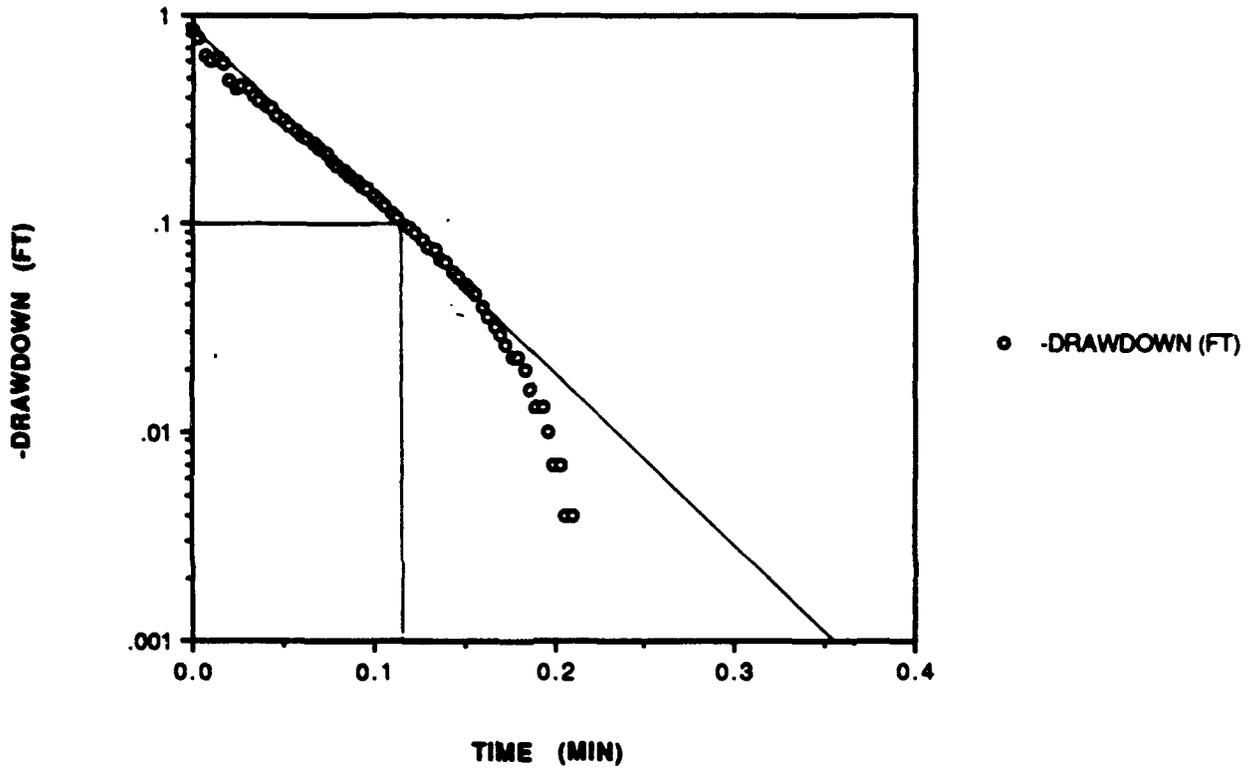
TIME	DRAWDOWN	TIME (MIN)	
1	0.1400	0.045	0.000
2	0.1433	0.042	0.003
3	0.1466	0.042	0.007
4	0.1500	0.042	0.010
5	0.1533	0.039	0.013
6	0.1566	0.039	0.017
7	0.1600	0.035	0.020
8	0.1633	0.035	0.023
9	0.1666	0.032	0.027
10	0.1700	0.032	0.030
11	0.1733	0.029	0.033
12	0.1766	0.029	0.037
13	0.1800	0.026	0.040
14	0.1833	0.026	0.043
15	0.1866	0.026	0.047
16	0.1900	0.023	0.050
17	0.1933	0.023	0.053
18	0.1966	0.023	0.057
19	0.2000	0.023	0.060
20	0.2033	0.023	0.063
21	0.2066	0.020	0.067
22	0.2100	0.016	0.070
23	0.2133	0.016	0.073
24	0.2166	0.020	0.077
25	0.2200	0.016	0.080
26	0.2233	0.016	0.083
27	0.2266	0.016	0.087
28	0.2300	0.016	0.090
29	0.2333	0.013	0.093
30	0.2366	0.016	0.097
31	0.2400	0.016	0.100
32	0.2433	0.013	0.103
33	0.2466	0.013	0.107
34	0.2500	0.013	0.110
35	0.2533	0.013	0.113
36	0.2566	0.013	0.117
37	0.2600	0.010	0.120
38	0.2633	0.010	0.123
39	0.2666	0.013	0.127
40	0.2700	0.016	0.130
41	0.2733	0.016	0.133
42	0.2766	0.016	0.137
43	0.2800	0.010	0.140
44	0.2833	0.007	0.143
45	0.2866	0.004	0.147
46	0.2400	0.016	0.100
47	0.2433	0.013	0.103
48	0.2466	0.013	0.107
49	0.2500	0.013	0.110
50	0.2533	0.013	0.113
51	0.2566	0.013	0.117
52	0.2600	0.010	0.120
53	0.2633	0.010	0.123
54	0.2666	0.013	0.127
55	0.2700	0.016	0.130
56	0.2733	0.016	0.133

TIME	DRAWDOWN	TIME (MIN)
57	0.2766	0.016
58	0.2800	0.010
59	0.2833	0.007
60	0.2866	0.004

MWS02IN.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	0.851
DRAWDOWN/BUILDUP AT TIME T, YT	0.1
TIME, T	0.115
SCREEN LENGTH, L	50
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	51.98
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	5
COEFFICIENT B	0.85
LN((D-H)/RW)	6.61345133
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	4.11217647
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.05561801

WELL MWS-02 SLUG IN



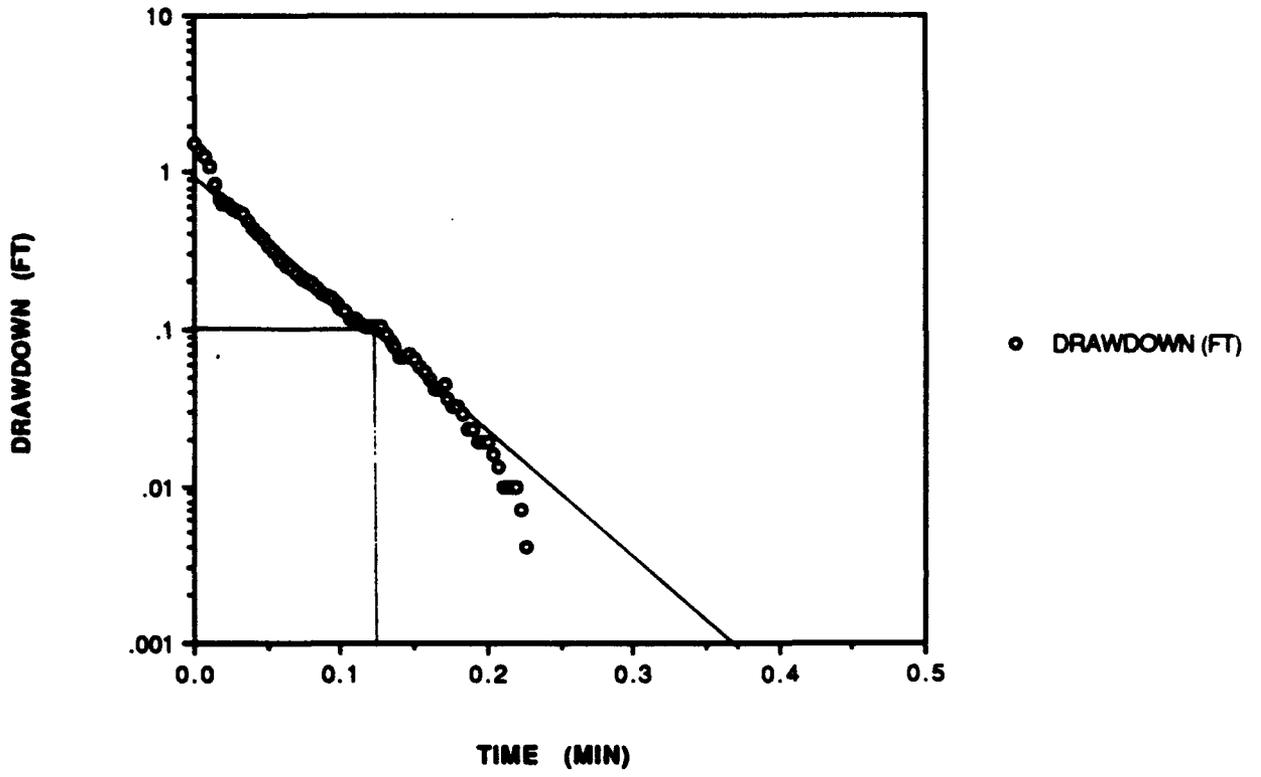
	TIME	DRAWDOWN	TIME (MIN)	-DRAWDOWN
1	0.1000	-0.851	0.000	0.851
2	0.1033	-0.787	0.003	0.787
3	0.1066	-0.640	0.007	0.640
4	0.1100	-0.612	0.010	0.612
5	0.1133	-0.631	0.013	0.631
6	0.1166	-0.589	0.017	0.589
7	0.1200	-0.494	0.020	0.494
8	0.1233	-0.449	0.023	0.449
9	0.1266	-0.459	0.027	0.459
10	0.1300	-0.449	0.030	0.449
11	0.1333	-0.414	0.033	0.414
12	0.1366	-0.386	0.037	0.386
13	0.1400	-0.373	0.040	0.373
14	0.1433	-0.357	0.043	0.357
15	0.1466	-0.335	0.047	0.335
16	0.1500	-0.316	0.050	0.316
17	0.1533	-0.300	0.053	0.300
18	0.1566	-0.284	0.057	0.284
19	0.1600	-0.268	0.060	0.268
20	0.1633	-0.255	0.063	0.255
21	0.1666	-0.242	0.067	0.242
22	0.1700	-0.230	0.070	0.230
23	0.1733	-0.217	0.073	0.217
24	0.1766	-0.204	0.077	0.204
25	0.1800	-0.191	0.080	0.191
26	0.1833	-0.179	0.083	0.179
27	0.1866	-0.169	0.087	0.169
28	0.1900	-0.160	0.090	0.160
29	0.1933	-0.153	0.093	0.153
30	0.1966	-0.147	0.097	0.147
31	0.2000	-0.137	0.100	0.137
32	0.2033	-0.128	0.103	0.128
33	0.2066	-0.121	0.107	0.121
34	0.2100	-0.112	0.110	0.112
35	0.2133	-0.106	0.113	0.106
36	0.2166	-0.099	0.117	0.099
37	0.2200	-0.096	0.120	0.096
38	0.2233	-0.090	0.123	0.090
39	0.2266	-0.083	0.127	0.083
40	0.2300	-0.077	0.130	0.077
41	0.2333	-0.074	0.133	0.074
42	0.2366	-0.067	0.137	0.067
43	0.2400	-0.064	0.140	0.064
44	0.2433	-0.058	0.143	0.058
45	0.2466	-0.055	0.147	0.055
46	0.2500	-0.051	0.150	0.051
47	0.2533	-0.048	0.153	0.048
48	0.2566	-0.045	0.157	0.045
49	0.2600	-0.039	0.160	0.039
50	0.2633	-0.035	0.163	0.035
51	0.2666	-0.032	0.167	0.032
52	0.2700	-0.029	0.170	0.029
53	0.2733	-0.026	0.173	0.026
54	0.2766	-0.023	0.177	0.023
55	0.2800	-0.023	0.180	0.023
56	0.2833	-0.020	0.183	0.020

	TIME	DRAWDOWN	TIME (MIN)	-DRAWDOWN
57	0.2888	-0.016	0.187	0.016
58	0.2900	-0.013	0.190	0.013
59	0.2933	-0.013	0.193	0.013
60	0.2988	-0.010	0.197	0.010
61	0.3000	-0.007	0.200	0.007
62	0.3033	-0.007	0.203	0.007
63	0.3068	-0.004	0.207	0.004
64	0.3100	-0.004	0.210	0.004

MWS04OUT.SLUG

INITIAL DRAWDOWN/BUILDUP, Y0	1
DRAWDOWN/BUILDUP AT TIME T, YT	0.1
TIME, T	0.125
SCREEN LENGTH, L	50
INITIAL SATURATED THICKNESS, D	350
DISTANCE FROM BOTTOM OF SCREEN TO WATER TABLE, H	49.1
WELL RADIUS (INCLUDING GRAVEL PACK), RW	0.4
CASING RADIUS, RC	0.16
GRAVEL PACK POROSITY (0 IF SIMILAR TO FORMATION), N	0.35
NEW RC BASED ON GRAVEL PACK POROSITY	0.26951809
COEFFICIENT A	5
COEFFICIENT B	0.85
LN((D-H)/RW)	6.62306872
IF LN((D-H)/RW)>6 THEN SET IT EQUAL TO 6 HERE OTHERWISE COPY IT	6
LN(RE/RW)	4.11217647
ESTIMATE OF HYDRAULIC CONDUCTIVITY, K	0.05502414

WELL MWS-04 SLUG OUT



TIME	DRAWDOWN	TIME (MIN)	
1	0.0733	1.513	0.000
2	0.0766	1.347	0.003
3	0.0800	1.252	0.007
4	0.0833	1.086	0.010
5	0.0866	0.847	0.013
6	0.0900	0.688	0.017
7	0.0933	0.640	0.020
8	0.0966	0.624	0.023
9	0.1000	0.596	0.027
10	0.1033	0.574	0.030
11	0.1066	0.535	0.033
12	0.1100	0.488	0.037
13	0.1133	0.437	0.040
14	0.1166	0.405	0.043
15	0.1200	0.370	0.047
16	0.1233	0.341	0.050
17	0.1266	0.312	0.053
18	0.1300	0.296	0.057
19	0.1333	0.274	0.060
20	0.1366	0.252	0.063
21	0.1400	0.239	0.067
22	0.1433	0.223	0.070
23	0.1466	0.211	0.073
24	0.1500	0.201	0.077
25	0.1533	0.195	0.080
26	0.1566	0.182	0.083
27	0.1600	0.169	0.087
28	0.1633	0.160	0.090
29	0.1666	0.153	0.093
30	0.1700	0.144	0.097
31	0.1733	0.134	0.100
32	0.1766	0.128	0.103
33	0.1800	0.118	0.107
34	0.1833	0.115	0.110
35	0.1866	0.109	0.113
36	0.1900	0.105	0.117
37	0.1933	0.105	0.120
38	0.1966	0.102	0.123
39	0.2000	0.102	0.127
40	0.2033	0.093	0.130
41	0.2066	0.083	0.133
42	0.2100	0.077	0.137
43	0.2133	0.067	0.140
44	0.2166	0.067	0.143
45	0.2200	0.070	0.147
46	0.2233	0.064	0.150
47	0.2266	0.058	0.153
48	0.2300	0.054	0.157
49	0.2333	0.048	0.160
50	0.2366	0.042	0.163
51	0.2400	0.042	0.167
52	0.2433	0.045	0.170
53	0.2466	0.035	0.173
54	0.2500	0.032	0.177
55	0.2533	0.032	0.180
56	0.2566	0.029	0.183

	TIME	DRAWDOWN	TIME (MIN)
57	0.2600	0.023	0.187
58	0.2633	0.023	0.190
59	0.2666	0.019	0.193
60	0.2700	0.019	0.197
61	0.2733	0.019	0.200
62	0.2766	0.016	0.203
63	0.2800	0.013	0.207
64	0.2833	0.010	0.210
65	0.2866	0.010	0.213
66	0.2900	0.010	0.217
67	0.2933	0.010	0.220
68	0.2966	0.007	0.223
69	0.3000	0.004	0.227

APPENDIX J

POTENTIOMETRIC MEASUREMENTS

APPENDIX J

POTENTIOMETRIC MEASUREMENTS
DEPTH TO WATER
161 ST AREFG, PHOENIX, ARIZONA

LOCATION:	PS-01	PS-02	PS-03	PP-01	PP-02	PP-03	MWS-01	MWS-02	MWS-03
NORTHING:	9822.40	8992.99	9916.67	13666.88	13022.75	13675.97	9484.29	8941.36	8620.48
EASTING:	12315.52	10050.94	10066.64	6114.69	5919.85	5744.84	11768.37	10847.55	10430.88
TOC ELEVATION:	1119.78	1113.86	1113.83	1245.22	1251.07	1239.42	1118.40	1115.61	1115.84

MEASUREMENT DATE DAY DEPTH TO WATER

19-JAN-91	19	76.12	81.82	83.48															
20-JAN-91	20	74.95	80.58	80.45															
21-JAN-91	21	76.21	83.72	75.54															
22-JAN-91	22	76.18	76.25	75.51															
23-JAN-91	23	76.20	75.25	75.58	30.74	36.63	61.77												
28-JAN-91	28	77.41	76.20	76.54															
29-JAN-91	29				30.84	37.45	32.30												
31-JAN-91	31				31.44	37.22	42.09												
01-FEB-91	32	76.51	75.20	75.78	31.26	37.14	37.16												
04-FEB-91	35		75.25	75.83	31.18	37.27	30.36												
05-FEB-91	36				31.16	37.20	29.66												
06-FEB-91	37	76.68	75.37	75.76	30.97	37.14	29.07												
07-FEB-91	38				30.92	37.93	28.69												
08-FEB-91	39	75.75	75.46	75.92	30.88	37.19	28.62	77.27	75.22	75.22	75.22	77.27	75.22	75.22	75.22	75.22	75.22	75.22	76.50
12-FEB-91	43	76.88	75.51	76.02	30.76	37.15	28.36	77.40	75.41	75.41	75.41	77.40	75.41	75.41	75.41	75.41	75.41	75.41	76.85
20-FEB-91	51	77.12	75.68	76.19	31.22	37.37	28.01	77.62	75.57	75.57	75.57	77.62	75.57	75.57	75.57	75.57	75.57	75.57	76.80
25-FEB-91	55																		
20-MAR-91	78	74.46	74.12	75.04															
21-MAR-91	79	72.98	72.74	73.75	31.09	37.28	28.02												
01-APR-91	91																		
02-APR-91	92																		
18-APR-91	108	66.90	67.99	69.94	30.84	37.14	27.90												
19-APR-91	109				30.07	37.54	27.80												
27-JUN-91	178				30.47	36.78	27.88												
30-JUN-91	181	72.26	71.40	73.06															
26-MAR-92	451	53.90	50.46	57.67	29.20	34.92	26.59												

APPENDIX J

**POTENTIOMETRIC MEASUREMENTS
DEPTH TO WATER (CONTINUED)
161 ST AREFG, PHOENIX, ARIZONA**

LOCATION:	MWS-04	MW1-02	MW2-02	MW3-01	MW3-02	MW4-01	MW4-02	MW5-01
NORTHING:	9224.57	9992.28	9801.70	9611.01	9774.44	13733.29	13732.21	9345.98
EASTING:	10052.99	10606.30	10386.43	10082.74	9815.91	5749.44	5959.36	11050.01
TOC ELEVATION:	1114.67	1116.04	1114.20	1114.77	1112.14	1237.87	1241.69	1116.80

DEPTH TO WATER

MEASUREMENT DATE	DAY							
19-JAN-91	19							
20-JAN-91	20							
21-JAN-91	21							
22-JAN-91	22							
23-JAN-91	23							
28-JAN-91	28							
29-JAN-91	29							
31-JAN-91	31							
01-FEB-91	32							
04-FEB-91	35							
05-FEB-91	36							
06-FEB-91	37							
07-FEB-91	38							
08-FEB-91	39	77.34	75.53					77.86
12-FEB-91	43	77.49	75.80				29.55	76.65
20-FEB-91	51	77.64	75.97			42.43	27.83	76.84
25-FEB-91	55					40.02	27.93	
20-MAR-91	78	76.40	74.66					75.09
21-MAR-91	79						27.79	
01-APR-91	91	75.34	73.62		72.25			73.80
02-APR-91	92	73.94		74.48			27.61	
18-APR-91	108	69.42		70.06				68.52
19-APR-91	109		69.24		68.03		26.98	
27-JUN-91	178						27.14	
30-JUN-91	181	72.45	71.64	72.64	70.31			72.27
26-MAR-92	451	55.10	56.44	55.91	55.12	22.93	25.68	54.15

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APPENDIX J

POTENTIOMETRIC MEASUREMENTS
WATER ELEVATION
161 ST AREFG, PHOENIX, ARIZONA

LOCATION: NORTHING: EASTING: TOC ELEVATION:	PS-01	PS-02	PS-03	PP-01	PP-02	PP-03	MWS-01	MWS-02	MWS-03	
	9822.4	8992.99	9916.67	13666.88	13022.75	13675.97	9484.29	8941.36	8620.48	
	12315.52	10050.94	10066.64	6114.69	5919.85	5744.84	11768.37	10847.55	10430.86	
	1119.78	1113.86	1113.83	1245.22	1251.07	1239.42	1118.40	1115.61	1115.84	
MEASUREMENT DATE	DAY	WATER ELEVATION								
19-JAN-91	19	1043.66	1032.04	1030.35						
20-JAN-91	20	1044.83	1033.28	1033.38						
21-JAN-91	21	1043.57	1030.14	1038.29						
22-JAN-91	22	1043.6	1037.61	1038.32						
23-JAN-91	23	1043.58	1038.61	1038.25	1214.48	1214.44				1177.65
28-JAN-91	28	1042.37	1037.66	1037.29						
29-JAN-91	29				1214.38	1213.62				1207.12
31-JAN-91	31				1213.78	1213.85				1197.33
01-FEB-91	32	1043.27	1038.66	1038.05	1213.96	1213.93				1202.26
04-FEB-91	35		1038.61	1038.00	1214.04	1213.80				1209.06
05-FEB-91	36				1214.06	1213.87				1209.76
06-FEB-91	37	1043.1	1038.49	1038.07	1214.25	1213.93				1210.35
07-FEB-91	38				1214.30	1213.14				1210.73
08-FEB-91	39	1044.03	1038.40	1037.91	1214.34	1213.88				1210.80
12-FEB-91	43	1042.9	1038.35	1037.81	1214.46	1213.92				1211.06
20-FEB-91	51	1042.66	1038.18	1037.64	1214.00	1213.70				1211.41
25-FEB-91	55						1041.13	1040.39	1039.34	
20-MAR-91	78	1045.32	1039.74	1038.79			1041.00	1040.20	1038.99	
21-MAR-91	79						1040.78	1040.04	1039.04	
01-APR-91	91	1046.8	1041.12	1040.08	1213.79	1213.93	1042.81	1041.87	1040.80	
02-APR-91	92				1245.22	1213.93	1044.25	1043.32	1042.34	
18-APR-91	108	1052.88	1045.87	1043.89			1050.12	1048.85	1048.01	
19-APR-91	109				1215.15	1213.53				
27-JUN-91	178				1214.75	1214.29				
30-JUN-91	181	1047.52	1042.46	1040.77			1045.52	1044.62	1043.54	
26-MAR-92	451	1065.88	1063.40	1056.16	1216.02	1216.15	1065.08	1063.62	1068.79	

