

Appendix E

**Laboratory Analytical Reports and
Chain-of-Custody Records**

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/03/92

Date Received: 11/06/92

Date Analyzed 11/16/92

Field Sample Number: WELL NO. 1

Laboratory Sample Number: 92111094

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	4.7	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5	TION.	
Chloroethane	<5.0	Dichloromethane	3.0(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	114 71-141
Chloroform	7.3	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	98 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	4.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/03/92

Date Received: 11/06/92

Date Analyzed 11/16/92

Field Sample Number: WELL NO. 16

Laboratory Sample Number: 92111095

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	117 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	103 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	47		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	53		

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/03/92

Date Received: 11/06/92

Date Analyzed 11/17/92

Field Sample Number: WELL NO. H

Laboratory Sample Number: 92111096

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	3.4(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	102 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	95 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science
 ES Job No. ZA070
 Client MS. SUSAN ROBERTS, ES AUSTIN
 Project CAMP STANLEY GROUNDWATER, AU358.01
 Date Collected: 11/04/92
 Date Received: 11/06/92
 Date Analyzed 11/17/92
 Field Sample Number: WELL NO. 4
 Laboratory Sample Number: 92111097

ANALYTICAL RESULTS SUMMARY
 PURGEABLE ORGANICS
 EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L
 / / Soil, ug/g
 / / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	110 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	90 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	2.8		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	1.1		

Engineering-Science
 ES Job No. ZA070
 Client MS. SUSAN ROBERTS, ES AUSTIN
 Project CAMP STANLEY GROUNDWATER, AU358.01
 Date Collected: 11/04/92
 Date Received: 11/06/92
 Date Analyzed 11/17/92
 Field Sample Number: WELL NO. G