APPENDIX J

**POTENTIOMETRIC MEASUREMENTS
WATER ELEVATION (CONTINUED)
161 ST AREFG, PHOENIX, ARIZONA**

LOCATION:	MW5-01	MW4-02	MW4-01	MW3-02	MW3-01	MW2-02	MW1-02	MW04	MW5-01
NORTHING:	9345.98	5749.44	13733.29	9774.44	9611.01	9801.70	9992.28	9224.57	9345.98
EASTING:	11050.01	5959.36	5749.44	9815.91	10082.74	10386.43	10606.30	10052.99	11050.01
TOC ELEVATION:	1116.80	1241.69	1237.87	1112.14	1114.77	1114.20	1116.04	1114.67	1116.80

MEASUREMENT DATE	DAY	WATER ELEVATION																		
19-JAN-91	19																			
20-JAN-91	20																			
21-JAN-91	21																			
22-JAN-91	22																			
23-JAN-91	23																			
28-JAN-91	28																			
29-JAN-91	29																			
31-JAN-91	31																			
01-FEB-91	32																			
04-FEB-91	35																			
05-FEB-91	36																			
06-FEB-91	37																			
07-FEB-91	38																			
08-FEB-91	39																			
12-FEB-91	43																			
20-FEB-91	51																			
25-FEB-91	55																			
20-MAR-91	78																			
21-MAR-91	79																			
01-APR-91	91																			
02-APR-91	92																			
18-APR-91	108																			
19-APR-91	109																			
27-JUN-91	178																			
30-JUN-91	181																			
26-MAR-92	451																			

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APPENDIX K
RESULTS OF SCREENING ANALYSES

**APPENDIX K
RESULTS OF SCREENING ANALYSES
BACKGROUND SOIL SAMPLES
16th AVEFG, PHOENIX, ARIZONA**

FIELD SAMPLE NUMBER:	MRS-01-0-2-04	MRS-01-5-7-04	MRS-02-0-2-05	MRS-02-5-7-05	MRS-02-10-12-05	MRS-02-15-17-01
LAB SAMPLE NUMBER:	G 2044	G 2045	G 2052	G 2053	G 2054	G 2055
LOCATION:	MWS-01	MWS-01	MWS-02	MWS-02	MWS-02	MWS-02
DEPTH (FT):	00-02	05-07	00-02	05-07	10-12	15-17
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	572 U	572 U				
TCA (PPB):	1000 UA	1000 UA				
BENZENE (PPB):	40 US	40 US	40 US	40 U	40 U	40 U
TCE (PPB):	572 U	572 U				
TOLUENE (PPB):	40 US	40 US				
PCE (PPB):	52.4 U	52.4 U				
ETHYL BENZENE (PPB):	40 U	40 U				
TOTAL XYLENES (PPB):	40 US	40 US	40 US	40 U	40 U	40 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES
 U = NOT DETECTED AT CONCENTRATION GIVEN
 S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
 E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
 A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K
RESULTS OF SCREENING ANALYSES
BACKGROUND SOIL SAMPLES (cont.)
161st AFBFG, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	MBS-02-25-27-01	MBS-02-40-02-01	MBS-02-45-47-01	MBS-02-50-52-01	MBS-02-0-2-03	MBS-02-5-7-02
LAB SAMPLE NUMBER:	G 2056	G 2057	G 2074	G 2075	G 2047	G 2048
LOCATION:	MWS-02	MWS-02	MWS-02	MWS-02	MWS-03	MWS-03
DEPTH (FT):	25-27	40-02	45-47	50-52	00-02	05-07
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U
TCA (PPB):	1080 UA	1080 UA	1080 UA	1080 UA	1080 UA	1080 UA
BENZENE (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
TCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U
TOLUENE (PPB):	40 US	40 US	40 US	40 US	40 US	40 US
PCE (PPB):	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U
ETHYLBENZENE (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
TOTAL XYLENES (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	YES
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES
 U = NOT DETECTED AT CONCENTRATION GIVEN
 S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
 E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
 A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

**APPENDIX K
RESULTS OF SCREENING ANALYSES
BACKGROUND SOIL SAMPLES (cont.)
161st AFBFG, PHOENIX, ARIZONA**

	MBS-03-50-52-01	MBS-03-75-77-01	MBS-04-0-2-02	MBS-04-15-16.5-03	MBS-04-20-21.5-01	MBS-04-25-26.5-01
LAB SAMPLE NUMBER:	G 2049	G 2050	G 2059	G 2100	G 2101	G 2102
LOCATION:	MWS-03	MWS-03	MWS-04	MWS-04	MWS-04	MWS-04
DEPTH (FT):	50-52	75-77	00-02	15-16.5	20-21.5	25-26.5
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	572 U	572 U	6.6 U	5.7 U	16 U	4.4 U
TCA (PPB):	1080 UA	1080 UA	680 U	590 U	1700 U	460 U
BENZENE (PPB):	40 U	40 US	5.6 U	4.8 U	14 U	3.8 U
TCE (PPB):	572 U	572 U	53 U	23 U	65 U	18 U
TOLUENE (PPB):	40 US	40 US	5.1 U	4.4 U	13 U	3.4 U
PCE (PPB):	52.4 U	52.4 U	42 U	36 U	100 U	28 U
ETHYL BENZENE (PPB):	40 U	40 U	4.1 U	3.6 U	10 U	2.8 U
TOTAL XYLENES (PPB):	40 U	40 US	9.6 U	8.7 U	24 U	6.5 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

APPENDIX K
RESULTS OF SCREENING ANALYSES
BACKGROUND SOIL SAMPLES (cont.)
16th AVE. FBG, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	MBS-04-40-01.5-01	MBS-04-45-66.5-1	MBS-04-50-51.5-1	MBS-04-65-66.5-1	MBS-04-70-71.5-1
LAB SAMPLE NUMBER:	G 2103	G 2104	G 2105	G 2106	G 2107
LOCATION:	MWS-04 40-41.5	MWS-04 45-66.5	MWS-04 50-51.5	MWS-04 65-66.5	MWS-04 70-71.5
DEPTH (FT):					
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	18 U	35 U	120 U	35 U	22 U
TCA (PPB):	1000 U	3700 U	12000 U	3700 U	2300 U
BENZENE (PPB):	230	530	190	82	64
TCE (PPB):	72	140 E	84	140 U	36 E
TOLUENE (PPB):	14	1200	65 E	8.2 E	4.4 E
PCE (PPB):	11 U	230 U	750 U	230 U	140 U
ETHYL BENZENE (PPB):	1700 E	3700 E	1600 E	190	300
TOTAL XYLENES (PPB):	110	420	2500 E	260	360
HEAVY HYDROCARBON:	YES	YES	YES	YES	YES
LIGHT HYDROCARBON:	YES	YES	YES	NO	NO

NOTES
 U = NOT DETECTED AT CONCENTRATION GIVEN
 S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
 E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
 A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

RESULTS OF SCREENING ANALYSSES
SITE 1 SOIL SAMPLES
161st AREFG, PHOENIX, ARIZONA

	SB1-02-0-2-04	SB1-02-15-17-01	SB1-02-25-27-02	SB1-02-50-52-01	SB1-03-0-2-02
FIELD SAMPLE NUMBER:	G 2063	G 2071	G 2072	G 2073	G 2018
LAB SAMPLE NUMBER:	SB1-02	SB1-02	SB1-02	SB1-02	SB1-03
LOCATION:	00-02	15-17	25-27	50-52	00-02
DBPTH (FT):	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX:					
DCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	64.4 US
TCA (PPB):	1080 UA	1080 UA	1080 UA	1080 UA	1080 AU
BENZENE (PPB):	40 US	40 U	40 U	40 U	40 U
TCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U
TOLUENE (PPB):	40 US	40 US	40 US	40 US	40 US
PCE (PPB):	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U
ETHYLBENZENE (PPB):	40 U	40 U	40 U	40 U	40 U
TOTAL XYLENES (PPB):	6.73 E	40 U	40 U	40 US	40 U
HEAVY HYDROCARBON:	YES	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO

NOTES

- U - NOT DETECTED AT CONCENTRATION GIVEN
- S - RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E - ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A - ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

**RESULTS OF SCREENING ANALYSES
SITE 1 SOIL SAMPLES (cont.)
161st ARBFG, PHOENIX, ARIZONA**

	SB1-04-0-2-02	SB1-04-5-7-02	SB1-04-10-12-02	SB1-04-30-32-02	SB1-05-01-02
FIELD SAMPLE NUMBER:	SB1-04-0-2-02	SB1-04-5-7-02	SB1-04-10-12-02	SB1-04-30-32-02	SB1-05-01-02
LAB SAMPLE NUMBER:	G 2015	G 2016	G 2017	G 2019	G 2007
LOCATION:	SB1-04	SB1-04	SB1-04	SB1-04	SB1-05
DEPTH (FT):	00-02	05-07	10-12	30-32	01-02
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	64.4 US	64.4 US	64.4 US	64.4 US	64.4 US
TCA (PPB):	1080 AU	1080 AU	1080 AU	1080 AU	
BENZENE (PPB):	40 U	40 U	40 U	40 U	70 U
TCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	100 U
TOLUENE (PPB):	40 US	40 US	40 US	40 US	70 U
PCE (PPB):	52.4 U	52.4 U	52.4 U	52.4 U	91.7 U
ETHYLBENZENE (PPB):	40 U	40 U	40 U	40 U	70 U
TOTAL XYLENES (PPB):	40 U	40 U	40 U	40 US	70 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO

NOTES

- U = NOT DETECTED AT CONCENTRATION GIVEN
- S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

**RESULTS OF SCREENING ANALYSES
SITE 1 SOIL SAMPLES (cont.)
161st ARBFG, PHOENIX, ARIZONA**

	SB1-05-0-502	SB1-05-5-10/02	SB1-05-5-10-15/02	SB1-05-25-30	SB1-05-25-30/02
FIELD SAMPLE NUMBER:	SB1-05-0-502	SB1-05-5-10/02	SB1-05-5-10-15/02	SB1-05-25-30	SB1-05-25-30/02
LAB SAMPLE NUMBER:	G 2010	G 2011	G 2012	G 2045	G 2013
LOCATION:	SB1-05	SB1-05	SB1-05	SB1-05	SB1-05
DEPTH (FT):	00-05	05-10	10-15	25-30	25-30
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	64.4 US	64.4 US	64.4 US	64.4 US	64.4 US
TCA (PPB):	1080 UA	1080 UA	1080 UA	1080 UA	1080 UA
BENZENE (PPB):	40 US	40 US	40 US	40 US	40 US
TCE (PPB):	57.2 U	57.2 U	57.2 U	100 U	57.2 U
TOLUENE (PPB):	40 US	40 US	40 U	70 U	40 US
PCE (PPB):	52.4 U	52.4 U	52.4 U	91.7 U	52.4 U
ETHYL BENZENE (PPB):	40 US	40 U	40 U	70 U	40 U
TOTAL XYLENES (PPB):	40 U	40 US	40 U	70 U	40 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO

NOTES

- U = NOT DETECTED AT CONCENTRATION GIVEN
- S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

RESULTS OF SCREENING ANALYSES

SITS I SOIL SAMPLES (cont.)

161st AFB, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	SBI-65-45-50/02	SBI-65-65	MBI-02-0-2-03	MBI-02-15-17-01	MBI-02-50-52-01	MBI-02-50-52-01
LAB SAMPLE NUMBER:	G 2014	G 2006	G 2033 R	G 2034 R	G 2035 R	G 2035 R
LOCATION:	SBI-65	SBI-65	MW1-02	MW1-02	MW1-02	MW1-02
DEPTH (FT):	45-50	65	00-02	15-17	50-52	50-52
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	64.4 US	64.4 U	57.2 U	57.2 U	57.2 U	57.2 U
TCA (PPB):	1000 UA	1000 UA	1000 US	1000 UA	1000 UA	1000 UA
BENZENE (PPB):	40 U	70 U	40 U	40 U	21.4 U	21.4 U
TCE (PPB):	57.2 U	100 U	57.2 U	57.2 U	33.4 U	33.4 U
TOLUENE (PPB):	40 US	70 US	40 US	40 US	24 US	24 US
PCE (PPB):	52.4 U	91.7 U	52.4 U	52.4 U	44 U	44 U
ETHYLBENZENE (PPB):	40 U	70 U	40 U	40 U	19.4 U	19.4 U
TOTAL XYLENES (PPB):	40 U	70 U	40 U	40 U	24.4 US	24.4 U
HEAVY HYDROCARBON:	NO	YES	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES

- U = NOT DETECTED AT CONCENTRATION GIVEN
- S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGES
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K
RESULTS OF SCREENING ANALYSES
SITE 2 SOIL SAMPLES
161st ARBFG, PHOENIX, ARIZONA

	SB2-01-0-2-03	SB2-01-50-52-02	SB2-01-55-57-02	SB2-01-60-62-02	SB2-02-0-2-02	SB2-02-5-7-02
FIELD SAMPLE NUMBER:	G 2037 R	G 2034 R	G 2039 R	G 2040 R	G 2026	G 2020
LAB SAMPLE NUMBER:	SB2-01	SB2-01	SB2-01	SB2-01	SB2-02	SB2-02
LOCATION:	00-02	50-52	55-57	60-62	00-02	05-07
DEPTH (FT):	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX:						
DCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	64.4 US	64.4 US
TCA (PPB):	1080 UA	1080 UA	1080 UA	1080 UA	1080 AU	1080 AU
BENZENE (PPB):	21.4 U	21.4 U	21.4 U	21.4 U	40 U	40 U
TCE (PPB):	33.4 U	33.4 U	33.4 U	33.4 U	57.2 U	57.2 U
TOLUENE (PPB):	24 US	24 US	24 US	24 US	40 US	40 US
PCE (PPB):	44 U	44 U	44 U	44 U	52.4 U	52.4 U
ETHYLBENZENE (PPB):	19.4 U	19.4 U	19.4 U	19.4 U	40 U	40 U
TOTAL XYLENES (PPB):	24.4 U	24.4 U	24.4 U	24.4 U	40 U	40 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES
 U = NOT DETECTED AT CONCENTRATION GIVEN
 S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
 E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
 A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K
RESULTS OF SCREENING ANALYSES
SITE 2 SOIL SAMPLES (cont.)
161st AREFG, PHOENIX, ARIZONA

	SB2-02-10-12-02	SB2-02-40-42-02	SB2-02-50-52-02	SB2-02-70-72-02	SB2-04-0-2-02	SB2-04-15-17-02
FIELD SAMPLE NUMBER:	G 2021	G 2027	G 2022	G 2023	G 2024	G 2025
LAB SAMPLE NUMBER:	SB2-02	SB2-02	SB2-02	SB2-02	SB2-04	SB2-04
LOCATION:	10-12	40-42	50-52	70-72	00-02	15-17
DEPTH (FT):	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	64.4 US	64.4 US	64.4 US	64.4 US	64.4 US	64.4 US
TCA (PPB):	1080 AU	1080 AU	1080 AU	1080 AU	1080 AU	1080 AU
BENZENE (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
TCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U
TOLUENE (PPB):	40 US	40 US	40 US	40 US	40 US	40 US
PCE (PPB):	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U
ETHYLBENZENE (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
TOTAL XYLENES (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES

- U = NOT DETECTED AT CONCENTRATION GIVEN
- S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K
RESULTS OF SCREENING ANALYSES
SITE 2 SOIL SAMPLES (cont.)
161st AFB, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	SB2-04-50-52-02	SB2-04-70-72-02	MR2-02-0-2-64	MR2-02-5-7-03	MR2-02-10-12-01	MR2-02-30-32-01
LAB SAMPLE NUMBER:	G 2029	G 2028	G 2077	G 2078	G 2079	G 2080
LOCATION:	SB2-04	SB2-04	MW2-02	MW2-02	MW2-02	MW2-02
DEPTH (FT):	50-52	70-72	00-02	05-07	10-12	50-52
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	57.2 US	57.2 US	57.2 U	57.2 U	57.2 U	57.2 U
TCA (PPB):	1080 AU	1080 AU	1080 AU	1080 AU	1080 AU	1080 AU
BENZENE (PPB):	40 US	40 US	3.71 E	40 U	40 U	40 U
TCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U	57.2 U
TOLUENE (PPB):	40 US	40 US	40 US	40 US	40 US	40 US
PCE (PPB):	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U	52.4 U
ETHYLBENZENE (PPB):	40 U	40 U	40 U	40 U	40 U	40 U
TOTAL XYLENES (PPB):	40 U	40 US	13.5 E	40 US	40 U	40 US
HEAVY HYDROCARBON:	NO	NO	YES	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES
 U = NOT DETECTED AT CONCENTRATION GIVEN
 S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
 E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
 A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K
RESULTS OF SCREENING ANALYSES
SITE 2 SOIL SAMPLES (cont.)
161st AREFG, PHOENIX, ARIZONA

	MB2-02-45-47-01	MB2-02-50-52-01	MB2-02-65-67-01	MB2-02-70-72-01
FIELD SAMPLE NUMBER:	MB2-02-45-47-01	MB2-02-50-52-01	MB2-02-65-67-01	MB2-02-70-72-01
LAB SAMPLE NUMBER:	G 2081	G 2082	G 2083	G 2084
LOCATION:	MW2-02	MW2-02	MW2-02	MW2-02
DEPTH (FT):	45-47	50-52	65-67	70-72
MATRIX:	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U
TCA (PPB):	1080 AU	1080 AU	1080 AU	1080 AU
BENZENE (PPB):	40 U	40 U	40 U	40 U
TCE (PPB):	57.2 U	57.2 U	57.2 U	57.2 U
TOLUENE (PPB):	40 US	40 US	40 US	40 US
PCE (PPB):	52.4 U	52.4 U	52.4 U	52.4 U
ETHYLBENZENE (PPB):	40 U	40 U	40 U	40 US
TOTAL XYLENES (PPB):	40 U	40 U	40 U	40 U
HEAVY HYDROCARBON:	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO

NOTES

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- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

**RESULTS OF SCREENING ANALYSES
SITE 3 SOIL SAMPLES
161st ARBFG, PHOENIX, ARIZONA**

FIELD SAMPLE NUMBER:	MB3-01-0-1.5-03	MB3-01-5-6.5-3	MB3-01-35-34.5-2	MB3-01-40-41.5-01	MB3-01-50-51.5-01	MB3-01-55-56.5-1
LAB SAMPLE NUMBER:	G 2108	G 2109	G 2110	G 2111	G 2112	G 2113
LOCATION:	MW3-01	MW3-01	MW3-01	MW3-01	MW3-01	MW3-01
DEPTH (FT):	00-01.5	05-06.5	35-36.5	40-41.5	50-51.5	55-56.5
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	8.4 U	7.4 U	5.7 U	8.4 U	5.5 U	8.4 U
TCA (PPB):	870 U	770 U	590 U	870 U	570 U	870 U
BENZENE (PPB):	7.1 U	6.3 U	4.8 U	7.1 U	4.7 U	7.1 U
TCE (PPB):	34 U	30 U	23 U	34 U	22 U	34 U
TOLUENE (PPB):	6.5 U	5.7 U	4.4 U	6.5 U	4.3 U	6.5 U
PCE (PPB):	54 U	47 U	36 U	54 U	35 U	53 U
ETHYLBENZENE (PPB):	5.3 U	.7 U	3.6 U	5.3 U	3.5 U	5.3 U
TOTAL XYLENES (PPB):	12 U	11 U	8.4 U	12 U	8.1 U	12 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES

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- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

RESULTS OF SCREENING ANALYSES
SITE 3 SOIL SAMPLES (cont.)
14th AREFG, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	MB3-01-99-01	MB3-02-0-1.5-03	MB3-02-5-6.5-03	MB3-01-0-1.5-03	MB3-01-0-1.5-03	MB3-01-0-1.5-03
LAB SAMPLE NUMBER:	G 2115	G 2116	G 2117	G 2118	G 2118	G 2119
LOCATION:	MW3-01	MW3-02	MW3-02	MB3-01	MB3-01	MB3-01
DEPTH (FT):	99-01	00-01.5	05-06.5	00-01.5	00-01.5	00-01.5
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	4.7 U	8.9 U	9.3 U	63 U	44 U	44 U
TCA (PPB):	400 U	920 U	970 U	1300 U	2300 U	2300 U
BENZENE (PPB):	3.9 U	7.5 U	7.9 U	11 U	7.5 U	7.5 U
TCE (PPB):	19 U	36 U	38 U	200 U	143 U	143 U
TOLUENE (PPB):	3.6 U	6.9 U	7.2 U	9.8 U	6.9 U	6.9 U
PCE (PPB):	30 U	57 U	59 U	160 U	110 U	110 U
ETHYLBENZENE (PPB):	2.9 U	5.6 U	5.9 U	8 U	5.6 U	5.6 U
TOTAL XYLENES (PPB):	6.8 U	13 U	14 U	19 U	13 U	13 U
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO

NOTES

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- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

RESULTS OF SCREENING ANALYSES
 SITE 3 SOIL SAMPLES (cont.)
 161st AFBFG, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	SB3-01-36-01	SB3-01-44-01	SB3-01-50-51.5-02	SB3-01-63-01	SB3-01-69-01	SB3-01-80-81.5-03
LAB SAMPLE NUMBER:	G 2126	G 2121	G 2122	G 2123	G 2124	G 2125
LOCATION:	SB3-01	SB3-01	SB3-01	SB3-01	SB3-01	SB3-01
DEPTH (FT):	36	44	50-51.5	63	69	80-81.5
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	139	30 U	23 U	34 U	74 U	5.7 U
TCA (PPB):	2100 U	1500 U	1200 U	1800 U	3800 U	770 U
BENZENE (PPB):	6.8U	5 U	3.9 U	5.8 U	13 U	3.5 U
TCE (PPB):	130 U	95 U	75 U	30 E	240 U	35 U
TOLUENE (PPB):	6.2 U	4.6 U	3.6 U	17.7	89	3.5 U
PCE (PPB):	100 U	75 U	59 U	3.9 E	240	170 U
ETHYLBENZENE (PPB):	5.1 U	3.7 U	2.9 U	2 E	9.3 U	3.5 U
TOTAL XYLENES (PPB):	12 U	3.4 E	6.8 U	6.1 E	22 U	14 U
HEAVY HYDROCARBON:	NO	YES	NO	YES	YES	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	YES	NO

NOTES

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- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX E

RESULTS OF SCREENING ANALYSES
SITE 3 SOIL SAMPLES (cont.)
161st AIRBFG, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	LAB SAMPLE NUMBER:	LOCATION:	DEPTH (FT):	MATRIX:	883-03-10-11.3-03	883-03-20-21.3-02	883-03-34-01	883-03-40-41.3-01	883-03-54-01	883-03-74-01	883-03-74-01	883-03-74-01
	G 2154	883-03	10-11.3	SOIL	64U	64U	59U	61U	9U	17U	55U	55U
DCE (PPB):	900 U				670 U	600 U	600 U	1100 U	1200 U	200 U	200 U	200 U
TCA (PPB):	41U				3.9 U	3.6 U	3.6 U	4.9 U	5.5 U	10 U	12	12
BENZENE (PPB):	41U				4.3 E	3.4 E	3.4 E	9.6 U	110 U	210 U	270	270
TCE (PPB):	41U				4U	3.7U	3.7U	5U	5.6 U	11U	8.6 U	8.6 U
TOLUENE (PPB):	200 U				190 U	36 U	36 U	240 U	270 U	510 U	140 U	140 U
PCE (PPB):	41U				3.9 U	3.6 U	3.6 U	4.9 U	5.5 U	10 U	7U	7U
ETHYLBENZENE (PPB):	16U				16U	4.1E	4.1E	20 U	22 U	41 U	16 U	16 U
TOTAL XYLENES (PPB):	NO				NO	NO	NO	NO	NO	NO	NO	NO
HEAVY HYDROCARBON:	NO				NO	NO	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO				NO	NO	NO	NO	NO	NO	NO	YES

NOTES

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- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX E

RESULTS OF SCREENING ANALYSES
SITE 3 SOIL SAMPLES (cont.)
161st AREFG, PHOENIX, ARIZONA

FIELD SAMPLE NUMBER:	SB3-04-5-6.5-04	SB3-04-10-11.5-01	SB3-04-20-21.5-01	SB3-04-35-36.5-01	SB3-04-40-41.5-01	SB3-04-49-01	SB3-04-60-60.5-01
LAB SAMPLE NUMBER:	G 2127	G 2128	G 2129	G 2130	G 2131	G 2132	G 2133
LOCATION:	SB3-04	SB3-04	SB3-04	SB3-04	SB3-04	SB3-04	SB3-04
DEPTH (FT)	05-06.5	10-11.5	20-21.5	35-36.5	40-41.5	49	60-60.5
MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	49 U	22 U	26 U	88 U	47 U	8.1 U	7.7 U
TCA (PPB):	2400 U	1100 U	1400 U	4600 U	2400 U	1100 U	1000 U
BENZENE (PPB):	8.3 U	3.8 U	4.4 U	15 U	7.9 U	4.9 U	4.7 U
TCE (PPB):	160 U	72 U	84 U	290 U	150 U	49 U	47 U
TOLUENE (PPB):	7.4 U	3.3 U	4 U	14 U	6.8 U	5 U	4.8 U
PCE (PPB):	130 U	57 U	66 U	230 U	120 U	240 U	230 U
ETHYLBENZENE (PPB):	6.2 U	2.8 U	3.3 U	11 U	5.9 U	4.9 U	1.8 E
TOTAL XYLENES (PPB):	14 U	6.5 U	7.6 U	26 U	14 U	20 U	9.9 E
HEAVY HYDROCARBON:	NO	NO	NO	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO	NO	NO	NO

NOTES

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- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

**APPENDIX K
RESULTS OF SCREENING ANALYSES
SITE 5 SOIL SAMPLES
161st ARBFG, PHOENIX, ARIZONA**

	MBS-01-0-2-0	MBS-01-5-7-0	MBS-01-20-22-0	MBS-01-25-27-01
FIELD SAMPLE NUMBER:	MBS-01-0-2-0	MBS-01-5-7-0	MBS-01-20-22-0	MBS-01-25-27-01
LAB SAMPLE NUMBER:	G 2085	G 2086	G 2087	G 2088
LOCATION:	MWS-01	MWS-01	MWS-01	MWS-01
DEPTH (FT):	00-02	05-07	20-22	25-27
MATRIX:	SOIL	SOIL	SOIL	SOIL
DCE (PPB):	114 U	114 U	114 U	114 U
TCA (PPB):	1080 AU	1080 AU	1080 AU	1080 AU
BENZENE (PPB):	10.7 U	10.7 U	10.7 U	10.7 U
TCE (PPB):	66.8 U	66.8 U	66.8 U	66.8 U
TOLUENE (PPB):	12 US	12 US	12 US	12 US
PCE (PPB):	88 U	88 U	88 U	88 U
ETHYLBENZENE (PPB):	9.7 US	9.7 U	9.7 U	9.7 U
TOTAL XYLENES (PPB):	22.9 US	22.9 US	22.9 US	22.9 US
HEAVY HYDROCARBON:	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO

NOTES

- U - NOT DETECTED AT CONCENTRATION GIVEN
- S - RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E - ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A - ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

APPENDIX K

**RESULTS OF SCREENING ANALYSES
SITE 5 SOIL SAMPLES (cont.)
161st AREFG, PHOENIX, ARIZONA**

	MBS-01-45-47-01	MBS-01-55-57-01	MBS-01-60-62-02	MBS-01-75-77-02
FIELD SAMPLE NUMBER:	G 2089	G 2090	G 2091	G 2092
LAB SAMPLE NUMBER:	MW5-01	MW5-01	MW5-01	MW5-01
LOCATION:	45-47	55-57	60-62	75-77
DEPTH (FT):	SOIL	SOIL	SOIL	SOIL
MATRIX:				
DCE (PPB):	114 U	114 U	114 U	114 U
TCA (PPB):	1080 AU	1080 AU	1080 AU	1080 AU
BENZENE (PPB):	10.7 U	10.7 U	10.7 U	10.7 U
TCE (PPB):	66.8 U	66.8 U	66.8 U	66.8 U
TOLUENE (PPB):	12 US	12 US	12 US	12 US
PCE (PPB):	88 U	88 U	88 U	88 U
ETHYLBENZENE (PPB):	9.7 U	9.7 U	9.7 US	9.7 US
TOTAL XYLENES (PPB):	22.9 U	22.9 U	22.9 U	22.9 U
HEAVY HYDROCARBON:	NO	NO	NO	NO
LIGHT HYDROCARBON:	NO	NO	NO	NO

NOTES

- U = NOT DETECTED AT CONCENTRATION GIVEN
- S = RESIDUAL SYSTEM (BLANK) CONTAMINATION
- E = ESTIMATED VALUE OUTSIDE OF CALIBRATION LINEAR RANGE
- A = ESTIMATED VALUE DUE TO CALIBRATION PROBLEM

1

STARTING DATE: 10/30/81
 DRAFT. CHK. BY: G. PACHECO
 DATE LAST REV: 03/25/92
 DRAWN BY: S. CARDWELL
 40872150 04/23/92 2:30pm STC

FIELD SAMPLE NUMBER: WV-PS3-1
 LAB SAMPLE NUMBER: G 2008
 LOCATION: PS-03
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 6.44 US
 TCA (PPB): 108 UA
 BENZENE (PPB): 4 U
 TCE (PPB): 2.01 E
 TOLUENE (PPB): 4 US
 PCE (PPB): 5.24 U
 ETHYLBENZENE (PPB): 4 U
 TOTAL XYLENES (PPB): 4 US
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): NO
 TOTAL HALOGENS (PPB): 2.01

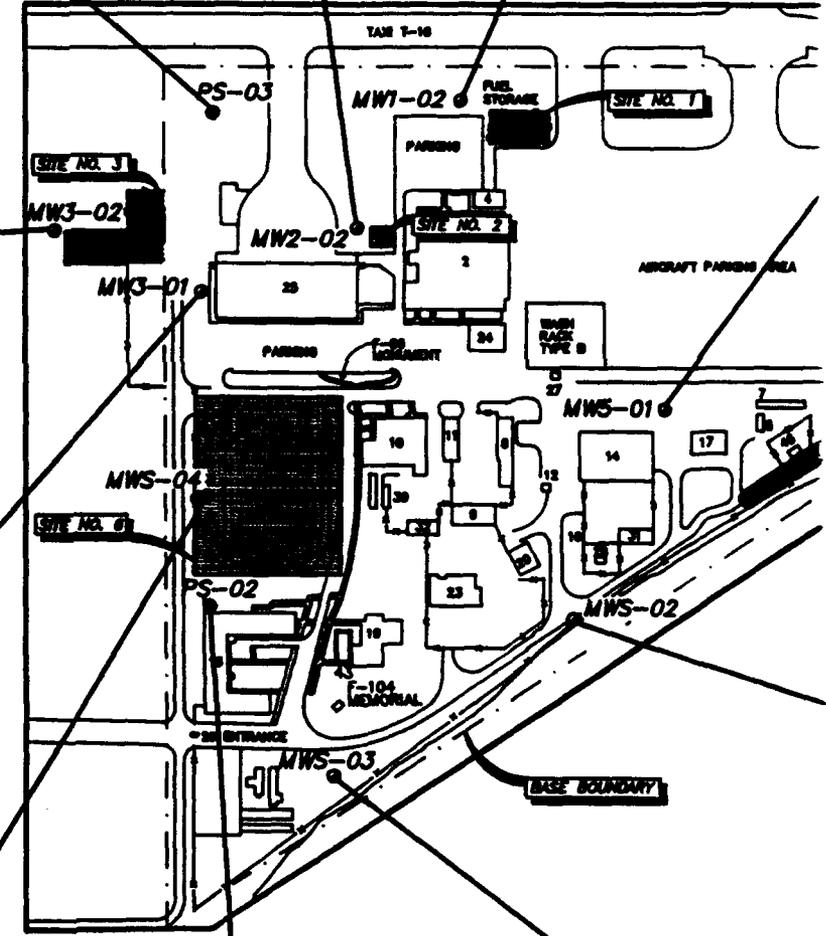
FIELD SAMPLE NUMBER: WV-MW2-02-01
 LAB SAMPLE NUMBER: G 2085
 LOCATION: MW2-02
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 2.15 E
 TCA (PPB): 108 AU
 BENZENE (PPB): 0.483 E
 TCE (PPB): 5.8
 TOLUENE (PPB): 5.48
 PCE (PPB): 4.4 U
 ETHYLBENZENE (PPB): 0.88 E
 TOTAL XYLENES (PPB): 4.84
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): 10.13
 TOTAL HALOGENS (PPB): 7.75

FIELD SAMPLE NUMBER: WV-MW2-02-01
 LAB SAMPLE NUMBER: G 2085
 LOCATION: MW2-02
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 2.15 E
 TCA (PPB): 108 AU
 BENZENE (PPB): 0.483 E
 TCE (PPB): 5.8
 TOLUENE (PPB): 5.48
 PCE (PPB): 4.4 U
 ETHYLBENZENE (PPB): 0.88 E
 TOTAL XYLENES (PPB): 4.84
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): 10.13
 TOTAL HALOGENS (PPB): 7.75

FIELD SAMPLE NUMBER: WV-MWS-02-02
 LAB SAMPLE NUMBER: G 2143
 LOCATION: MWS-02
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 0.58 E
 TCA (PPB): 210 U
 BENZENE (PPB): 0.94 U
 TCE (PPB): 7.8 E
 TOLUENE (PPB): 0.85 U
 PCE (PPB): 48 U
 ETHYLBENZENE (PPB): 0.84 U
 TOTAL XYLENES (PPB): 3.7
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: NO
 TOTAL AROMATICS (PPB): NO
 TOTAL HALOGENS (PPB): 8.48

FIELD SAMPLE NUMBER: WV-MWS-01-01
 LAB SAMPLE NUMBER: G 2144
 LOCATION: MWS-01
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 1.5 U
 TCA (PPB): 210 U
 BENZENE (PPB): 25
 TCE (PPB): 1.1E
 TOLUENE (PPB): 1.1
 PCE (PPB): 48 U
 ETHYLBENZENE (PPB): 2.7 E
 TOTAL XYLENES (PPB): 3.7 U
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): 28.8
 TOTAL HALOGENS (PPB): 1.1

FIELD SAMPLE NUMBER: WV-MWS-04-01
 LAB SAMPLE NUMBER: G 2142
 LOCATION: MWS-04
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 1.1E
 TCA (PPB): 118 E
 BENZENE (PPB): 17
 TCE (PPB): 6.3 E
 TOLUENE (PPB): 4.8
 PCE (PPB): 48 U
 ETHYLBENZENE (PPB): 4.8
 TOTAL XYLENES (PPB): 8.3
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): 34.8
 TOTAL HALOGENS (PPB): 125.4



FIELD SAMPLE NUMBER: WV-PS2-1
 LAB SAMPLE NUMBER: G 2009
 LOCATION: PS-02
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 6.44 US
 TCA (PPB): 108 UA
 BENZENE (PPB): 5.41
 TCE (PPB): 5.72 U
 TOLUENE (PPB): 7.25
 PCE (PPB): 5.24 U
 ETHYLBENZENE (PPB): 507
 TOTAL XYLENES (PPB): 4 U
 HEAVY HYDROCARBON: YES
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): 1085.25
 TOTAL HALOGENS (PPB): NO

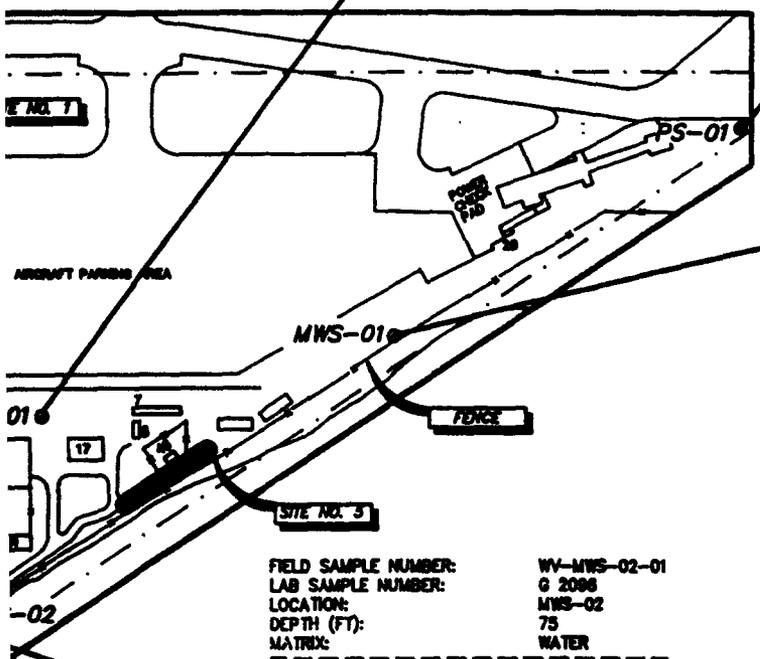
FIELD SAMPLE NUMBER: WV-PS2-2
 LAB SAMPLE NUMBER: G 2078
 LOCATION: PS-02
 DEPTH (FT): 75
 MATRIX: WATER
 DCE (PPB): 13.1
 TCA (PPB): 108 AU
 BENZENE (PPB): 311
 TCE (PPB): 5.72 U
 TOLUENE (PPB): 4 US
 PCE (PPB): 5.24 U
 ETHYLBENZENE (PPB): 45.4
 TOTAL XYLENES (PPB): 2.05 E
 HEAVY HYDROCARBON: NO
 LIGHT HYDROCARBON: YES
 TOTAL AROMATICS (PPB): 358.45
 TOTAL HALOGENS (PPB): 13.1

3

D SAMPLE NUMBER:	WV-MW1-02-01	FIELD SAMPLE NUMBER:	WV-MWS-01-01	FIELD SAMPLE NUMBER:	WV-PS1-1
SAMPLE NUMBER:	G 2084	LAB SAMPLE NUMBER:	G 2007	LAB SAMPLE NUMBER:	G 2088
ATONS:	MW1-02	LOCATION:	MWS-01	LOCATION:	PS-01
IN (FT):	75	DEPTH (FT):	75	DEPTH (FT):	75
RDG:	WATER	MATRIX:	WATER	MATRIX:	WATER

DCE (PPB):	1.74 E	DCE (PPB):	1.35 E	DCE (PPB):	5.72 U
(PPB):	108 AU	TCA (PPB):	108 AU	TCA (PPB):	108 AU
BENE (PPB):	0.42 ES	BENZENE (PPB):	0.408	BENZENE (PPB):	4 US
(PPB):	0.88 E	TCE (PPB):	3.38	TCE (PPB):	5.72 U
UENE (PPB):	1.44 E	TOLUENE (PPB):	1.91 E	TOLUENE (PPB):	4 US
(PPB):	5.24 U	PCE (PPB):	4.4 U	PCE (PPB):	5.24 U
ETHYLBENZENE (PPB):	40 U	ETHYLBENZENE (PPB):	1.94 U	ETHYLBENZENE (PPB):	4 U
AL XYLENES (PPB):	40 U	TOTAL XYLENES (PPB):	0.908 E	TOTAL XYLENES (PPB):	4 US
VY HYDROCARBON:	NO	HEAVY HYDROCARBON:	NO	HEAVY HYDROCARBON:	NO
IT HYDROCARBON:	YES	LIGHT HYDROCARBON:	YES	LIGHT HYDROCARBON:	NO

AL AROMATICS (PPB):	1.88	TOTAL AROMATICS (PPB):	3.225	TOTAL AROMATICS (PPB):	NO
AL HALOGENS (PPB):	2.63	TOTAL HALOGENS (PPB):	4.73	TOTAL HALOGENS (PPB):	NO



FIELD SAMPLE NUMBER:	WV-MWS-01-01	FIELD SAMPLE NUMBER:	WV-MWS-01-01
LAB SAMPLE NUMBER:	G 2067	LAB SAMPLE NUMBER:	G 2088
LOCATION:	MWS-01	LOCATION:	MWS-01
DEPTH (FT):	75	DEPTH (FT):	75
MATRIX:	WATER	MATRIX:	WATER

DCE (PPB):	5.72 U	DCE (PPB):	5.72 U
TCA (PPB):	108 AU	TCA (PPB):	108 AU
BENZENE (PPB):	4 U	BENZENE (PPB):	4 U
TCE (PPB):	5.72 U	TCE (PPB):	0.65 E
TOLUENE (PPB):	4 U	TOLUENE (PPB):	5
PCE (PPB):	5.24 U	PCE (PPB):	5.24 U
ETHYLBENZENE (PPB):	4 U	ETHYLBENZENE (PPB):	4 U
TOTAL XYLENES (PPB):	4 U	TOTAL XYLENES (PPB):	4 US
HEAVY HYDROCARBON:	NO	HEAVY HYDROCARBON:	NO
LIGHT HYDROCARBON:	YES	LIGHT HYDROCARBON:	YES

TOTAL AROMATICS (PPB):	NO	TOTAL AROMATICS (PPB):	5
TOTAL HALOGENS (PPB):	NO	TOTAL HALOGENS (PPB):	0.85

FIELD SAMPLE NUMBER:	WV-MWS-02-01
LAB SAMPLE NUMBER:	G 2088
LOCATION:	MWS-02
DEPTH (FT):	75
MATRIX:	WATER

DCE (PPB):	4.43 E
TCA (PPB):	112 A
BENZENE (PPB):	15.7
TCE (PPB):	9.98
TOLUENE (PPB):	3.1
PCE (PPB):	4.4 U
ETHYLBENZENE (PPB):	0.81 E
TOTAL XYLENES (PPB):	3.88
HEAVY HYDROCARBON:	NO
LIGHT HYDROCARBON:	YES

TOTAL AROMATICS (PPB):	23.47
TOTAL HALOGENS (PPB):	128.38

SAMPLE NUMBER:	WV-MWS-03-01	WV-MWS-03-02
SAMPLE NUMBER:	G 2088	G 2070
IN:	MWS-03	MWS-03
(FT):	75	75
	WATER	WATER

(PPB):	2.7 E	5.72 U
(PPB):	108 U	108 AU
(PPB):	4 U	4 U
(PPB):	3.44 E	9.75
(PPB):	4 U	3.11 U
(PPB):	5.24 U	5.24 U
BENE (PPB):	4 U	4 US
YLENES (PPB):	4 U	4
YDROCARBON:	NO	NO
YDROCARBON:	YES	YES

ROMATICS (PPB):	NO	3.11
AL XYLENES (PPB):	6.14	8.75

LEGEND - DATA QUALIFIERS:

- A- DUE TO COMPOUND SPECIFIC CALIBRATION DIFFICULTY, VALUE IS ESTIMATED
- E- COMPOUND DETECTED EITHER ABOVE OR BELOW DETECTION LIMIT, REPORTED RESULTS ARE ESTIMATED
- U- NONE DETECTED, VALUE REPORTED IS LOWER THAN DETECTION LIMIT
- US- COMPOUND DETECTED BELOW DETECTION LIMIT AS A RESULT OF SYSTEM CONTAMINATION

**FIGURE K-1
SUMMARY OF FIELD SCREENING
WATER ANALYSIS**

161 AREFG, ARIZONA ANG
SKY HARBOR IAP
PHOENIX, ARIZONA



APPENDIX L

TABULATION OF SOIL ANALYTICAL RESULTS

**APPENDIX I
RESULTS OF VOAs IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA**

Sample Number:	MBS-01-0-2-01	MBS-01-60-62-01	MBS-02-0-2-01	MBS-07-5-7-01	MBS-02-10-12-01	MBS-03-0-2-01	MBS-03-5-7-01
Sample Date:	29-Jan-91	29-Jan-91	31-Jan-91	31-Jan-91	31-Jan-91	30-Jan-91	30-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101318-01A	C101319-04A	C102088-01A	C102009-03A	C102009-07A		C101328-03A
Analysis Date:	07-Feb-91	07-Feb-91	08-Feb-91	08-Feb-91	08-Feb-91	07-Feb-91	07-Feb-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND NAME							
1,1,1-Trichloroethane	5U	5U	5U	5U	6U	5U	5U
1,1,2,2-Tetrachloroethane	5U	5U	5U	5U	6U	5U	5U
1,1,2-Trichloroethane	5U	5U	5U	5U	6U	5U	5U
1,1-Dichloroethane	5U	5U	5U	5U	6U	5U	5U
1,1-Dichloroethane	5U	5U	5U	5U	6U	5U	5U
1,2-Dichloroethane	5U	5U	5U	5U	6U	5U	5U
1,2-Dichloroethane	5U	5U	5U	5U	6U	5U	5U
1,2-Dichloropropane	5U	5U	5U	5U	6U	5U	5U
2-Butanone	11U	11U	10U	10U	12U	11U	11U
2-Butanone	11U	11U	10U	10U	12U	11U	11U
4-Methyl-2-pentanone	11U	11U	10U	10U	12U	11U	11U
Acetone	11U	10U	10U	10U	6J	11U	10U
Benzene	5U	5U	5U	5U	6U	5U	5U
Bromodichloromethane	5U	5U	5U	5U	6U	5U	5U
Bromoforn	5U	5U	5U	5U	6U	5U	5U
Bromomethane	11U	11U	10U	10U	12U	11U	11U
Carbon disulfide	5U	5U	5U	5U	6U	5U	5U
Carbon Tetrachloride	5U	5U	5U	5U	6U	5U	5U
Chlorobenzene	11U	11U	10U	10U	12U	11U	11U
Chloroethane	5U	5U	5U	5U	6U	5U	5U
Chloroform	5U	5U	5U	5U	6U	5U	5U
Chloromethane	11U	11U	10U	10U	12U	11U	11U
cis-1,3-Dichloropropene	5U	5U	5U	5U	6U	5U	5U
Dibromochloromethane	5U	5U	5U	5U	6U	5U	5U
Ethylbenzene	5U	5U	5U	5U	6U	5U	5U
Methylene chloride	7U	10U	15U	20U	14U	14U	6U
Styrene	5U	5U	5U	5U	6U	5U	5U
Tetrachloroethane	5U	5U	5U	5U	6U	5U	5U
Toluene	5U	5U	5U	1J	6U	5U	5U
trans-1,3-Dichloropropene	5U	5U	5U	5U	6U	5U	5U
Trichloroethane	11U	11U	10U	10U	12U	11U	11U
Vinyl Acetate	11U	11U	10U	10U	12U	11U	11U
Vinyl chloride	5U	5U	5U	5U	6U	5U	5U
Total xylenes	10000 U	10000 U	4900000	9600000	10000 U	75000	30000
TPH							

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result rejected in validation

**APPENDIX I
RESULTS OF VOAS IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA**

Sample Number:	SB1-02-0-2-01	SB1-03-0-2-01	SB1-03-20-22-01	SB1-03-35-37-01	SB1-03-55-57-01	SB1-03-55-57-01	SB1-03-55-57-01
Sample Date:	04-Feb-91	21-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	22-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C102058-01A	C101211-05A	C101211-14A	C101211-06A	C101211-07A	C101215-01A	C101215-02A
Analysis Date:	12-Feb-91	26-Jan-91	20-Jan-91	25-Jan-91	26-Jan-91	26-Jan-91	26-Jan-91
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
COMPOUND NAME							
1,1,1-Trichloroethane	5U	5U	5U	5U	5U	6U	6U
1,1,2,2-Tetrachloroethane	5U	5U	5U	5U	5U	6U	6U
1,1,2-Trichloroethane	5U	5U	5U	5U	5U	6U	6U
1,1-Dichloroethane	5U	5U	5U	5U	5U	6U	6U
1,1-Dichloroethane	5U	5U	5U	5U	5U	6U	6U
1,2-Dichloroethane	5U	5U	5U	5U	5U	6U	6U
1,2-Dichloroethane	5U	5U	5U	5U	5U	6U	6U
1,2-Dichloropropane	5U	5U	5U	5U	5U	6U	6U
2-Butanone	11U	11U	10U	10U	10U	13U	12U
2-Hexanone	11U	11U	10U	10U	10U	13U	12U
4-Methyl-2-pentanone	11U	11U	10U	10U	10U	13U	12U
Acetone	8U	12U	26	12U	13U	12U	12U
Benzene	5U	5U	5U	5U	5U	6U	6U
Bromodichloromethane	5U	5U	5U	5U	5U	6U	6U
Bromoform	5U	5U	5U	5U	5U	6U	6U
Bromomethane	11U	11U	10U	10U	10U	13U	12U
Carbon disulfide	5U	5U	5U	5U	5U	6U	6U
Carbor Tetrachloride	5U	5U	5U	5U	5U	6U	6U
Chlorobenzene	5U	5U	5U	5U	5U	6U	6U
Chloroethane	11U	11U	10U	10U	10U	13U	12U
Chloroform	5U	5U	5U	5U	5U	6U	6U
Chloromethane	11U	11U	10U	10U	10U	13U	12U
cis-1,3-Dichloropropene	5U	5U	5U	5U	5U	6U	6U
Dibromochloromethane	5U	5U	5U	5U	5U	6U	6U
Ethylbenzene	5U	5U	5U	5U	5U	6U	6U
Methylene chloride	6U	6U	9U	13U	5U	6U	6U
Styrene	5U	5U	5U	5U	5U	6U	6U
Tetrachloroethane	5U	5U	5U	5U	5U	6U	6U
Toluene	5U	5U	5U	5U	5U	6U	6U
trans-1,3-Dichloropropene	5U	5U	5U	5U	5U	6U	6U
Trichloroethane	5U	5U	5U	5U	5U	6U	6U
Vinyl Acetate	11U	11U	10U	10U	10U	13U	12U
Vinyl chloride	11U	11U	10U	10U	10U	13U	12U
Total xylenes	5U	5U	5U	5U	5U	6U	6U
TPH	26000	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result rejected in validation

APPENDIX L
RESULTS OF VOCs IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	883-01-0-1 1/2-01	883-01-50-51 1/2-01	883-01-70-71 1/2-01	883-03-0-0-1 1/2-01	883-03-10-11 1/2-01	883-03-20-21 1/2-01	24-Mar-91
Sample Date:	24-Mar-91	24-Mar-91	25-Mar-91	25-Mar-91	25-Mar-91	25-Mar-91	24-Mar-91
Lab Number:	C103220-03A	C103220-04A	C103220-11A	C103220-07A	C103220-08A	C103220-09A	C103220-08A
Analyte Date:	26-Mar-91	26-Mar-91	27-Mar-91	27-Mar-91	27-Mar-91	28-Mar-91	28-Mar-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	5U	5U	5U	5U	5U	5U	5U
1,1,1-Trichloroethane	5U	5U	5U	5U	5U	5U	5U
1,1,2-Tetrachloroethane	5U	5U	5U	5U	5U	5U	5U
1,1,2-Trichloroethane	5U	5U	5U	5U	5U	5U	5U
1,1-Dichloroethane	5U	5U	5U	5U	5U	5U	5U
1,1-Dichloroethane	5U	5U	5U	5U	5U	5U	5U
1,2-Dichloroethane	5R	5U	5U	5U	5U	5U	5U
1,2-Dichloroethane	5U	5U	5U	5U	5U	5U	5U
1,2-Dichloropropane	5U	5U	5U	5U	5U	5U	5U
2-Butanone	11U	10R	11R	11R	11R	10U	10R
2-Hexanone	11U	10U	11U	11U	11U	10R	10U
4-Methyl-2-pentanone	11U	10U	11U	11U	11U	10U	10U
Acetone	11U	45UJ	40UJ	5UJ	11UJ	10U	10UJ
Benzene	5U	5U	5U	5U	5U	5U	5U
Bromodichloromethane	5U	5U	5U	5U	5U	5U	5U
Bromoforn	5U	5U	5U	5U	5U	5U	5U
Bromomethane	11U	10U	11U	11U	11U	10U	10U
Carbon disulfide	5U	5U	5U	5U	5U	5U	5U
Carbon Tetrachloride	5U	5U	5U	5U	5U	5U	5U
Chlorobenzene	106-90-7	5U	5U	5U	5U	5U	5U
Chloroethane	75-00-3	10U	11U	11U	11U	10U	10U
Chloroform	67-66-3	5U	5U	5U	5U	5U	5U
Chloromethane	74-87-3	11U	11UJ	11UJ	11UJ	10UJ	10UJ
cis-1,3-Dichloropropene	10081-01-1	5U	5U	5U	5U	5U	5U
Dibromochloromethane	124-48-1	5U	5U	5U	5U	5U	5U
Ethylbenzene	100-41-4	5U	5U	5U	5U	5U	5U
Methylene chloride	75-09-2	5U	5UJ	5UJ	5UJ	5UJ	5UJ
Styrene	100-42-5	5U	5U	5U	5U	5U	5U
Tetrachloroethane	127-18-4	5U	5U	5U	5U	5U	5U
Toluene	106-86-3	2J	21	5U	2J	5U	3J
trans-1,3-Dichloropropene	10081-02-1	5R	5U	5U	5U	5U	5U
Trichloroethane	78-01-6	5U	5U	5U	5U	5U	5U
Vinyl Acetate	106-05-4	11R	11U	11U	11U	10U	10U
Vinyl chloride	75-01-4	11U	11U	11U	11U	10U	10U
Total xylenes	1330-20-7	5U	150	8U	2J	5U	5U
TPH	30000	10000 U	10000 U	46000	50000	10000 U	140000

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result rejected in validation

APPENDIX L
RESULTS OF VOAs IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SS4-01	SS4-02	SS4-03	SS4-04	SS4-05	SS4-06	SC-MW4-01-01A
Sample Date:	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91	16-Apr-91
Matrix:	SOIL						
Lab Number:	C102192-01C	C102192-02C	C102192-03C	C102192-04C	C102192-05C	C102192-06C	883500
Analysis Date:	22-Feb-91	22-Feb-91	22-Feb-91	22-Feb-91	22-Feb-91	22-Feb-91	25-Apr-91
Units:	ug/Kg						
1,1,1-Trichloroethane	5U						
1,1,2,2-Tetrachloroethane	5U						
1,1,2-Trichloroethane	5U						
1,1-Dichloroethane	5U						
1,1-Dichloroethane	5U						
1,2-Dichloroethane	5U						
1,2-Dichloroethylene	5U						
1,2-Dichloropropane	5U						
2-Butanone	11R	11U	11U	11R	11R	10R	11U
2-Hexanone	11R	11U	11U	11R	11R	10R	11U
4-Methyl-2-pentanone	11R	11U	11U	11U	11U	10R	11U
Acetone	11R	8UJ	11UJ	11R	10UJ	10R	11U
Benzene	5U						
Bromodichloromethane	5U						
Bromoform	5U						
Bromomethane	11U	11U	11U	11U	11U	10U	11UJ
Carbon disulfide	5U						
Carbon Tetrachloride	5U	5U	5U	5U	5U	5U	5UJ
Chlorobenzene	11U	11U	11U	11U	11U	10U	11U
Chloroethane	5U						
Chloroform	11U	11U	11U	11U	11U	10U	11U
Chloromethane	5U						
cis-1,3-Dichloropropene	5U						
Dibromochloromethane	5U						
Ethylbenzene	5U						
Methylene chloride	5U	5U	6U	6U	7U	9U	5U
Styrene	5U						
Tetrachloroethane	5U						
Toluene	5U						
trans-1,3-Dichloropropene	5R	5U	5U	5R	5R	5R	5U
Trichloroethane	5U						
Vinyl Acetate	11U	11U	11U	11U	11U	10U	11U
Vinyl chloride	11U	11U	11U	11U	11U	10U	11U
Total xylenes	63000	10000 U	490000	28000	78000	970000	5U
TPH							

U = Compound not detected
J = Estimated value
E = Estimated concentration above calibration range
R = Result rejected in validation

APPENDIX L
RESULTS OF VOAs IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SC-MW4-02-01A	SC-PP1-01A	MBS-01-0-2-01	MBS-01-5-7-01	MBS-01-70-72-01
Sample Date:	16-Apr-91	16-Apr-91	07-Feb-91	07-Feb-91	07-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	BB3501	BB3504	C102108-01A	C102108-02A	C102108-03A
Analysis Date:	25-Apr-91	25-Apr-91	16-Feb-91	16-Feb-91	16-Feb-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	5 U	5 U	6 R	5 R	5 R
1,1,1-Trichloroethane	71-55-6	5 U	6 R	5 R	5 R
1,1,2,2-Tetrachloroethane	79-34-5	5 U	6 U	5 R	5 R
1,1,2-Trichloroethane	79-00-5	5 U	6 U	5 U	5 U
1,1-Dichloroethane	75-34-3	5 U	6 U	5 U	5 U
1,1-Dichloroethene	75-35-4	5 U	6 U	5 U	5 U
1,2-Dichloroethane	107-06-2	5 U	6 U	5 U	5 U
1,2-Dichloroethylene	540-58-0	5 U	6 U	5 U	5 U
1,2-Dichloropropane	78-67-5	5 U	6 U	5 U	5 U
2-Butanone	78-83-3	10 U	11 U	10 U	10 U
2-Hexanone	591-78-6	10 U	11 U	10 U	10 U
4-Methyl-2-pentanone	108-10-1	10 U	11 U	10 U	10 U
Acetone	67-64-1	10 U	10 J	10 J	10 U
Benzene	71-43-2	5 U	6 U	5 U	5 U
Bromodichloromethane	75-27-4	5 U	6 R	5 R	5 R
Bromotom	75-25-2	5 U	6 U	5 U	5 U
Bromomethane	74-83-9	10 U	11 U	10 U	10 U
Carbon disulfide	75-15-0	5 U	6 U	5 U	5 U
Carbon Tetrachloride	56-23-5	5 U	6 R	5 R	5 R
Chlorobenzene	108-90-7	5 U	6 U	5 U	5 U
Chloroethane	75-00-3	10 U	11 U	10 U	10 U
Chloroform	67-66-3	5 U	6 U	5 U	5 U
Chloromethane	74-87-3	10 U	11 U	10 U	10 U
cis-1,3-Dichloropropene	10081-01-5	5 U	6 U	5 U	5 U
Dibromochloromethane	124-48-1	5 U	6 U	5 U	5 U
Ethylbenzene	100-41-4	5 U	6 U	5 U	5 U
Methylene chloride	75-09-2	5 U	11 U	7 U	8 U
Styrene	100-42-5	5 U	6 U	5 U	5 U
Tetrachlorethene	127-18-4	5 U	6 U	5 U	5 U
Toluene	108-88-3	5 U	6 U	5 U	5 U
trans-1,3-Dichloropropene	10081-02-6	5 U	5 U	5 U	5 U
Trichloroethene	79-01-6	5 U	6 U	5 U	5 U
Vinyl Acetate	108-05-4	10 U	11 U	10 U	10 U
Vinyl chloride	75-01-4	10 U	11 U	10 U	10 U
Total xylenes	1330-20-7	5 U	6 U	5 U	5 U
TPH			10000 U	10000 U	10000 U

REV. 10/81

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result rejected in validation

APPENDIX L
RESULTS OF VOAS IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MBS-04-0-2-01	MBS-04-15-16 1/2-0	MBS-04-99-01	SC-PS1-1	SC-PS2-1	SC-PS3-1
Sample Date:	21-Mar-91	21-Mar-91	21-Mar-91	22-Mar-91	22-Mar-91	22-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C103195-01A	C103195-02A	C103195-04A	C103213-01A	C103213-02A	C103213-03A
Analysis Date:	23-Mar-91	23-Mar-91	23-Mar-91	26-Mar-91	26-Mar-91	26-Mar-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
1,1,1-Trichloroethane	6 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	6 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	6 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	6 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	6 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	6 U	5 U	5 U	5 R	5 R	5 R
1,2-Dichloroethylene	6 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	6 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	11 U	10 U	11 U	10 U	10 U	10 U
2-Hexanone	11 U	10 U	11 U	10 U	10 U	10 U
4-Methyl-2-pentanone	11 U	10 U	11 U	10 U	10 U	10 U
Acetone	6 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	6 U	5 U	5 U	5 U	5 U	5 U
Bromoform	11 U	10 U	11 U	10 U	10 U	10 U
Bromomethane	6 R	5 R	5 R	5 U	5 U	5 U
Carbon disulfide	6 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	6 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	11 U	10 U	11 U	10 U	10 U	10 U
Chloroethane	6 U	5 U	5 U	5 U	5 U	5 U
Chloroform	11 U	10 U	11 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	6 U	5 U	5 U	5 R	5 R	5 R
Dibromochloromethane	6 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	6 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	7 U	13 U	6 U	5 U	5 U	5 U
Styrene	6 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane	6 U	5 U	5 U	5 U	5 U	5 U
Toluene	6 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	6 U	5 U	5 U	5 R	5 R	5 R
Trichloroethane	6 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	11 U	10 U	11 U	10 R	10 R	10 R
Vinyl chloride	11 U	10 U	11 U	10 U	10 U	10 U
Total xylenes	35000	10000 U	67000	10000 U	10000 U	10000 U
TPH						

8000-100-001

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result reflected in validation

APPENDIX L
RESULTS OF VOAs IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number: 881-04-0-2-01 881-04-10-12-01 881-04-55-57-01 881-04-55-57-02 881-05-0-1/01
 Sample Date: 21-Jan-91 21-Jan-91 21-Jan-91 21-Jan-91 18-Jan-91
 Matrix: SOIL SOIL SOIL SOIL SOIL
 Lab Number: C101211-01A C101211-02A C101211-03A C101211-04A C101197-01A
 Analysis Date: 25-Jan-91 24-Jan-91 24-Jan-91 24-Jan-91 22-Jan-91
 Units: ug/kg ug/kg ug/kg ug/kg ug/kg

COMPOUND NAME	CAS NUMBER	881-04-0-2-01	881-04-10-12-01	881-04-55-57-01	881-04-55-57-02	881-05-0-1/01
1,1,1-Trichloroethane	71-55-6	5U	5U	5U	6U	5U
1,1,2,2-Tetrachloroethane	79-34-5	5U	5U	5U	6U	5U
1,1,2-Trichloroethane	79-00-5	5U	5U	5U	6U	5U
1,1-Dichloroethane	75-34-3	5U	5U	5U	6U	5U
1,1-Dichloroethene	75-35-4	5U	5U	5U	6U	5U
1,2-Dichloroethane	107-06-2	5U	5U	5U	6U	5U
1,2-Dichloroethyne	540-59-0	5U	5U	5U	6U	5R
1,2-Dichloropropane	78-67-5	5U	5U	5U	6U	5U
2-Butanone	78-83-3	11U	11U	11U	13U	11U
2-Hexanone	591-78-6	11U	11U	11U	13U	11U
4-Methyl-2-pentanone	108-10-1	11U	11U	11U	13U	11U
Acetone	67-64-1	20	12U	12U	12U	12U
Benzene	71-43-2	5U	5U	5U	6U	5U
Bromodichloromethane	75-27-4	5U	5U	5U	6U	5U
Bromoform	75-25-2	5U	5U	5U	6U	5U
Bromomethane	74-83-9	11U	11U	11U	13U	11U
Carbon disulfide	75-15-0	5U	5U	5U	6U	5U
Carbon Tetrachloride	56-23-5	5U	5U	5U	6U	5U
Chlorobenzene	108-90-7	5U	5U	5U	6U	5U
Chloroethane	75-00-3	11U	11U	11U	13U	11U
Chloroform	67-66-3	5U	5U	5U	6U	5U
Chloromethane	74-87-3	11U	11U	11U	13U	11U
cis-1,3-Dichloropropene	10061-01-	5U	5U	5U	6U	5U
Dibromochloromethane	124-48-1	5U	5U	5U	6U	5U
Ethylbenzene	100-41-4	5U	5U	5U	6U	5U
Methylene chloride	75-09-2	14U	15U	15U	21U	7UJ
Styrene	100-42-5	5U	5U	5U	6U	5U
Tetrahydrofuran	127-18-4	5U	5U	5U	6U	5U
Toluene	108-88-3	5U	5U	5U	6U	5U
trans-1,3-Dichloropropene	10061-02-	5U	5U	5U	6U	5U
Trichloroethane	79-01-6	5U	5U	5U	6U	5U
Vinyl Acetate	108-05-4	11U	11U	11U	13U	11U
Vinyl chloride	75-01-4	11U	11U	11U	13U	11U
Total xylenes	1330-20-7	5U	5U	5U	6U	5U
TPH		33000	10000 U	10000 U	10000 U	10000 U

REV. 08-83

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result rejected in validation

APPENDIX L
RESULTS OF VOAS IN SOIL
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SBS-04-15-16 1/2-01	SBS-04-5-6 1/2-01	MB3-01-0-1 1/2-01	MB3-01-50-51 1/2-01	MB3-01-60-61 1/2-01	1/2-01MBS-02-0-1 1/2-01	MB3-02-5-6 1/2-01
Sample Date:	24-Mar-91	24-Mar-91	22-Mar-91	22-Mar-91	22-Mar-91	23-Mar-91	23-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C103220-13A	C103220-06A	C103212-01A	C103212-02A	C103212-03A	C103220-01A	C103220-02A
Analysis Date:	27-Mar-91	27-Mar-91	26-Mar-91	26-Mar-91	26-Mar-91	26-Mar-91	26-Mar-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
1,1,1-Trichloroethane	5U	5U	6U	6U	5U	5U	5U
1,1,2,2-Tetrachloroethane	5U	5U	6U	6U	5U	5U	5U
1,1,2-Trichloroethane	5U	5U	6U	6U	5U	5U	5U
1,1-Dichloroethane	5U	5U	6U	6U	5U	5U	5U
1,1-Dichloroethane	5U	5U	6U	6U	5U	5U	5U
1,2-Dichloroethane	5R	5U	6U	6U	5U	5R	5R
1,2-Dichloroethylene	5U	5U	6U	6U	5U	5U	5U
1,2-Dichloropropane	5U	5U	6U	6U	5U	5U	5U
2-Butanone	10U	10R	12U	12U	11U	11U	10U
2-Hexanone	10U	10U	12U	12U	11U	11U	10U
4-Methyl-2-pentanone	10U	10U	12U	12U	11U	11U	10U
Acetone	67-84-1	10U	12U	12U	11U	11U	10U
Benzene	71-43-2	5U	6U	6U	5U	5U	5U
Bromodichloromethane	75-27-4	5U	6U	6U	5U	5U	5U
Bromoforn	75-25-2	5U	6U	6U	5U	5U	5U
Bromomethane	74-83-9	10U	12U	12U	11U	11U	10U
Carbon disulfide	75-15-0	5U	6R	6R	5R	5U	5U
Carbon Tetrachloride	56-23-5	5U	6U	6U	5U	5U	5U
Chlorobenzene	106-90-7	5U	6U	6U	5U	5U	5U
Chloroethane	75-00-3	10U	12U	12U	11U	11U	10U
Chloroform	67-66-3	5U	6U	6U	5U	5U	5U
Chloromethane	74-87-3	10U	12U	12U	11U	11U	10U
cis-1,3-Dichloropropene	10061-01-	5U	6U	6U	5U	5U	5U
Dibromochloromethane	124-48-1	5U	6U	6U	5U	5U	5U
Ethylbenzene	100-41-4	5U	6U	6U	5U	5U	5U
Methylene chloride	75-09-2	5U	6U	6U	5U	5U	5U
Styrene	100-42-5	5U	6U	6U	5U	5U	5U
Tetrachlorethane	127-18-4	5U	6U	6U	5U	5U	5U
Toluene	106-98-3	5U	6U	6U	5U	5U	5U
trans-1,3-Dichloropropene	10061-02-	5R	6U	6U	5U	5R	5R
Trichloroethane	79-01-6	5U	6U	6U	5U	5U	5U
Vinyl Acetate	106-05-4	10R	12U	12U	11U	11R	10R
Vinyl chloride	75-01-4	10U	12U	12U	11U	11U	10U
Total xylenes	1330-20-7	5U	6U	6U	5U	5U	5U
TPH	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above calibration range
 R = Result rejected in validation

APPENDIX L

RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number: MBS-01-0-2-01 MBS-01-60-62-01 MBS-02-0-2-01 MBS-02-10-12-01 MBS-02-5-7-01
 Sample Date: 29-Jan-91 29-Jan-91 31-Jan-91 31-Jan-91 31-Jan-91
 Matrix: SOIL SOIL SOIL SOIL SOIL
 Lab Number: C101318-01A C101318-04A C102008-01A C102008-05A C102008-03A
 Prep Date: 06-Feb-91 06-Feb-91 10-Feb-91 10-Feb-91 10-Feb-91
 Analysis Date: 13-Feb-91 12-Feb-91 20-Feb-91 15-Feb-91 20-Feb-91
 Units: ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg

COMPOUND NAME	CAS NUMBER	MBS-01-0-2-01	MBS-01-60-62-01	MBS-02-0-2-01	MBS-02-10-12-01	MBS-02-5-7-01
1,2,4-Trichlorobenzene	120-82-1	360 U	360 U	3400 U	410 U	3400 U
1,2-Dichlorobenzene	95-50-1	360 U	360 U	3400 U	410 U	3400 U
1,3-Dichlorobenzene	541-73-1	360 U	360 U	3400 U	410 U	3400 U
1,4-Dichlorobenzene	106-46-7	360 U	360 U	3400 U	410 U	3400 U
2,4,5-Trichlorophenol	95-95-4	1800 U	1800 U	16000 U	2000 U	16000 U
2,4,6-Trichlorophenol	88-06-2	360 U	360 U	3400 U	410 U	3400 U
2,4-Dichlorophenol	120-83-2	360 U	360 U	3400 U	410 U	3400 U
2,4-Dimethylphenol	105-67-9	360 U	360 U	3400 U	410 U	3400 U
2,4-Dinitrophenol	51-28-5	1800 U	1800 U	16000 U	2000 U	16000 UJ
2,4-Dinitrotoluene	121-14-2	360 U	360 U	3400 UJ	410 U	3400 U
2,6-Dinitrotoluene	606-20-2	360 U	360 U	3400 U	410 U	3400 U
2-Chloronaphthalene	91-58-7	360 U	360 U	3400 U	410 U	3400 U
2-Chlorophenol	95-57-8	360 U	360 U	3400 U	410 U	3400 U
2-Methylnaphthalene	91-57-6	360 U	360 U	3400 U	410 U	3400 U
2-Methylphenol	95-48-7	360 U	360 U	3400 U	410 U	3400 U
2-Nitroaniline	88-74-4	1800 U	1800 U	16000 U	2000 U	16000 U
2-Nitrophenol	88-75-5	360 U	360 U	3400 U	410 U	3400 U
3,3'-Dichlorobenzidine	91-94-1	730 U	730 R	6800 UJ	820 U	6700 UJ
3-Nitroaniline	99-09-2	1800 UJ	1800 U	16000 U	2000 R	16000 UJ
4,6-Dinitro-2-methylphenol	534-52-1	1800 U	1800 U	16000 UJ	2000 U	16000 UJ
4-Bromophenyl phenyl ether	101-55-3	360 U	360 U	3400 U	410 U	3400 U
4-Chloroaniline	106-47-8	360 UJ	360 U	3400 U	410 R	3400 U
4-Chlorophenylphenyl ether	7005-72-5	360 U	360 U	3400 U	410 U	3400 U
4-Chloro-3-methylphenol	59-50-7	360 U	360 U	3400 U	410 U	3400 U
4-Methylphenol	106-44-5	360 U	360 U	3400 U	410 U	3400 U
4-Nitroaniline	100-01-6	1800 R	1800 R	16000 U	2000 U	16000 U
4-Nitrophenol	100-02-7	1800 U	1800 U	16000 U	2000 U	16000 U
Acenaphthene	83-32-9	360 U	360 U	3400 U	410 U	3400 U
Acenaphthylene	208-96-8	360 U	360 U	3400 U	410 U	3400 U
Anthracene	120-12-7	360 U	360 U	3400 U	410 U	3400 U
Benzoic acid	65-85-0	1800 R	1800 R	16000 UJ	2000 R	16000 UJ
Benzo(a)anthracene	56-55-3	360 U	360 U	3400 U	410 U	3400 U

APPENDIX L

RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MBS-03-0-2-01	MBS-03-5-7-01	MBS-04-0-2-01	MBS-04-15-16 1/2-0 MBS-04-99-01
Sample Date:	30-Jan-91	30-Jan-91	21-Mar-91	21-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101326-01A	C101326-03A	C103195-01A	C103195-02A
Prep Date:	10-Feb-91	10-Feb-91	23-Mar-91	23-Mar-91
Analysis Date:	15-Feb-91	15-Feb-91	01-Apr-91	05-Apr-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg

COMPOUND NAME	CAS NUMBER	ug/Kg	ug/Kg	ug/Kg
1,2,4-Trichlorobenzene	120-82-1	350 U	370 U	370 U
1,2-Dichlorobenzene	95-50-1	350 U	370 U	370 U
1,3-Dichlorobenzene	541-73-1	350 U	370 U	370 U
1,4-Dichlorobenzene	106-46-7	350 U	370 U	370 U
2,4,5-Trichlorophenol	95-95-4	1700 U	1800 U	1800 U
2,4,6-Trichlorophenol	88-06-2	350 U	370 U	370 U
2,4-Dichlorophenol	120-83-2	350 U	370 U	370 U
2,4-Dimethylphenol	105-67-9	350 U	370 U	370 U
2,4-Dinitrophenol	51-28-5	1700 U	1800 U	1800 U
2,4-Dinitrotoluene	121-14-2	350 U	370 U	370 U
2,6-Dinitrotoluene	606-20-2	350 U	370 U	370 U
2-Chloronaphthalene	91-58-7	350 U	370 U	370 U
2-Chlorophenol	95-57-8	350 U	370 U	370 U
2-Methylnaphthalene	91-57-6	350 U	370 U	370 U
2-Methylphenol	95-48-7	350 U	370 U	370 U
2-Nitroaniline	88-74-4	1700 U	1800 U	1800 U
2-Nitrophenol	88-75-5	350 U	370 U	370 U
3,3'-Dichlorobenzidine	91-94-1	700 U	750 U	750 U
3-Nitroaniline	99-09-2	1700 R	1800 U	1800 U
4,6-Dinitro-2-methylphenol	534-52-1	1700 U	1800 U	1800 U
4-Bromophenyl phenyl ether	101-55-3	350 U	370 U	370 U
4-Chloroaniline	106-47-8	350 U	370 U	370 U
4-Chlorophenylphenyl ether	7005-72-5	350 U	370 U	370 U
4-Chloro-3-methylphenol	59-50-7	350 U	370 U	370 U
4-Methylphenol	106-44-5	350 U	370 U	370 U
4-Nitroaniline	100-01-6	1700 U	1800 U	1800 U
4-Nitrophenol	100-02-7	1700 U	1800 U	1800 U
Acenaphthene	83-32-9	350 U	370 U	370 U
Acenaphthylene	208-96-8	350 U	370 U	370 U
Anthracene	120-12-7	350 U	370 U	370 U
Benzoic acid	65-85-0	1700 R	1800 U	1800 U
Benzo(a)anthracene	56-55-3	350 U	370 U	370 U

APPENDIX L
RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MBS-01-0-2-01	MBS-01-60-62-01	MBS-02-0-2-01	MBS-02-10-12-01	MBS-02-5-7-01
Sample Date:	29-Jan-91	29-Jan-91	31-Jan-91	31-Jan-91	31-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101318-01A	C101318-04A	C102008-01A	C102008-05A	C102008-03A
Prep Date:	06-Feb-91	08-Feb-91	10-Feb-91	10-Feb-91	10-Feb-91
Analysis Date:	13-Feb-91	12-Feb-91	20-Feb-91	15-Feb-91	20-Feb-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND NAME					
CAS NUMBER					
Benzo(a)pyrene	360 U	360 U	3400 U	410 U	3400 U
Benzo(b)fluoranthene	360 U	360 U	3400 U	410 U	3400 U
Benzo(g,h,i)perylene	360 U	360 U	3400 UJ	410 U	3400 UJ
Benzo(k)fluoranthene	360 U	360 U	3400 U	410 U	3400 U
Benzyl alcohol	360 U	360 U	3400 U	410 U	3400 U
bis(2-Chloroethoxy)methane	360 U	360 U	3400 U	410 U	3400 U
bis(2-Chloroethyl)ether	360 R	360 U	3400 U	410 U	3400 U
bis(2-Chloroisopropyl) ether	360 U	360 U	3400 U	410 U	3400 U
bis(2-Ethylhexyl) phthalate	360 U	360 U	3400 U	410 U	3400 U
Butyl benzyl phthalate	360 U	360 U	3400 U	410 U	3400 U
Chrysene	360 U	360 U	3400 U	410 U	3400 U
Dibenzofuran	360 U	360 U	3400 U	410 U	3400 U
Dibenzo(a,h)anthracene	360 U	360 U	3400 UJ	410 U	3400 UJ
Diethyl phthalate	360 U	360 U	3400 U	410 U	3400 U
Dimethyl phthalate	360 U	360 U	3400 U	410 U	3400 U
Di-n-butyl phthalate	360 U	360 U	3400 U	410 U	3400 U
Di-n-octyl phthalate	360 U	360 U	3400 U	410 U	3400 U
Fluoranthene	360 U	360 U	3400 U	410 U	3400 U
Fluorene	360 U	360 U	3400 U	410 U	3400 U
Hexachlorobenzene	360 U	360 U	3400 U	410 U	3400 U
Hexachlorobutadiene	360 U	360 U	3400 U	410 U	3400 U
Hexachlorocyclopentadiene	360 U	360 U	3400 UJ	410 U	3400 UJ
Hexachloroethane	360 U	360 U	3400 U	410 U	3400 U
Indeno(1,2,3-cd)pyrene	360 U	360 U	3400 UJ	410 U	3400 UJ
Isophorone	360 U	360 U	3400 U	410 U	3400 U
Naphthalene	360 U	360 U	3400 U	410 U	3400 U
Nitrobenzene	360 U	360 U	3400 U	410 U	3400 U
N-Nitrosodiphenylamine	360 U	360 U	3400 U	410 U	3400 U
N-Nitroso-di-n-propylamine	360 U	360 U	3400 U	410 U	3400 U
Pentachlorophenol	1800 U	1800 U	16000 U	2000 U	16000 U
Phenanthrene	360 U	360 U	3400 U	410 U	3400 U
Phenol	360 U	360 U	3400 U	410 U	3400 U
Pyrene	360 U	360 U	3400 U	410 U	3400 U

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MBS-03-0-2-01	MBS-03-5-7-01	MBS-04-0-2-01	MBS-04-15-16 1/2-01	MBS-04-99-01
Sample Date:	30-Jan-91	30-Jan-91	21-Mar-91	21-Mar-91	21-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101326-01A	C101326-03A	C103195-01A	C103195-02A	C103195-04A
Prep Date:	10-Feb-91	10-Feb-91	23-Mar-91	23-Mar-91	23-Mar-91
Analysis Date:	15-Feb-91	15-Feb-91	01-Apr-91	01-Apr-91	05-Apr-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND NAME					
CAS NUMBER					
Benzo(e)pyrene	350 U	350 U	370 U	370 U	690 U
Benzo(b)fluoranthene	350 U	350 U	370 U	370 U	690 U
Benzo(g,h,i)perylene	350 U	350 U	370 U	370 U	690 U
Benzo(k)fluoranthene	350 U	350 U	370 U	370 U	690 U
Benzyl alcohol	350 U	350 U	370 U	370 U	690 U
bis(2-Chloroethoxy)methane	350 U	350 U	370 U	370 U	690 U
bis(2-Chloroethyl)ether	350 U	350 U	370 U	370 U	690 U
bis(2-Chloroisopropyl) ether	350 U	350 U	370 U	370 U	690 U
bis(2-Ethylhexyl) phthalate	350 U	350 U	370 U	370 U	690 U
Butyl benzyl phthalate	350 U	350 U	370 U	370 U	690 U
Chrysene	350 U	350 U	370 U	370 U	690 U
Dibenzofuran	350 U	350 U	370 U	370 U	690 U
Dibenzo(e,h)anthracene	350 U	350 U	370 U	370 U	690 U
Diyl phthalate	350 U	350 U	370 U	370 U	690 U
Dimethyl phthalate	350 U	350 U	370 U	370 U	690 U
Di-n-butyl phthalate	350 U	350 U	370 U	370 U	690 U
Di-n-octyl phthalate	350 U	350 U	370 U	370 U	690 U
Fluoranthene	350 U	350 U	370 U	370 U	690 U
Fluorene	350 U	350 U	370 U	370 U	690 U
Hexachlorobenzene	350 U	350 U	370 U	370 U	690 U
Hexachlorobutadiene	350 U	350 U	370 U	370 U	690 U
Hexachlorocyclopentadiene	350 U	350 U	370 U	370 U	690 U
Hexachloroethane	350 U	350 U	370 U	370 U	690 U
Indeno(1,2,3-cd)pyrene	350 U	350 U	370 U	370 U	690 U
Isophorone	350 U	350 U	370 U	370 U	690 U
Naphthalene	350 U	350 U	370 U	370 U	110 J
Nitrobenzene	350 U	350 U	370 U	370 U	690 U
N-Nitrosodiphenylamine	350 U	350 U	370 U	370 U	690 U
N-Nitroso-di-n-propylamine	350 U	350 U	370 U	370 U	690 U
Pentachlorophenol	1700 U	1700 U	1800 U	1800 U	3400 U
Phenanthrene	350 U	350 U	43 J	370 U	690 U
Phenol	350 U	350 U	370 U	370 U	690 U
Pyrene	350 U	350 U	53 J	370 U	690 U

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	S81-02-0-2-01	S81-03-0-2-01	S81-03-20-22-01	S81-03-35-37-01	S81-03-35-37-02	S81-03-55-57-01
Sample Date:	04-Feb-91	21-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	22-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C102058-01A	C101211-05A	C101211-14A	C101211-08A	C101211-07A	C101215-01A
Prep Date:	10-Feb-91	25-Jan-91	29-Jan-91	25-Jan-91	25-Jan-91	29-Jan-91
Analysis Date:	15-Feb-91	29-Jan-91	30-Jan-91	29-Jan-91	29-Jan-91	30-Jan-91
Units:	ug/Kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	360 U	360 U	340 U	340 U	340 U	430 U
1,2,4-Trichlorobenzene	360 U	360 U	340 U	340 U	340 U	430 U
1,2-Dichlorobenzene	360 U	360 U	340 U	340 U	340 U	430 U
1,3-Dichlorobenzene	360 U	360 U	340 U	340 U	340 U	430 U
1,4-Dichlorobenzene	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
2,4,5-Trichlorophenol	360 U	360 U	340 U	340 U	340 U	430 U
2,4,6-Trichlorophenol	360 U	360 U	340 U	340 U	340 U	430 U
2,4-Dichlorophenol	360 U	360 U	340 U	340 U	340 U	430 U
2,4-Dimethylphenol	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
2,4-Dinitrophenol	360 U	360 U	340 U	340 U	340 U	430 U
2,4-Dinitrotoluene	360 U	360 U	340 U	340 U	340 U	430 U
2,6-Dinitrotoluene	360 U	360 U	340 U	340 U	340 U	430 U
2-Chloronaphthalene	360 U	360 U	340 U	340 U	340 U	430 U
2-Chlorophenol	360 U	360 U	340 U	340 U	340 U	430 U
2-Methylnaphthalene	360 U	360 U	340 U	340 U	340 U	430 U
2-Methylphenol	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
2-Nitroaniline	360 U	360 U	340 U	340 U	340 U	430 U
2-Nitrophenol	720 U	720 U	680 U	680 U	670 U	860 U
3,3'-Dichlorobenzidine	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
3-Nitroaniline	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
4,6-Dinitro-2-methylphenol	360 U	360 U	340 U	340 U	340 U	430 U
4-Bromophenyl phenyl ether	360 R	360 R	340 U	340 U	340 U	430 U
4-Chloroaniline	360 U	360 U	340 U	340 U	340 U	430 U
4-Chlorophenylphenyl ether	360 U	360 U	340 U	340 U	340 U	430 U
4-Chloro-3-methylphenol	360 U	360 U	340 U	340 U	340 U	430 U
4-Methylphenol	360 U	360 U	340 U	340 U	340 U	430 U
4-Nitroaniline	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
4-Nitrophenol	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
Acenaphthene	360 U	360 U	340 U	340 U	340 U	430 U
Acenaphthylene	360 U	360 U	340 U	340 U	340 U	430 U
Anthracene	1700 R	1700 R	1600 R	1600 R	1600 R	2100 U
Benzoic acid	360 U	360 U	340 U	340 U	340 U	430 U
Benzo(a)anthracene	360 U	360 U	340 U	340 U	340 U	430 U

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SB1-03-55-57-02	SB1-04-0-2-01	SB1-04-10-12-01	SB1-04-55-57-01	SB1-04-55-57-02	SB1-05-0-1/01
Sample Date:	22-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	18-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101215-02A	C101211-01A	C101211-02A	C101211-03A	C101211-04A	C101197-01A
Prep Date:	29-Jan-91	25-Jan-91	25-Jan-91	25-Jan-91	25-Jan-91	25-Jan-91
Analysis Date:	29-Jan-91	29-Jan-91	29-Jan-91	29-Jan-91	29-Jan-91	28-Jan-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg

COMPOUND NAME	CAS NUMBER	390 U	3500 U	350 U	360 U	360 U
1,2,4-Trichlorobenzene	120-82-1 U	390 U	3500 U	350 U	360 U	360 U
1,2-Dichlorobenzene	95-50-1 U	390 U	3500 U	350 U	360 U	360 U
1,3-Dichlorobenzene	541-73-1 U	390 U	3500 U	350 U	360 U	360 U
1,4-Dichlorobenzene	106-46-7 U	390 U	3500 U	350 U	360 U	360 U
2,4,5-Trichlorophenol	95-95-4 U	1900 U	17000 U	1700 U	1800 U	1700 U
2,4,6-Trichlorophenol	88-06-2 U	390 U	3500 U	350 U	360 U	360 U
2,4-Dichlorophenol	120-83-2 U	390 U	3500 U	350 U	360 U	360 U
2,4-Dimethylphenol	105-67-9 U	390 U	3500 U	350 U	360 U	360 U
2,4-Dinitrophenol	51-28-5 U	1900 U	17000 U	1700 U	1800 U	1700 U
2,4-Dinitrotoluene	121-14-2 U	390 U	3500 U	350 U	360 U	360 U
2,6-Dinitrotoluene	606-20-2 U	390 U	3500 U	350 U	360 U	360 U
2-Chloronaphthalene	91-58-7 U	390 U	3500 U	350 U	360 U	360 U
2-Chlorophenol	95-57-8 U	390 U	3500 U	350 U	360 U	360 U
2-Methylnaphthalene	91-57-6 U	390 U	3500 U	350 U	360 U	360 U
2-Methylphenol	95-48-7 U	390 U	3500 U	350 U	360 U	360 U
2-Nitroaniline	88-74-4 U	1900 U	17000 U	1700 U	1800 U	1700 U
2-Nitrophenol	88-75-5 U	390 U	3500 U	350 U	360 U	360 U
3,3'-Dichlorobenzidine	91-94-1 U	790 U	7000 U	690 U	730 U	720 U
3-Nitroaniline	99-08-2 U	1900 UJ	17000 UJ	1700 UJ	1800 UJ	1700 UJ
4,6-Dinitro-2-methylphenol	534-52-1 U	1900 U	17000 U	1700 U	1800 U	1700 U
4-Bromophenyl phenyl ether	101-55-3 U	390 U	3500 U	350 U	360 U	360 U
4-Chloroaniline	106-47-8 U	390 U	3500 U	350 U	360 U	360 UJ
4-Chlorophenylphenyl ether	7005-72-5J	390 U	3500 U	350 U	360 U	360 U
4-Chloro-3-methylphenol	59-50-7 U	390 U	3500 U	350 U	360 U	360 U
4-Methylphenol	106-44-5 U	390 U	3500 U	350 U	360 U	360 U
4-Nitroaniline	100-01-6 U	1900 UJ	17000 UJ	1700 R	1800 R	1700 U
4-Nitrophenol	100-02-7 U	1900 U	17000 U	1700 U	1800 U	1700 U
Acenaphthene	83-32-9 U	390 U	3500 U	350 U	360 U	360 U
Acenaphthylene	208-96-8 U	390 U	3500 U	350 U	360 U	360 U
Anthracene	120-12-7 U	390 U	3500 U	350 U	360 U	360 U
Benzoic acid	65-85-0 U	1900 R	17000 R	1700 R	1800 R	1700 U
Benzo(a)anthracene	56-55-3 U	390 U	3500 U	350 U	360 U	360 U

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SB1-02-0-2-01	SB1-03-0-2-01	SB1-03-20-22-01	SB1-03-35-37-01	SB1-03-35-37-02	SB1-03-55-57-01
Sample Date:	04-Feb-91	21-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	22-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C102058-01A	C101211-05A	C101211-14A	C101211-06A	C101211-07A	C101215-01A
Prep Date:	10-Feb-91	25-Jan-91	29-Jan-91	25-Jan-91	25-Jan-91	29-Jan-91
Analytic Date:	15-Feb-91	29-Jan-91	30-Jan-91	29-Jan-91	29-Jan-91	30-Jan-91
Units:	ug/Kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/Kg
COMPOUND NAME						
Benzo(a)pyrene	360 U	360 U	340 U	340 U	340 U	430 U
Benzo(b)fluoranthene	360 U	360 U	340 U	340 U	340 U	430 U
Benzo(g,h,i)perylene	360 U	360 U	340 U	340 U	340 U	430 U
Benzo(k)fluoranthene	360 U	360 U	340 U	340 U	340 U	430 U
Benzyl alcohol	360 U	360 U	340 U	340 U	340 U	430 U
bis(2-Chloroethoxy)methane	360 U	360 U	340 U	340 U	340 U	430 U
bis(2-Chloroethyl)ether	360 U	360 U	340 U	340 U	340 U	430 U
bis(2-Chloroisopropyl) ether	360 U	360 U	340 U	340 U	340 U	430 U
bis(2-Ethylhexyl) phthalate	360 U	360 U	340 U	340 U	340 U	430 U
Buryl benzyl phthalate	360 U	360 U	340 U	340 U	340 U	430 U
Chrysene	360 U	360 U	340 U	340 U	340 U	430 U
Dibenzofuran	360 U	360 U	340 U	340 U	340 U	430 U
Dibenzo(a,h)anthracene	360 U	360 U	340 U	340 U	340 U	430 U
Diethyl phthalate	360 U	360 U	340 U	340 U	340 U	430 U
Dimethyl phthalate	360 U	360 U	340 U	340 U	340 U	430 U
Di-n-butyl phthalate	360 U	360 U	340 U	340 U	340 U	430 U
Di-n-octyl phthalate	360 U	360 U	340 U	340 U	340 U	430 U
Fluorene	360 U	360 U	340 U	340 U	340 U	430 U
Fluorene	360 U	360 U	340 U	340 U	340 U	430 U
Hexachlorobenzene	360 U	360 U	340 U	340 U	340 U	430 U
Hexachlorobutadiene	360 U	360 U	340 U	340 U	340 U	430 U
Hexachlorocyclopentadiene	360 U	360 U	340 U	340 U	340 U	430 U
Hexachloroethane	360 U	360 U	340 U	340 U	340 U	430 U
Indeno(1,2,3-cd)pyrene	360 U	360 U	340 U	340 U	340 U	430 U
Isochlorone	360 U	360 U	340 U	340 U	340 U	430 U
Naphthalene	360 U	360 U	340 U	340 U	340 U	430 U
Nitrobenzene	360 U	360 U	340 U	340 U	340 U	430 U
N-Nitrosodiphenylamine	360 U	360 U	340 U	340 U	340 U	430 U
N-Nitroso-di-n-propylamine	360 U	360 U	340 U	340 U	340 U	430 U
Pentachlorophenol	1700 U	1700 U	1600 U	1600 U	1600 U	2100 U
Phenanthrene	360 U	360 U	340 U	340 U	340 U	430 U
Phenol	360 U	360 U	340 U	340 U	340 U	430 U
Pyrene	360 U	360 U	340 U	340 U	340 U	430 U

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	S81-03-55-57-02	S81-04-0-2-01	S81-04-10-12-01	S81-04-55-57-01	S81-04-55-57-02	S81-05-0-1/81
Sample Date:	22-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	21-Jan-91	18-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101215-02A	C101211-01A	C101211-02A	C101211-03A	C101211-04A	C101197-01A
Prep Date:	28-Jan-91	25-Jan-91	25-Jan-91	25-Jan-91	25-Jan-91	25-Jan-91
Analysis Date:	29-Jan-91	29-Jan-91	29-Jan-91	29-Jan-91	29-Jan-91	28-Jan-91
Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	390 U	3500 U	350 U	360 U	420 U	360 U
Benzo(a)pyrene	390 U	3500 U	350 U	360 U	420 U	360 U
Benzo(b)fluoranthene	390 U	3500 U	350 U	360 U	420 U	360 U
Benzo(g,h,i)perylene	390 U	3500 U	350 U	360 U	420 U	360 U
Benzo(k)fluoranthene	390 U	3500 U	350 U	360 U	420 U	360 U
Benzyl alcohol	390 U	3500 U	350 U	360 U	420 U	360 U
bis(2-Chloroethoxy)methane	390 U	3500 U	350 U	360 U	420 U	360 U
bis(2-Chloroethylether	390 U	3500 U	350 U	360 U	420 U	360 U
bis(2-Chloroisopropyl) ether	390 U	3500 U	350 U	360 U	420 U	360 U
bis(2-Ethylhexyl) phthalate	390 U	3500 U	350 U	360 U	420 U	360 U
Butyl benzyl phthalate	390 U	3500 U	350 U	360 U	420 U	360 U
Chrysene	390 U	3500 U	350 U	360 U	420 U	360 U
Dibenzofuran	390 U	3500 U	350 U	360 U	420 U	360 U
Dibenzo(a,h)anthracene	390 U	3500 U	350 U	360 U	420 U	360 U
Diethyl phthalate	390 U	3500 U	350 U	360 U	420 U	360 U
Dimethyl phthalate	390 U	3500 U	350 U	360 U	420 U	360 U
Di-n-butyl phthalate	390 U	3500 U	350 U	360 U	420 U	360 U
Di-n-octyl phthalate	390 U	3500 U	350 U	360 U	420 U	360 U
Fluoranthene	390 U	3500 U	350 U	360 U	420 U	360 U
Fluorene	390 U	3500 U	350 U	360 U	420 U	360 U
Hexachlorobenzene	390 U	3500 U	350 U	360 U	420 U	360 U
Hexachlorobutadiene	390 U	3500 U	350 U	360 U	420 U	360 U
Hexachlorocyclopentadiene	390 U	3500 U	350 U	360 U	420 U	360 U
Hexachloroethane	390 U	3500 U	350 U	360 U	420 U	360 U
Indeno(1,2,3-cd)pyrene	390 U	3500 U	350 U	360 U	420 U	360 U
Isochlorone	390 U	3500 U	350 U	360 U	420 U	360 U
Naphthalene	390 U	3500 U	350 U	360 U	420 U	360 U
Nitrobenzene	390 U	3500 U	350 U	360 U	420 U	360 U
N-Nitrosodiphenylamine	390 U	3500 U	350 U	360 U	420 U	360 U
N-Nitroso-dl-n-propylamine	390 U	3500 U	350 U	360 U	420 U	360 U
Pentachlorophenol	1900 U	17000 U	1700 U	1900 U	2000 U	1700 U
Phenanthrene	390 U	3500 U	350 U	360 U	420 U	360 U
Phenol	390 U	3500 U	350 U	360 U	420 U	360 U
Pyrene	390 U	3500 U	350 U	360 U	420 U	360 U

APPENDIX L
RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	S.12-01-0-2-01	S82-01-55-57-01	S82-02-0-2-01	S82-02-10-12-01	S82-02-70-72-01	S82-04-0-2-01
Sample Date:	29-Jan-91	29-Jan-91	22-Jan-91	22-Jan-91	22-Jan-91	22-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101317-01A	C101317-02A	C101215-04A	C101215-06A	C101215-10A	C101215-11A
Prep Date:	06-Feb-91	06-Feb-91	29-Jan-91	29-Jan-91	29-Jan-91	01-Feb-91
Analysis Date:	13-Feb-91	13-Feb-91	29-Jan-91	29-Jan-91	30-Jan-91	05-Feb-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	360 U	360 U	360 U	350 U	370 U	360 U
1,2,4-Trichlorobenzene	360 U	360 U	360 U	350 U	370 U	360 U
1,2-Dichlorobenzene	360 U	360 U	360 U	350 U	370 U	360 U
1,3-Dichlorobenzene	360 U	360 U	360 U	350 U	370 U	360 U
1,4-Dichlorobenzene	360 U	360 U	360 U	350 U	370 U	360 U
2,4,5-Trichlorophenol	1700 U	1700 U	1900 U	1700 U	1800 U	1800 U
2,4,6-Trichlorophenol	360 U	360 U	360 U	350 U	370 U	360 U
2,4-Dichlorophenol	360 U	360 U	360 U	350 U	370 U	360 U
2,4-Dimethylphenol	360 U	360 U	360 U	350 U	370 U	360 U
2,4-Dinitrophenol	1700 U	1700 U	1900 U	1700 U	1800 U	1800 U
2,4-Dinitrotoluene	360 U	360 U	360 U	350 U	370 U	360 U
2,6-Dinitrotoluene	360 U	360 U	360 U	350 U	370 U	360 U
2-Chloronaphthalene	360 U	360 U	360 U	350 U	370 U	360 U
2-Chlorophenol	360 U	360 U	360 U	350 U	370 U	360 U
2-Methylnaphthalene	360 U	360 U	360 U	350 U	370 U	360 U
2-Methylphenol	360 U	360 U	360 U	350 U	370 U	360 U
2-Nitroaniline	1700 U	1700 U	1900 U	1700 U	1800 U	1800 U
2-Nitrophenol	360 U	360 U	360 U	350 U	370 U	360 U
3,3'-Dichlorobenzidine	720 U	720 U	770 U	690 U	740 U	760 U
3-Nitroaniline	1700 U	1700 U	1900 U	1700 U	1800 U	1800 U
4,6-Dinitro-2-methylphenol	1700 U	1700 U	1900 U	1700 U	1800 U	1800 U
4-Bromophenyl phenyl ether	360 U	360 U	360 U	350 U	370 U	360 U
4-Chloroaniline	360 U	360 U	360 U	350 U	370 U	360 U
4-Chlorophenylphenyl ether	360 U	360 U	360 U	350 U	370 U	360 U
4-Chloro-3-methylphenol	360 U	360 U	360 U	350 U	370 U	360 U
4-Methylphenol	360 U	360 U	360 U	350 U	370 U	360 U
4-Nitroaniline	1700 R	1700 R	1900 U	1700 U	1800 U	1800 U
4-Nitrophenol	1700 U	1700 U	1900 U	1700 U	1800 U	1800 R
Acenaphthene	360 U	360 U	360 U	350 U	370 U	360 U
Acenaphthylene	360 U	360 U	360 U	350 U	370 U	360 U
Anthracene	360 U	360 U	360 U	350 U	370 U	360 U
Benzic acid	100 J	1700 R	1900 U	1700 U	1800 U	1800 R
Benzo(a)anthracene	360 U	360 U	360 U	350 U	370 U	360 U

APPENDIX L
RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	S62-04-15-17-01	S62-04-55-57-01	S82-04-70-72-01	M82-02-0-2-01	M82-02-30-32-01	M82-02-70-72-01
Sample Date:	22-Jan-91	23-Jan-91	23-Jan-91	06-Feb-91	06-Feb-91	06-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101215-03A	C101230-01A	C101230-02A	C102069-01A	C102069-03A	C102069-04A
Prep Date:	01-Feb-91	29-Jan-91	29-Jan-91	11-Mar-91	11-Mar-91	11-Mar-91
Analysis Date:	05-Feb-91	30-Jan-91	30-Jan-91	12-Mar-91	12-Mar-91	12-Mar-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg

COMPOUND NAME	CAS NUMBER	340 U	370 U	360 U	360 R	340 R	360 R
1,2,4-Trichlorobenzene	120-82-1	340 U	370 U	360 U	360 R	340 R	360 R
1,2-Dichlorobenzene	95-50-1	340 U	370 U	360 U	360 R	340 R	360 R
1,3-Dichlorobenzene	541-73-1	340 U	370 U	360 U	360 R	340 R	360 R
1,4-Dichlorobenzene	106-46-7	340 U	370 U	360 U	360 R	340 R	360 R
2,4,5-Trichlorophenol	95-95-4	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
2,4,6-Trichlorophenol	88-08-2	340 U	370 U	360 U	360 R	340 R	360 R
2,4-Dichlorophenol	120-83-2	340 U	370 U	360 U	360 R	340 R	360 R
2,4-Dimethylphenol	105-67-9	340 U	370 U	360 U	360 R	340 R	360 R
2,4-Dinitrophenol	51-28-5	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
2,4-Dinitrotoluene	121-14-2	340 U	370 U	360 U	360 R	340 R	360 R
2,6-Dinitrotoluene	606-20-2	340 U	370 U	360 U	360 R	340 R	360 R
2-Chloronaphthalene	91-58-7	340 U	370 U	360 U	360 R	340 R	360 R
2-Chlorophenol	95-57-8	340 U	370 U	360 U	360 R	340 R	360 R
2-Methylnaphthalene	91-57-6	340 U	370 U	360 U	360 R	340 R	360 R
2-Methylphenol	95-48-7	340 U	370 U	360 U	360 R	340 R	360 R
2-Nitroaniline	88-74-4	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
2-Nitrophenol	88-75-5	340 U	370 U	360 U	360 R	340 R	360 R
3,3'-Dichlorobenzidine	91-94-1	670 U	740 U	720 U	760 R	680 R	730 R
3-Nitroaniline	99-09-2	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
4,6-Dinitro-2-methylphenol	534-52-1	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
4-Bromophenyl phenyl ether	101-55-3	340 U	370 U	360 U	360 R	340 R	360 R
4-Chloroaniline	106-47-8	340 U	370 U	360 U	360 R	340 R	360 R
4-Chlorophenylphenyl ether	7005-72-5	340 U	370 U	360 U	360 R	340 R	360 R
4-Chloro-3-methylphenol	59-50-7	340 U	370 U	360 U	360 R	340 R	360 R
4-Methylphenol	106-44-5	340 U	370 U	360 U	360 R	340 R	360 R
4-Nitroaniline	100-01-6	1600 R	1800 U	1700 U	1800 R	1700 R	1800 R
4-Nitrophenol	100-02-7	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
Acenaphthene	83-32-9	340 U	370 U	360 U	360 R	340 R	360 R
Acenaphthylene	208-96-8	340 U	370 U	360 U	360 R	340 R	360 R
Anthracene	120-12-7	340 U	370 U	360 U	360 R	340 R	360 R
Benzoic acid	65-85-0	1600 R	1800 U	1700 U	1800 R	1700 R	1800 R
Benzo(a)anthracene	56-55-3	340 U	370 U	360 U	360 R	340 R	360 R

APPENDIX I
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	S82-01-0-2-01	S82-01-55-57-01	S82-02-0-2-01	S82-02-10-12-01	S82-02-70-72-01	S82-04-0-2-01
Sample Date:	29-Jan-91	29-Jan-91	22-Jan-91	22-Jan-91	22-Jan-91	22-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101317-01A	C101317-02A	C101215-04A	C101215-06A	C101215-10A	C101215-11A
Prep Date:	08-Feb-91	08-Feb-91	29-Jan-91	29-Jan-91	29-Jan-91	01-Feb-91
Analysis Date:	13-Feb-91	13-Feb-91	29-Jan-91	29-Jan-91	30-Jan-91	05-Feb-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND NAME						
Benzo(a)pyrene	360 U	360 U	360 U	350 U	370 U	360 U
Benzo(b)fluoranthene	360 U	360 U	360 U	350 U	370 U	360 U
Benzo(g,h,i)perylene	360 U	360 U	360 U	350 U	370 U	360 U
Benzo(k)fluoranthene	360 U	360 U	360 U	350 U	370 U	360 U
Benzyl alcohol	360 U	360 U	360 U	350 U	370 U	360 U
bis(2-Chloroethoxy)methane	360 U	360 U	360 U	350 U	370 U	360 U
bis(2-Chloroethyl)ether	360 R	360 R	360 U	350 U	370 U	360 U
bis(2-Chloroisopropyl) ether	360 U	360 U	360 U	350 U	370 U	360 U
bis(2-Ethylhexyl) phthalate	360 U	360 U	360 U	350 U	370 U	360 U
Butyl benzyl phthalate	360 U	360 U	360 U	350 U	370 U	360 U
Chrysene	360 U	360 U	360 U	350 U	370 U	360 U
Dibenzofuran	360 U	360 U	360 U	350 U	370 U	360 U
Dibenzo(a,h)anthracene	360 U	360 U	360 U	350 U	370 U	360 U
Diethyl phthalate	360 U	360 U	360 U	52 J	370 U	360 U
Dimethyl phthalate	360 U	360 U	360 U	350 U	370 U	360 U
Di-n-butyl phthalate	360 U	360 U	360 U	350 U	370 U	360 U
Di-n-octyl phthalate	360 U	360 U	360 U	350 U	370 U	360 U
Fluoranthene	360 U	360 U	360 U	350 U	370 U	360 U
Fluorene	360 U	360 U	360 U	350 U	370 U	360 U
Hexachlorobenzene	360 U	360 U	360 U	350 U	370 U	360 U
Hexachlorobutadiene	360 U	360 U	360 U	350 U	370 U	360 U
Hexachlorocyclopentadiene	360 U	360 U	360 U	350 U	370 U	360 U
Hexachloroethane	360 U	360 U	360 U	350 U	370 U	360 U
Indeno(1,2,3-cd)pyrene	360 U	360 U	360 U	350 U	370 U	360 U
Isophorone	360 U	360 U	360 U	350 U	370 U	360 U
Naphthalene	360 U	360 U	360 U	350 U	370 U	360 U
Nitrobenzene	360 U	360 U	360 U	350 U	370 U	360 U
N-Nitrosodiphenylamine	360 U	360 U	360 U	350 U	370 U	360 U
N-Nitroso-d-n-propylamine	360 U	360 U	360 U	350 U	370 U	360 U
Pentachlorophenol	1700 U	1700 U	1900 U	1700 U	1800 U	1800 U
Phenanthrene	360 U	360 U	360 U	350 U	370 U	360 U
Phenol	360 U	360 U	360 U	350 U	370 U	360 U
Pyrene	360 U	360 U	360 U	350 U	370 U	360 U

APPENDIX I
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SB2-04-15-17-01	SB2-04-55-57-01	SB2-04-70-72-01	MB2-02-0-2-01	MB2-02-30-32-01	MB2-02-70-72-01
Sample Date:	22-Jan-91	23-Jan-91	23-Jan-91	08-Feb-91	06-Feb-91	06-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101215-03A	C101230-01A	C101230-02A	C102089-01A	C102089-03A	C102089-04A
Prep Date:	01-Feb-91	29-Jan-91	29-Jan-91	11-Mar-91	11-Mar-91	11-Mar-91
Analyte Date:	05-Feb-91	30-Jan-91	30-Jan-91	12-Mar-91	12-Mar-91	12-Mar-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	340 U	370 U	360 U	43 J	340 R	360 R
Benzo(a)pyrene	340 U	370 U	360 U	360 R	340 R	360 R
Benzo(b)fluoranthene	340 U	370 U	360 U	360 R	340 R	360 R
Benzo(g,h,i)perylene	340 U	370 U	360 U	47 J	340 R	360 R
Benzo(k)fluoranthene	340 U	370 U	360 U	360 R	340 R	360 R
Benzyl alcohol	340 U	370 U	360 U	360 R	340 R	360 R
bis(2-Chloroethoxy)methane	340 U	370 U	360 U	360 R	340 R	360 R
bis(2-Chloroethyl)ether	340 U	370 U	360 U	360 R	340 R	360 R
bis(2-Chloroisopropyl) ether	340 U	370 U	360 U	360 R	340 R	360 R
bis(2-Ethylhexyl) phthalate	340 U	370 U	360 U	360 R	340 R	360 R
Butyl benzyl phthalate	340 U	370 U	360 U	360 R	340 R	86 J
Chryseene	340 U	370 U	360 U	360 R	340 R	360 R
Dibenzofuran	340 U	370 U	360 U	360 R	340 R	360 R
Dibenzo(a,h)anthracene	340 U	370 U	360 U	360 R	340 R	360 R
Diethyl phthalate	340 U	370 U	360 U	360 R	340 R	360 R
Dimethyl phthalate	340 U	370 U	360 U	360 R	340 R	360 R
Di-n-butyl phthalate	340 U	370 U	360 U	360 R	340 R	360 R
Di-n-octyl phthalate	340 U	370 U	360 U	360 R	340 R	360 R
Fluoranthene	340 U	370 U	360 U	360 R	340 R	360 R
Fluorene	340 U	370 U	360 U	360 R	340 R	360 R
Hexachlorobenzene	340 U	370 U	360 U	360 R	340 R	360 R
Hexachlorobutadiene	340 U	370 U	360 U	360 R	340 R	360 R
Hexachlorocyclopentadiene	340 U	370 U	360 U	360 R	340 R	360 R
Hexachloroethane	340 U	370 U	360 U	360 R	340 R	360 R
Indeno(1,2,3-cd)pyrene	340 U	370 U	360 U	360 R	340 R	360 R
Isophorone	340 U	370 U	360 U	360 R	340 R	360 R
Naphthalene	340 U	370 U	360 U	360 R	340 R	360 R
Nitrobenzene	340 U	370 U	360 U	360 R	340 R	360 R
N-Nitrosodiphenylamine	340 U	370 U	360 U	360 R	340 R	360 R
N-Nitroso-di-n-propylamine	340 U	370 U	360 U	360 R	340 R	360 R
Pentachlorophenol	1600 U	1800 U	1700 U	1800 R	1700 R	1800 R
Phenanthrene	340 U	370 U	360 U	360 R	340 R	360 R
Phenol	340 U	370 U	360 U	360 R	340 R	360 R
Pyrene	340 U	370 U	360 U	360 R	340 R	360 R

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SB3-01-0-0-1 1/2-01	SB3-01-50-51 1/2-01	SB3-01-70-71 1/2-01	SB3-03-0-1 1/2-01	SB3-03-10-11 1/2-01
Sample Date:	24-Mar-91	24-Mar-91	25-Mar-91	25-Mar-91	25-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C103220-03A	C103220-04A	C103220-11A	C103220-07A	C103220-06A
Prep Date:	30-Mar-91	30-Mar-91	30-Mar-91	30-Mar-91	30-Mar-91
Analysis Date:	03-Apr-91	03-Apr-91	03-Apr-91	03-Apr-91	03-Apr-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	350 U	340 U	350 U	350 U	350 U
1,2,4-Trichlorobenzene	120-82-1	340 U	350 U	350 U	350 U
1,2-Dichlorobenzene	95-50-1	340 U	350 U	350 U	350 U
1,3-Dichlorobenzene	541-73-1	340 U	350 U	350 U	350 U
1,4-Dichlorobenzene	108-46-7	340 U	350 U	350 U	350 U
2,4,5-Trichlorophenol	95-95-4	1600 U	1700 U	1700 U	1700 U
2,4,6-Trichlorophenol	88-06-2	340 U	340 U	350 U	350 U
2,4-Dichlorophenol	120-83-2	340 U	340 U	350 U	350 U
2,4-Dimethylphenol	105-67-9	340 U	340 U	350 U	350 U
2,4-Dinitrophenol	51-28-5	1600 U	1700 U	1700 U	1700 U
2,4-Dinitrotoluene	121-14-2	340 U	340 U	350 U	350 U
2,6-Dinitrotoluene	606-20-2	340 U	340 U	350 U	350 U
2-Chloronaphthalene	91-58-7	340 U	340 U	350 U	350 U
2-Chlorophenol	95-57-8	340 U	340 U	350 U	350 U
2-Methylnaphthalene	91-57-6	340 U	340 U	350 U	350 U
2-Methylphenol	95-48-7	340 U	340 U	350 U	350 U
2-Nitroaniline	88-74-4	1600 U	1700 U	1700 U	1700 U
2-Nitrophenol	88-75-5	340 U	340 U	350 U	350 U
3,3'-Dichlorobenzidine	91-94-1	680 U	700 U	690 U	700 U
3-Nitroaniline	99-09-2	1600 R	1700 R	1700 R	1700 R
4,6-Dinitro-2-methylphenol	534-52-1	1600 U	1700 U	1700 U	1700 U
4-Bromophenyl phenyl ether	101-55-3	340 U	340 U	350 U	350 U
4-Chloroaniline	106-47-8	340 U	340 U	350 U	350 U
4-Chlorophenylphenyl ether	7005-72-5	340 U	340 U	350 U	350 U
4-Chloro-3-methylphenol	59-50-7	340 U	340 U	350 U	350 U
4-Methylphenol	106-44-5	340 U	340 U	350 U	350 U
4-Nitroaniline	100-01-6	1600 U	1700 U	1700 U	1700 U
4-Nitrophenol	100-02-7	1600 U	1700 U	1700 U	1700 U
Acenaphthene	83-32-9	340 U	340 U	350 U	350 U
Acenaphthylene	208-96-8	340 U	340 U	350 U	350 U
Anthracene	120-12-7	340 U	340 U	350 U	350 U
Benzoic acid	65-85-0	1600 U	1700 U	1700 U	1700 U
Benzo(e)anthracene	56-55-3	340 U	340 U	350 U	350 U

SOLBAT WELBY

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SB3-03-20-21 1/2-01	SB3-04-0-1 1/2-01	SB3-04-5-6 1/2-01	SB3-04-15-16 1/2-01	MB3-01-0-1 1/2-01
Sample Date:	25-Mar-91	24-Mar-91	24-Mar-91	24-Mar-91	22-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C103220-09A	C103220-05A	C103220-06A	C103220-13A	C103212-01A
Prep Date:	30-Mar-91	30-Mar-91	30-Mar-91	30-Mar-91	26-Mar-91
Analysis Date:	03-Apr-91	03-Apr-91	03-Apr-91	03-Apr-91	02-Apr-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
1,2,4-Trichlorobenzene	340 U	340 U	350 U	340 U	390 U
1,2-Dichlorobenzene	340 U	340 U	350 U	340 U	390 U
1,3-Dichlorobenzene	340 U	340 U	350 U	340 U	390 U
1,4-Dichlorobenzene	340 U	340 U	350 U	340 U	390 U
2,4,5-Trichlorophenol	1600 U	1700 U	1700 U	1700 U	1900 U
2,4,6-Trichlorophenol	340 U	340 U	350 U	340 U	390 U
2,4-Dichlorophenol	340 U	340 U	350 U	340 U	390 U
2,4-Dimethylphenol	340 U	340 U	350 U	340 U	390 U
2,4-Dinitrophenol	1600 U	1700 U	1700 U	1700 U	1900 UJ
2,4-Dinitrotoluene	340 U	340 U	350 U	340 U	390 U
2,6-Dinitrotoluene	340 U	340 U	350 U	340 U	390 U
2-Chloronaphthalene	340 U	340 U	350 U	340 U	390 U
2-Chlorophenol	340 U	340 U	350 U	340 U	390 U
2-Methylnaphthalene	340 U	340 U	350 U	340 U	390 U
2-Methylphenol	340 U	340 U	350 U	340 U	390 U
2-Nitroaniline	1600 U	1700 U	1700 U	1700 U	1900 U
2-Nitrophenol	340 U	340 U	350 U	340 U	390 U
3,3'-Dichlorobenzidine	680 U	690 U	700 U	690 U	760 U
3-Nitroaniline	1600 R	1700 R	1700 R	1700 R	1900 UJ
4,6-Dinitro-2-methylphenol	1600 U	1700 U	1700 U	1700 U	1900 U
4-Bromophenyl phenyl ether	340 U	340 U	350 U	340 U	390 U
4-Chloroaniline	340 U	340 U	350 U	340 U	390 U
4-Chlorophenylphenyl ether	340 U	340 U	350 U	340 U	390 U
4-Chloro-3-methylphenol	340 U	340 U	350 U	340 U	390 U
4-Methylphenol	340 U	340 U	350 U	340 U	390 U
4-Nitroaniline	1600 U	1700 U	1700 U	1700 U	1900 UJ
4-Nitrophenol	1600 U	1700 U	1700 U	1700 U	1900 U
Acenaphthene	340 U	340 U	350 U	340 U	390 U
Acenaphthylene	340 U	340 U	350 U	340 U	390 U
Anthracene	340 U	340 U	350 U	340 U	390 U
Benzoic acid	1600 U	1700 U	1700 U	1700 U	1900 U
Benzo(a)anthracene	340 U	340 U	350 U	340 U	390 U

**APPENDIX L
RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA**

Sample Number: MB3-01-50-51 1/2-01MB3-01-60-61 1/2-01MB3-02-0-1 1/2-01 MB3-02-5-6 1/2-01
 Sample Date: 22-Mar-91 22-Mar-91 23-Mar-91 23-Mar-91
 Matrix: SOIL SOIL SOIL SOIL
 Lab Number: C103212-02A C103212-03A C103220-01A C103220-02A
 Prep Date: 26-Mar-91 26-Mar-91 30-Mar-91 30-Mar-91
 Analysis Date: 01-Apr-91 01-Apr-91 02-Apr-91 02-Apr-91
 Units: ug/Kg ug/Kg ug/Kg ug/Kg

COMPOUND NAME	CAS NUMBER	ug/Kg	ug/Kg	ug/Kg	ug/Kg
1,2,4-Trichlorobenzene	120-82-1	380 U	360 U	350 U	340 U
1,2-Dichlorobenzene	95-50-1	380 U	360 U	350 U	340 U
1,3-Dichlorobenzene	541-73-1	380 U	360 U	350 U	340 U
1,4-Dichlorobenzene	106-46-7	380 U	360 U	350 U	340 U
2,4,5-Trichlorophenol	95-95-4	1900 U	1800 U	1700 U	1600 U
2,4,6-Trichlorophenol	88-06-2	380 U	360 U	350 U	340 U
2,4-Dichlorophenol	120-83-2	380 U	360 U	350 U	340 U
2,4-Dimethylphenol	105-67-9	380 U	360 U	350 U	340 U
2,4-Dinitrophenol	51-28-5	1900 UJ	1800 UJ	1700 U	1600 U
2,4-Dinitrotoluene	121-14-2	380 U	360 U	350 U	340 U
2,6-Dinitrotoluene	606-20-2	380 U	360 U	350 U	340 U
2-Chloronaphthalene	91-58-7	380 U	360 U	350 U	340 U
2-Chlorophenol	95-57-8	380 U	360 U	350 U	340 U
2-Methylnaphthalene	91-57-6	380 U	360 U	350 U	340 U
2-Methylphenol	95-48-7	380 U	360 U	350 U	340 U
2-Nitroaniline	88-74-4	1800 U	1600 U	1700 U	1600 U
2-Nitrophenol	68-75-5	380 U	360 U	350 U	340 U
3,3'-Dichlorobenzidine	91-94-1	770 U	730 U	710 UJ	1600 UJ
3-Nitroaniline	99-09-2	1900 UJ	1800 UJ	1700 U	1600 U
4,6-Dinitro-2-methylphenol	534-52-1	1900 U	1800 U	1700 U	1600 U
4-Bromophenyl phenyl ether	101-55-3	380 U	360 U	350 U	340 U
4-Chloroaniline	106-47-8	380 U	360 U	350 UJ	340 UJ
4-Chlorophenylphenyl ether	7005-72-5	380 U	360 U	350 U	340 U
4-Chloro-3-methylphenol	59-50-7	380 U	360 U	350 U	340 U
4-Methylphenol	106-44-5	380 U	360 U	350 U	340 U
4-Nitroaniline	100-01-6	1900 UJ	1800 UJ	1700 U	1600 U
4-Nitrophenol	100-02-7	1900 U	1800 U	1700 U	1600 U
Acenaphthene	83-32-9	380 U	360 U	350 U	340 U
Acenaphthylene	208-96-8	380 U	360 U	350 U	340 U
Anthracene	120-12-7	380 U	360 U	350 U	340 U
Benzoic acid	65-85-0	1900 U	1800 U	1700 U	1600 U
Benzo(a)anthracene	56-55-3	380 U	360 U	350 U	340 U

APPENDIX L
RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MB3-01-50-51 1/2-01	MB3-01-60-61 1/2-01	MB3-02-0-1 1/2-01	MB3-02-5-6 1/2-01
Sample Date:	22-Mar-91	22-Mar-91	23-Mar-91	23-Mar-91
Matrix:	SOIL	SOIL	SOIL	SOIL
Lab Number:	C103212-02A	C103212-03A	C103220-01A	C103220-02A
Prep Date:	26-Mar-91	26-Mar-91	30-Mar-91	30-Mar-91
Analysis Date:	01-Apr-91	01-Apr-91		02-Apr-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	360 U	360 U	350 U	340 U
Benzo(a)pyrene	360 U	360 U	350 U	340 U
Benzo(b)fluoranthene	360 U	360 U	350 U	340 U
Benzo(g,h,i)perylene	360 U	360 U	350 U	340 U
Benzo(k)fluoranthene	360 U	360 U	350 U	340 U
Benzyl alcohol	360 U	360 U	350 U	340 U
bis(2-Chloroethoxy)methane	360 U	360 U	350 U	340 U
bis(2-Chloroethyl) ether	360 U	360 U	350 U	340 U
bis(2-Chloropropyl) ether	360 U	360 U	350 U	340 U
bis(2-Ethylhexyl) phthalate	360 U	360 U	350 U	340 U
Butyl benzyl phthalate	360 U	360 U	350 U	340 U
Chryse	360 U	360 U	350 U	340 U
Dibenzofuran	360 U	360 U	350 U	340 U
Dibenzo(a,h)anthracene	360 U	360 U	350 U	340 U
Diethyl phthalate	360 U	360 U	350 U	340 U
Dimethyl phthalate	360 U	360 U	350 U	340 U
Di-n-butyl phthalate	360 U	360 U	350 U	340 U
Di-n-octyl phthalate	360 U	360 U	350 U	340 U
Fluoranthene	360 U	360 U	350 U	340 U
Fluorene	360 U	360 U	350 U	340 U
Hexachlorobenzene	360 U	360 U	350 U	340 U
Hexachlorobutadiene	360 U	360 U	350 U	340 U
Hexachlorocyclopentadiene	360 U	360 U	350 U	340 U
Hexachloroethane	360 U	360 U	350 U	340 U
Indeno(1,2,3-cd)pyrene	360 U	360 U	350 U	340 U
Isochlorone	360 U	360 U	350 U	340 U
Naphthalene	360 U	360 U	350 U	340 U
Nitrobenzene	360 U	360 U	350 U	340 U
N-Nitrosodiphenylamine	360 U	360 U	350 U	340 U
N-Nitroso-di-n-propylamine	360 U	360 U	350 U	340 U
Pentachlorophenol	1900 U	1800 U	1700 U	1600 U
Phenanthrene	360 U	360 U	350 U	340 U
Phenol	360 U	360 U	350 U	340 U
Pyrene	360 U	360 U	350 U	340 U

APPENDIX L

RESULTS OF SVOAS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SS4-01	SS4-02	SS4-03	SS4-04	SS4-05	SS4-06
Sample Date:	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C102182-01B	C102182-02B	C102182-03B	C102182-04B	C102182-05B	C102182-06B
Prep Date:	24-Feb-91	24-Feb-91	24-Feb-91	24-Feb-91	24-Feb-91	24-Feb-91
Analysis Date:	26-Feb-91	26-Feb-91	16-Mar-91	26-Feb-91	20-Mar-91	19-Mar-91
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Benzo(a)pyrene	350 U	350 U	360 U	350 U	350 U	340 U
Benzo(b)fluoranthene	350 U	350 U	360 U	350 U	350 U	340 U
Benzo(g,h,i)perylene	350 U	350 U	360 U	350 U	350 U	340 U
Benzo(k)fluoranthene	350 U	350 U	360 U	350 U	350 U	340 U
Benzyl alcohol	350 U	350 U	360 U	350 U	350 U	340 U
bis(2-Chloroethoxy)methane	350 U	350 U	360 U	350 U	350 U	340 U
bis(2-Chloroethyl)ether	350 U	350 U	360 U	350 U	350 U	340 U
bis(2-Chloroisopropyl) ether	350 U	350 U	360 U	350 U	350 U	340 U
bis(2-Ethylhexyl) phthalate	350 U	350 U	140 J	350 U	350 U	340 U
Butyl benzyl phthalate	350 U	350 U	360 U	350 U	350 U	340 U
Chrysene	350 U	350 U	360 U	350 U	350 U	340 U
Dibenzofuran	350 U	350 U	360 U	350 U	350 U	340 U
Dibenzo(a,h)anthracene	350 U	350 U	360 U	350 U	350 U	340 U
Diethyl phthalate	350 U	350 U	360 U	350 U	350 U	340 U
Dimethyl phthalate	350 U	350 U	360 U	350 U	350 U	340 U
Di-n-butyl phthalate	350 U	350 U	360 U	350 U	350 U	340 U
Di-n-octyl phthalate	350 U	350 U	360 U	350 U	72 J	340 U
Fluoranthene	350 U	350 U	360 U	350 U	40 J	340 U
Fluorene	350 U	350 U	360 U	350 U	350 U	340 U
Hexachlorobenzene	350 U	350 U	360 U	350 U	350 U	340 U
Hexachlorobutadiene	350 U	350 U	360 U	350 U	350 U	340 U
Hexachlorocyclopentadiene	350 U	350 U	360 U	350 U	350 U	340 U
Hexachloroethane	350 U	350 U	360 U	350 U	350 U	340 U
Indeno(1,2,3-cd)pyrene	350 U	350 U	360 U	350 U	350 U	340 U
Isochlorone	350 U	350 U	360 U	350 U	350 U	340 U
Naphthalene	350 U	350 U	360 U	350 U	350 U	340 U
Nitrobenzene	350 U	350 U	360 U	350 U	350 U	340 U
N-Nitrosodiphenylamine	350 U	350 U	360 U	350 U	350 U	340 U
N-Nitroso-di-n-propylamine	350 U	350 U	360 U	350 U	350 U	340 U
Pentachlorophenol	1700 U					
Phenanthrene	350 U	350 U	360 U	350 U	350 U	340 U
Phenol	350 U	350 U	360 U	350 U	350 U	340 U
Pyrene	350 U	350 U	360 U	350 U	350 U	340 U

APPENDIX L
RESULTS OF SVOAs IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number: M85-01-0-2-02 M85-01-5-7-02 M85-01-70-72-01
 Sample Date: 07-Feb-91 07-Feb-91 07-Feb-91
 Matrix: SOIL SOIL SOIL
 Lab Number: C102108-01B C102108-02B C102108-03A
 Prep Date: 11-Mar-91 11-Mar-91 22-Mar-91
 Analysis Date: 14-Mar-91 14-Mar-91 22-Mar-91
 Units: ug/Kg ug/Kg ug/Kg

COMPOUND NAME	CAS NUMBER	340 R	340 R	340 R
Benzo(e)pyrene	50-32-8	340 R	340 R	340 R
Benzo(b)fluoranthene	205-99-2	340 R	340 R	340 R
Benzo(g,h,i)perylene	191-24-2	340 R	340 R	340 R
Benzo(k)fluoranthene	207-08-9	340 R	340 R	340 R
Benzyl alcohol	100-51-6	340 R	340 R	340 R
bis(2-Chloroethoxy)methane	111-91-1	340 R	340 R	340 R
bis(2-Chloroethoxy)ether	111-44-4	340 R	340 R	340 R
bis(2-Chloroisopropyl) ether	108-60-1	340 R	340 R	340 R
bis(2-Ethylhexyl) phthalate	117-81-7	340 R	340 R	340 R
Butyl benzyl phthalate	85-68-7	340 R	340 R	340 R
Chrysene	218-01-9	340 R	340 R	340 R
Dibenzofuran	132-64-9	340 R	340 R	340 R
Dibenzo(a,h)anthracene	53-70-3	340 R	340 R	340 R
Dibutyl phthalate	84-68-2	340 R	340 R	340 R
Dimethyl phthalate	131-11-3	340 R	340 R	340 R
Di-n-butyl phthalate	84-74-2	340 R	340 R	340 R
Di-n-octyl phthalate	117-84-0	340 R	340 R	340 R
Fluoranthene	206-44-0	340 R	340 R	340 R
Fluorene	86-73-7	340 R	340 R	340 R
Hexachlorobenzene	119-74-1	340 R	340 R	340 R
Hexachlorobutadiene	87-68-3	340 R	340 R	340 R
Hexachlorocyclopentadiene	77-47-4	340 R	340 R	340 R
Hexachloroethane	67-72-1	340 R	340 R	340 R
Indeno(1,2,3-cd)pyrene	193-39-5	340 R	340 R	340 R
Isothorone	78-59-1	340 R	340 R	340 R
Naphthalene	91-20-3	340 R	340 R	340 R
Nitrobenzene	98-95-3	340 R	340 R	340 R
N-Nitrosodiphenylamine	86-30-6	340 R	340 R	340 R
N-Nitroso-di-n-propylamine	621-64-7	1600 R	340 R	1600 R
Pentachlorophenol	87-86-5	340 R	340 R	340 R
Phenanthrene	85-01-8	340 R	340 R	340 R
Phenol	108-95-2	340 R	340 R	340 R
Pyrene	129-00-0	340 R	340 R	340 R

POLARITY

U = Not detected

J = Estimated value

R = Result rejected in validation

APPENDIX L

RESULTS OF INORGANICS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MBS-01-0-2-01	MBS-01-60-62-01	MBS-02-0-2-01	MBS-02-5-7-01	MBS-02-10-12-03-0-2-01
Sample Date:	29-Jan-91	29-Jan-91	29-Jan-91	29-Jan-91	29-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101318-01A	C101318-04A	C101318-04A	C101318-04A	C101326-01A
Prep Date:	20-Feb-91	20-Feb-91	20-Feb-91	20-Feb-91	20-Feb-91
Analysis Date:	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	10400	5230	4230	3830	9250
Antimony	3.9 UJ	4 UJ	3.8 UJ	3.7 UJ	3.8 UJ
Arsenic	8.1 J	8.2 J	4 J	4.1 J	8 J
Barium	115	93.2	61.3	53.9	145
Beryllium	0.49 J	0.36 J	0.2 U	0.2 J	0.55 J
Cadmium	0.83 U	0.85 U	0.79 U	0.78 U	0.95 U
Calcium	28400	2170	8570	6710	31800
Chromium	24.1 J	16.5 J	12.9	11.2	51.1
Cobalt	10.8	4.6 J	5.9 J	5.5 J	14.3
Copper	22 J	35 J	17.5 J	80.2 J	53.8 J
Iron	18900	8490	10700	9550	30300
Lead	6.8 J	3.4 J	6.4 J	6.2 J	6.3 J
Magnesium	8620	2290	3620	3230	10200
Manganese	313 J	468 J	230 J	218 J	362 J
Mercury	0.16 R	0.16 U	0.15 R	0.15 R	0.19 R
Nickel	22.2	15.3	17.4	18.3	31.1
Potassium	1700 J	561 J	626 J	581 J	1360 J
Selenium	0.42 U	0.42 U	0.4 U	0.39 U	0.48 U
Silver	1.8 J	0.63 U	0.6 U	0.61 J	2.6 J
Sodium	706 J	127 J	295 J	305 J	530 J
Thallium	0.21 U	0.21 U	0.2 J	0.2 U	0.24 U
Vanadium	46 J	19.3 J	32.9 J	32.3 J	104 J
Zinc	39.9 J	47.4 J	33.8 J	43.4 J	76.4 J
Nitrate/Nitrite	54	0.8	3.7	2	44
Organic Lead	1.1 U	1.1 U	1 U	1 U	1.2 U

U = Compound not detected
J = Estimated value
R = Result rejected in

APPENDIX L

RESULTS OF INORGANICS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	M88-03-5-7-01	S82-01-0-2-01	S82-01-0-2-02	S82-01-50-82-01	S82-01-85-57-01	S82-02-0-2-01
Sample Date:	30-Jan-91	28-Jan-91	29-Jan-91	28-Jan-91	29-Jan-91	22-Jan-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101326-03A	C101317-01A	C101317-03A	C101317-06A	C101317-02A	C101215-04A
Prep Date:	20-Feb-91	23-Feb-91	23-Feb-91	23-Feb-91	23-Feb-91	07-Feb-91
Analysis Date:	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	8190	12000	11400	8200	5550	12400
Antimony	7440-38-0	3.7 UJ	4 UJ	4 UJ	3.7 UJ	4.3 UJ
Arsenic	7440-38-2	4.8 J	5.7 J	3.9 J	3 J	7.9 J
Barium	7440-38-3	112 J	118	35.9 J	53.1	140 J
Beryllium	7440-41-7	0.33 J	0.6 J	0.62 J	0.4 U	0.46 U
Cadmium	7440-43-9	0.82 U	0.81 U	0.84 U	0.8 U	0.9 U
Calcium	7440-70-2	32800 J	27800	26800	2780	33100 J
Chromium	7440-47-3	26.2	20.5 J	22.3 J	11.9 J	23.8
Cobalt	7440-48-4	8 J	10.8	10.4 J	6.8 J	12.5
Copper	7440-50-8	97.8 J	88.9 J	42.2 J	35.2 J	25.6 J
Iron	7439-89-6	16200	17200	17700	9320	20400
Lead	7439-92-1	18.4 J	33.5 J	194	2.4 J	5.9 J
Magnesium	7439-95-4	6080 J	9360	8810	2710	11200 J
Manganese	7439-96-5	250 J	361	355	274	360 J
Mercury	7439-97-6	0.16 R	0.16 R	0.16 R	0.16 R	0.17 R
Nickel	7440-02-0	14.6	25.2	23.8	10.8	27.3
Potassium	7440-09-7	1600 J	3420 J	3080 J	693 J	2970 J
Selenium	7782-49-2	0.42 U	0.41 U	0.4 U	0.44 U	0.44 U
Silver	7440-22-4	1.7 J	1.4 J	1.7 J	1.2 J	1.7 J
Sodium	7440-23-5	726 J	713 J	680 J	189 J	1180 J
Thallium	7440-28-0	0.21 U	0.41 U	0.4 U	0.44 U	0.44 U
Vanadium	7440-82-2	47.9 J	36.4 J	42.2 J	19.8 J	43.2 J
Zinc	7440-86-6	79.6 J	79 J	76.4 J	75 J	49.7 J

Nitrate/Nitrite
Organic Lead

U = Compound not detected
J = Estimated value
R = Result rejected in
data validation

APPENDIX L

RESULTS OF INORGANICS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SB2-02-10-12-01	SB2-02-70-72-01	SB2-04-0-2-01	SB2-04-55-57-01	SB2-04-70-72-01	MS2-02-0-2-01
Sample Date:	22-Jan-91	22-Jan-91	22-Jan-91	23-Jan-91	23-Jan-91	06-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C101215-06A	C101215-10A	C101215-11A	C101230-01A	C101230-02A	C102088-01A
Prep Date:	07-Feb-91	07-Feb-91	07-Feb-91	23-Feb-91	23-Feb-91	06-Mar-91
Analysis Date:	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91	13-Mar-91	18-Mar-91
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	5400	7310	13000	13800	4570	8920
Antimony	3.9 UJ	4.2 UJ	4 UJ	4 UJ	3.7 UJ	4.2 UJ
Arsenic	4.8 J	8.3 J	10 J	6.8 J	4 J	6.4 J
Barium	68.5 J	102 J	143 J	152 J	36.1 J	115
Beryllium	0.41 U	0.44 U	0.44 U	0.72 J	0.45 J	0.39 J
Cadmium	0.82 U	0.89 U	0.87 U	0.86 U	0.81 U	5.5
Calcium	14200 J	3780	31700 J	5850 J	2430	22500 J
Chromium	17.3	22.6	25.6	35.9	8 J	19.6
Cobalt	8.1 J	11.5	12.3	11.4	4.5 J	9.6 J
Copper	25.5 J	67.8 J	35.4	71.9 J	24.6 J	39.2
Iron	14700	15200	20700	19100	7570	15900
Lead	3.2 J	3.2 J	6.3 J	3.2 J	2.6 J	154
Magnesium	4960 J	3650 J	10700 J	5450 J	2400	8230 J
Manganese	179 J	414 J	387 J	720	120	334
Mercury	0.16 R	0.17 R	0.17 R	0.17 R	0.16 R	0.17 R
Nickel	14.9	15.6	28.2	35.9	7.5 J	23.8
Potassium	914 J	893 J	3590 J	1130 J	604 J	2190 J
Selenium	0.4 U	0.43 U	0.44 U	0.43 U	0.4 U	0.45 U
Silver	1.4 J	0.67 U	3.7 J	1.3 J	0.83 J	1.3 J
Sodium	577 J	229 J	1110 J	338 J	185 J	299 J
Thallium	0.4 U	0.43 U	0.44 U	0.43 U	0.4 U	0.45 U
Vanadium	43.2 J	41.2 J	44.7 J	34.1 J	15.5 J	33.9
Zinc	27.8 J	47.5 J	51.2 J	130 J	43.9 J	127 J

Nitrate/Nitrite
Organic Lead

U = Compound not detected
J = Estimated value
R = Result rejected in
data validation

APPENDIX L

RESULTS OF INORGANICS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MB2-02-30-32-01	MB2-02-70-72-01	SS4-01	SS4-02	SS4-03	SS4-04
Sample Date:	06-Feb-91	06-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91	13-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C102069-03A	C102069-04A	C102192-01A	C102192-02A	C102192-03A	C102192-04A
Prep Date:	08-Mar-91	08-Mar-91	08-Mar-91	08-Mar-91	08-Mar-91	08-Mar-91
Analysis Date:	18-Mar-91	18-Mar-91	18-Mar-91	18-Mar-91	18-Mar-91	18-Mar-91
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	2680	4040	6310	6240	6140	5820
Antimony	4.5 J	4 UU	4 UU	3.9 UU	4 UU	4 UU
Arsenic	3.1 J	7.2 J	2.7 J	3.2 J	3.5 J	3.2
Barium	27.1 J	51.2 J	74.5	74.2	73.7	62.2
Beryllium	0.21 J	0.55 J	0.26 J	0.35 J	0.33 J	0.34 J
Cadmium	0.81 U	0.87 U	0.84 U	0.83 U	0.84 U	0.84 U
Calcium	1670 J	3310 J	69500 J	21400 J	21900 J	19000 J
Chromium	5	9.9	8.5	9.1	13.3	10
Cobalt	3.5 J	6.5 J	6.5 J	6.3 J	6.4 J	5.5 J
Copper	19 J	24.1 J	11 J	39.6 J	25.3 J	16.1 J
Iron	6220 J	8710 J	8740	9920	9550	9820
Lead	3.3 J	4.3 J	10.2 J	8.4 J	66.9 J	12.5 J
Magnesium	2050 J	2880 J	4830 J	4310 J	4560 J	3760 J
Manganese	94.7	204	189	205	189	180
Mercury	0.16 R	0.16 R	0.16 R	0.16 R	0.16 R	0.16 R
Nickel	6.4 J	11.4	11.5	10.5 J	11.6	9.9 J
Potassium	543 J	574 J	1670 J	1570 J	1390 J	1400 J
Selenium	0.4 U	0.41 U	0.41 U	0.42 U	0.43 U	0.43 U
Silver	0.61 U	0.75 J	0.82 J	0.82 U	0.82 J	0.63 U
Sodium	225 J	246 J	144 J	163 J	191 J	146 J
Thallium	0.4 U	0.41 U	0.41 U	0.42 U	0.43 U	0.43 U
Vanadium	12.6	22.1	16.7	18.1	19.8	19.2
Zinc	30.6 J	34.2 J	41.4 J	29.8 J	44 J	27 J

Nitrate/Nitrite
Organic Lead

U = Compound not detected
J = Estimated value
R = Result rejected in data validation

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APPENDIX L

RESULTS OF INORGANICS IN SOIL
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	SS4-05	SS4-06	MB5-01-0-2-01	MB5-01-5-7-01	MB5-01-70-72-01
Sample Date:	13-Feb-91	13-Feb-91	07-Feb-91	07-Feb-91	07-Feb-91
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Lab Number:	C102192-05A	C102192-06A	C102106-01A	C102106-02A	C102106-03A
Prep Date:	08-Mar-91	08-Mar-91	08-Mar-91	08-Mar-91	08-Mar-91
Analysis Date:	18-Mar-91	18-Mar-91	18-Mar-91	18-Mar-91	18-Mar-91
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	6470	4390	10500	3670	3710
Antimony	3.9 UJ	3.7 UJ	4 UJ	3.7 UJ	3.7 UJ
Arsenic	3.1 J	2.9 J	7.8 J	3.2 J	6.5 J
Barium	67.4	42.4 J	115	49	182
Beryllium	7440-41-7	0.21 U	0.4 J	0.2 J	0.53 J
Cadmium	7440-43-9	0.83 U	0.87 U	0.78 U	0.78 U
Calcium	7440-70-2	33300 J	23100 J	10500 J	3620 J
Chromium	7440-47-3	10.5	18.8	8.6	11
Cobalt	7440-48-4	5.5 J	10.6 J	5.5 J	8.1 J
Copper	7440-50-8	16 J	24.7 J	9.3 J	36.7 J
Iron	7439-89-6	10200	17200	9330	8480
Lead	7439-92-1	9.4 J	10.8 J	3 J	2.6 J
Magnesium	7439-95-4	4310 J	8950 J	3690 J	2360 J
Manganese	7439-96-5	189	358	132	736
Mercury	7439-97-6	0.16 R	0.17 R	0.15 R	0.15 R
Nickel	7440-02-0	12.1	24.3	11.1	17.8
Potassium	7440-09-7	1570 J	649 J	2020 J	365 J
Selenium	7782-49-2	0.4 U	0.41 U	0.44 U	0.39 U
Silver	7440-22-4	0.79 J	0.61 J	1 J	0.58 U
Sodium	7440-23-5	219 J	194 J	497 J	178 J
Thallium	7440-28-0	0.4 U	0.41 U	0.44 U	0.39 U
Vanadium	7440-62-2	21.2	13.6	36	22.6
Zinc	7440-66-6	27.3 J	22.6 J	53.7 J	57.5 J
Nitrate/Nitrite			28	7.5	0.2
Organic Lead			1.1 U	1 U	1 U

U = Compound not detected
J = Estimated value
R = Result rejected in
data validation

APPENDIX M
TABULATION OF WATER ANALYTICAL RESULTS

APPENDIX M
RESULTS OF VOAs IN WATER
161 AREFG SITE INVESTIGATION PHOENIX, ARIZONA

Sample Number:	MWS-01-01A	MWS-01-02	MWS-02-01	MWS-02-02	MWS-02-02	MWS-02-02	MWS-02-02 DJP
Sample Date:	15-Apr-91	24-Jun-91	12-Apr-91	28-Jun-91	28-Jun-91	28-Jun-91	28-Jun-91
Lab Number:	BB3291	BB8943	BB3074	BB9147	BB9147 DL	BB9148	BB9148
Analyte Date:	24-Apr-91	29-Jun-91	23-Apr-91	03-Jul-91	03-Jul-91	05-Jul-91	05-Jul-91
COMPOUND	CASE NUMBER	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS
1,1,1-Trichloroethane	71-55-6	ug/L	5U	5U	5U	5U	5U
1,1,2,2-Tetrachloroethane	79-34-5	ug/L	5U	5U	5UJ	5U	5U
1,1,2-Trichloroethane	79-00-5	ug/L	5U	5U	5U	5U	5U
1,1-Dichloroethane	75-34-3	ug/L	5U	5U	5U	5U	5U
1,1-Dichloroethene	75-35-4	ug/L	5U	5U	5U	5U	5U
1,2-Dichloroethane	107-06-2	ug/L	5U	5U	5U	5U	5U
1,2-Dichloroethylene	540-59-0	ug/L	1J	1U	5U	5U	5U
1,2-Dichloropropane	78-87-5	ug/L	5U	5U	5U	5U	5U
2-Butanone	78-83-3	ug/L	10U	10U	10U	10U	10U
2-Hexanone	591-78-6	ug/L	10U	10U	10U	20U	10U
4-Methyl-2-pentanone	108-10-1	ug/L	10UJ	10U	10U	20U	10U
Acetone	67-64-1	ug/L	10U	10U	10U	20U	10U
Benzene	71-43-2	ug/L	5U	5U	66	230 D	110
Bromochloromethane	75-27-4	ug/L	5U	5U	5U	5U	5U
Bromoform	75-25-2	ug/L	5UJ	5U	5U	5U	5U
Bromomethane	74-83-9	ug/L	10U	10U	10U	10U	10U
Carbon disulfide	75-15-0	ug/L	5U	5U	5UJ	5UJ	5U
Carbon Tetrachloride	56-23-5	ug/L	5UJ	5U	5U	5U	5U
Chlorobenzene	108-90-7	ug/L	5U	5U	5U	5U	5U
Chloroethane	75-00-3	ug/L	10U	10U	10U	10R	10U
Chloroform	67-66-3	ug/L	5U	5U	5U	5U	5U
Chloromethane	74-87-3	ug/L	10U	10U	10U	10U	10U
cis-1,3-Dichloropropene	10061-01-5	ug/L	5U	5U	5U	5U	5U
Dibromochloromethane	124-48-1	ug/L	5U	5U	5U	5U	5U
Ethylbenzene	100-41-4	ug/L	5U	5U	5U	5U	5U
Methylene chloride	75-09-2	ug/L	5U	5U	5U	5U	5U
Styrene	100-42-5	ug/L	5U	5U	5U	5U	5U
Tetrachlorethene	127-18-4	ug/L	5U	5U	5U	5U	5U
Toluene	108-88-3	ug/L	5U	5U	1J	5U	5U
Total xylenes	1330-20-7	ug/L	5U	5U	9	2J	1J
trans-1,3-Dichloropropene	10061-02-6	ug/L	5U	5U	5U	5U	5U
Trichloroethene	79-01-6	ug/L	5U	5U	6	5U	5U
Vinyl Acetate	108-05-4	ug/L	10U	10U	10U	10U	3J
Vinyl chloride	75-01-4	ug/L	10U	10U	10U	10U	10U
Vinyl chloride	75-01-4	ug/L	0.5U	1.8U	0.5U	1.8U	1.8U
Organic Lead		ug/L	100U	100U	100U	100U	100UJ
TPH		mg/L	1U	1U	2	1U	1U

U = Compound not detected
 J = Estimated value
 E = Estimated concentration above quantitation limits
 R = Result rejected in validation

APPENDIX M
RESULTS OF VOAS IN WATER
161 AREFG SITE INVESTIGATION PHOENIX, ARIZONA
(cont.)

Sample Number:	T1-01-01A	T2-01-01A	T3-01-01A	T4-01-01A	T5-01-01A
Sample Date:	19-Apr-91	19-Apr-91	19-Apr-91	19-Apr-91	19-Apr-91
Lab Number:	BB3994	BB3995	BB3996	BB3997	BB3993
Analysis Date:	30-Apr-91	30-Apr-91	30-Apr-91	30-Apr-91	30-Apr-91
	CASE				
	NUMBER				
	UNITS				
1,1,1-Trichloroethane	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethylene	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U
2-Butanone	10 R	10 R	10 R	10 R	10 R
2-Hexanone	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U
Acetone	65	10 U	10 U	10 U	110
Benzene	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	5 U	5 U
Chloroethane	10 U	10 U	10 U	10 U	10 U
Chloroform	5 U	5 U	5 U	5 U	5 U
Chloromethane	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U
Tetrachloroethane	5 U	5 U	5 U	5 U	5 U
Toluene	5 U	5 U	5 U	5 U	5 U
Total xylenes	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U
Organic Lead	1 U	1 U	1 U	1 U	1 U
TPH	1 U	1 U	1 U	1 U	1 U

APPENDIX M
RESULTS OF VOAS IN WATER
161 AREFG SITE INVESTIGATION PHOENIX, ARIZONA
 (cont.)

Sample Number:	MW3-01-01	MW3-01-01	MW3-01-02	MW3-01-02	MW3-01-02	MW3-02-01A	MW3-02-01A-DUP
Sample Date:	11-Apr-91	11-Apr-91	28-Jun-91	28-Jun-91	28-Jun-91	17-Apr-91	17-Apr-91
Lab Number:	BB3075	BB3075 DL	BB9144	BB9144 DL	BB9144 DL	BB3809	BB3810
Analysis Date:	23-Apr-91	23-Apr-91	03-Jul-91	03-Jul-91	03-Jul-91	26-Apr-91	26-Apr-91
COMPOUND	CASE NUMBER	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS
1,1,1-Trichloroethane	71-55-6	ug/L	25 U	50 U	5 U	100 U	5 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/L	25 U	50 U	5 U	100 U	5 U
1,1,2-Trichloroethane	79-00-5	ug/L	25 U	50 U	5 U	100 U	5 U
1,1-Dichloroethane	75-34-3	ug/L	25 U	50 U	5 U	100 U	5 U
1,1-Dichloroethene	75-35-4	ug/L	25 U	50 U	5 U	100 U	5 U
1,2-Dichloroethane	107-06-2	ug/L	25 U	50 U	5 U	100 U	5 U
1,2-Dichloroethylene	540-59-0	ug/L	25 U	50 U	4 J	100 U	2 J
1,2-Dichloropropane	78-87-5	ug/L	25 U	50 U	5 U	100 U	5 U
2-Butanone	78-93-3	ug/L	50 U	100 U	5 U	100 U	5 U
2-Hexanone	591-78-6	ug/L	50 U	100 U	10 U	200 U	10 U
4-Methyl-2-pentanone	108-10-1	ug/L	50 U	100 U	10 U	200 U	10 U
Acetone	67-64-1	ug/L	50 U	100 U	10 U	200 U	10 U
Benzene	71-43-2	ug/L	1300 E	1200 D	1500 E	2600 D	5 U
Bromodichloromethane	75-27-4	ug/L	25 U	50 U	5 U	100 U	5 U
Bromoform	75-25-2	ug/L	25 U	50 U	5 U	100 U	5 U
Bromomethane	74-83-9	ug/L	50 U	100 U	10 U	200 U	10 U
Carbon disulfide	75-15-0	ug/L	25 U	50 U	7 U	140 BD	5 U
Carbon Tetrachloride	56-23-5	ug/L	25 U	50 U	5 U	100 U	5 U
Chlorobenzene	106-90-7	ug/L	25 U	50 U	5 U	100 U	5 U
Chloroethane	75-00-3	ug/L	50 U	100 U	10 R	200 R	10 U
Chloroform	67-66-3	ug/L	25 U	50 U	5 U	100 U	5 U
Chloromethane	74-87-3	ug/L	50 U	100 U	10 U	200 U	10 U
cis-1,3-Dichloropropene	10061-01-5	ug/L	25 U	50 U	5 U	100 U	5 U
Dibromochloromethane	124-48-1	ug/L	25 U	50 U	5 U	100 U	5 U
Ethylbenzene	100-41-4	ug/L	18 J	16 DJ	240 E	240 D	5 U
Methylene chloride	75-09-2	ug/L	25 U	50 U	5 U	100 U	5 U
Styrene	100-42-5	ug/L	25 U	50 U	5 U	100 U	5 U
Tetrachloroethene	127-18-4	ug/L	25 U	50 U	5 U	100 U	5 U
Toluene	106-88-3	ug/L	25 U	50 U	5 U	100 U	5 U
Total xylenes	1330-20-7	ug/L	25 U	50 U	8	100 U	5 U
trans-1,3-Dichloropropene	10061-02-6	ug/L	25 U	50 U	5 U	100 U	5 U
Trichloroethene	79-01-6	ug/L	25 U	50 U	1 J	100 U	3 J
Vinyl Acetate	106-05-4	ug/L	50 U	100 U	10 U	200 U	10 U
Vinyl chloride	75-01-4	ug/L	50 U	100 U	10 U	200 U	10 U
Vinyl chloride	75-01-4	ug/L	0.5 U	0.5 U	1.8 U	0.5 U	0.5 U
Organic Lead		ug/L	100 U	100 U	100 U	100 U	100 U
TPH		mg/L	1 U	4	3.8	2	1 U

APPENDIX M
RESULTS OF SVOAs IN WATER
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MWS-01-01A	MWS-01-02	MWS-02-01	MWS-02-02	MWS-02-02	MWS-03-01
Sample Date:	15-Apr-91	24-Jun-91	12-Apr-91	28-Jun-91	28-Jun-91	10-Apr-91
Lab Number:	BB3305	BB8943	BB3090	BB9173	BB9173	BB2834
Prep Date:	18-Apr-91	01-Jul-91	17-Apr-91	05-Jul-91	05-Jul-91	17-Apr-91
Analysis Date:	29-Apr-91	09-Jul-91	19-Apr-91	09-Jul-91	09-Jul-91	19-Apr-91

COMPOUND	CASE NUMBER	UNITS	RESULTS
1,2,4-Trichlorobenzene	120-82-1	ug/L	10 U
1,2-Dichlorobenzene	95-50-1	ug/L	10 U
1,3-Dichlorobenzene	541-73-1	ug/L	10 U
1,4-Dichlorobenzene	106-46-7	ug/L	10 U
2,4,5-Trichlorophenol	95-95-4	ug/L	50 U
2,4,6-Trichlorophenol	88-06-2	ug/L	10 U
2,4-Dichlorophenol	120-83-2	ug/L	10 U
2,4-Dimethylphenol	105-67-9	ug/L	10 U
2,4-Dinitrophenol	51-28-5	ug/L	50 U
2,4-Dinitrotoluene	121-14-2	ug/L	10 U
2,6-Dinitrotoluene	606-20-2	ug/L	10 U
2-Chloronaphthalene	91-58-7	ug/L	10 U
2-Chlorophenol	95-57-8	ug/L	10 U
2-Methylnaphthalene	91-57-6	ug/L	10 U
2-Methylphenol	95-48-7	ug/L	10 U
2-Nitroaniline	88-74-4	ug/L	50 U
2-Nitrophenol	88-75-5	ug/L	10 U
3,3'-Dichlorobenzidine	91-94-1	ug/L	20 U
3-Nitroaniline	99-09-2	ug/L	50 U
4,6-Dinitro-2-methylphenol	534-52-1	ug/L	50 U
4-Bromophenyl phenyl ether	101-55-3	ug/L	10 U
4-Chloroaniline	106-47-8	ug/L	10 U
4-Chlorophenyl phenyl ether	7005-72-3	ug/L	10 U
4-Chloro-3-methylphenol	59-50-7	ug/L	10 U
4-Methylphenol	106-44-5	ug/L	10 U
4-Nitroaniline	100-01-6	ug/L	50 U
4-Nitrophenol	100-02-7	ug/L	50 U
Acenaphthene	83-32-9	ug/L	10 U
Acenaphthylene	208-86-8	ug/L	10 U
Anthracene	120-12-7	ug/L	10 U

APPENDIX M
RESULTS OF SVOCs IN WATER
161 AREG SITE INVESTIGATION
PHOENIX, ARIZONA

Sample Number:	MWS-01-01A	MWS-01-02	MWS-02-01	MWS-02-02	MWS-02-02 DUP	MWS-03-01
Sample Date:	15-Apr-91	24-Jun-91	12-Apr-91	26-Jun-91	26-Jun-91	10-Apr-91
Lab Number:	BB3305	BB643	BB3080	BB9173	BB9173	BB2804
Prep Date:	18-Apr-91	01-Jul-91	17-Apr-91	05-Jul-91	05-Jul-91	17-Apr-91
Analysis Date:	29-Apr-91	09-Jul-91	19-Apr-91	09-Jul-91	08-Jul-91	19-Apr-91
Benzic acid	65-85-0	ug/L	50 U	50 U	50 R	50 U
Benzofluoranthrene	56-55-3	ug/L	10 U	10 U	10 U	10 U
Benzofluorene	50-32-8	ug/L	10 U	10 U	10 U	10 U
Benzofluoranthrene	205-89-2	ug/L	10 U	10 U	10 U	10 U
Benzofluorene	191-24-2	ug/L	10 U	10 U	10 U	10 U
Benzofluorene	207-08-9	ug/L	10 U	10 U	10 U	10 U
Benzyl alcohol	100-51-8	ug/L	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	111-91-1	ug/L	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	111-44-4	ug/L	10 U	10 U	10 U	10 U
bis(2-Chloroisopropyl) ether	108-60-1	ug/L	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl) phthalate	117-81-7	ug/L	10 U	10 U	10 U	10 U
Buyl benzyl phthalate	65-68-7	ug/L	10 U	10 U	10 U	10 U
Chrysene	218-01-9	ug/L	10 U	10 U	10 U	10 U
Dibenzofuran	132-64-9	ug/L	10 U	10 U	10 U	10 U
Dibenzofluoranthrene	53-70-3	ug/L	10 U	10 U	10 U	10 U
Dibutyl phthalate	84-68-2	ug/L	10 U	10 U	10 U	10 U
Dimethyl phthalate	131-11-3	ug/L	10 U	10 U	10 U	10 U
Di-n-butyl phthalate	84-74-2	ug/L	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	117-84-0	ug/L	10 U	10 U	10 U	10 U
Fluorene	208-44-0	ug/L	10 U	10 U	10 U	10 U
Fluorene	86-73-7	ug/L	10 U	10 U	10 U	10 U
Fluorene	118-74-1	ug/L	10 U	10 U	10 U	10 U
Hexachlorobenzene	87-68-3	ug/L	10 U	10 U	10 U	10 U
Hexachlorobutadiene	77-47-4	ug/L	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	67-72-1	ug/L	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	193-38-5	ug/L	10 U	10 U	10 U	10 U
Isophthalene	78-59-1	ug/L	10 U	10 U	10 U	10 U
Naphthalene	91-20-3	ug/L	10 U	10 U	10 U	10 U
Nitrobenzene	98-95-3	ug/L	10 U	10 U	10 U	10 U
N-nitrosodiphenylamine	86-30-6	ug/L	10 U	10 U	10 U	10 U
N-nitroso-di-n-propylamine	621-64-7	ug/L	10 U	10 U	10 U	10 U
Pentachlorophenol	87-86-5	ug/L	50 U	50 U	50 R	50 U
Phenanthrene	85-01-8	ug/L	10 U	10 U	10 U	10 U
Phenol	108-85-2	ug/L	10 U	10 U	10 R	10 U
Pyrene	129-00-0	ug/L	10 U	10 U	10 U	10 U

U = Compound not detected
J = Estimated value
R = Result rejected in validation

APPENDIX M
RESULTS OF SVOCs IN WATER
161 AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

COMPOUND	NUMBER	UNITS	CASE						
			MWS-03-02	MWS-04-01	MWS-04-02	PS-2-01	PS-2-02	MW1-02-01A	
Benzic acid	65-85-0	ug/L	50 U	50 U	50 R	50 R	50 U	50 U	50 U
Benzofluoranthene	56-55-3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzofluoranthene	50-32-8	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzofluoranthene	205-89-2	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzofluoranthene	191-24-2	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzofluoranthene	207-09-9	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol	100-51-6	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	111-91-1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl) ether	111-44-4	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloropropyl) ether	108-60-1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl) phthalate	117-81-7	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Butyl benzyl phthalate	85-68-7	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	218-01-9	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	132-64-9	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofluoranthene	53-70-3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibutyl phthalate	84-66-2	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	131-11-3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate	84-74-2	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	117-84-0	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	206-44-0	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	86-73-7	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	118-74-1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	87-66-3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	77-47-4	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorothene	87-72-1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	183-39-5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	78-59-1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	91-20-3	ug/L	10 U	7 J	3 J	10 U	10 U	10 U	10 U
Nitrobenzene	98-95-3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	86-30-6	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	621-64-7	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	87-66-5	ug/L	50 U	50 U	50 R	50 R	50 U	50 U	50 U
Phenanthrene	85-01-8	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	108-95-2	ug/L	10 U	2 J	10 R	10 R	10 U	10 U	10 U
Pyrene	129-00-0	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U

U = Compound not detected
J = Estimated value
R = Result rejected in validation

APPENDIX M

RESULTS OF INORGANICS IN WATER
161AREFG SITE INVESTIGATION
PHOENIX, ARIZONA

(cont.)

Sample Number:	MW2-02-02 DUP	MW4-01-01	MW4-01-02	MW4-02-01A	MW4-02-02	MW5-01-01A	MW5-01-01A-DUP	MW5-01-02
Sample Date:	25-Jun-91	08-Apr-91	26-Jun-91	16-Apr-91	28-Jun-91	16-Apr-91	16-Apr-91	25-Jun-91
Lab Number:	BB9060	BB2474	BB9101	BB3510	BB9082	BB3678	BB3679	BB9046
Prep Date:	03-Jul-91	16-Apr-91	03-Jul-91	24-Apr-91	03-Jul-91	24-Apr-91	24-Apr-91	03-Jul-91
Analysis Date:	03-Jul-91	18-Apr-91	03-Jul-91	25-Apr-91	03-Jul-91	25-Apr-91	25-Apr-91	03-Jul-91
Aluminum	40 U	40 U	54.1 J	59.6 J	40 U	40 U	59.3 J	48.4 J
Antimony	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
Arsenic	5.4 B	2 UW	2 U	32.4	14.2	5.6 J	3.8 J	5.1 J
Barium	47.5 B	217	195 J	121 J	118 J	55.6 J	54.5 J	52.5 J
Beryllium	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	49662	181000	206000	61200	62300	65600	65600	66200
Chromium	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chromium	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Cobalt	21.8 B	10 U	31.9 J	11.8 J	22.1 J	10.1 J	10 U	30.8 J
Copper	14.4 B	12 J	19.1 J	57.9 J	10 U	24.2 J	50.5 J	18.2 J
Iron	2 U	2 U	2 UW	2 UW	2 U	2 U	2 U	2 U
Lead	19669	61900	71600	24000	25500	26700	26100	27600
Magnesium	2.1 B	16.8	2.5 J	2 U	2 U	2 U	2 U	2 U
Manganese	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21	0.2 U	0.2 UW
Mercury	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Nickel	4653 B	17700	13700	9100	7630	4360 J	4450 J	5660
Potassium	2 U	2 UW	2 UW	6 UW	4 UJ	4 U	2 U	2 UJ
Selenium	5 B	5 U	18.8 J	6.9 J	5 U	5 U	5 UJ	7.2 J
Silver	136184	236000	223000	116000	104000 J	143000	136000	116000
Sodium	2 U	2 UW	2 UW	2 U	2 UJ	2 U	2 U	2 UJ
Thallium	10.4 B	10 U	10 U	64.2	39.9 J	10 U	10 U	10 U
Vanadium	20.3	36.3	22.4 J	10.8 J	12 J	10.2 J	21	66.8 J
Zinc								
Nitrate	14787-55-8					2.4	2.3	6.3
Nitrite						2 U	2 U	2 U

U = Compound not detected
J = Estimated value
R = Result rejected in validation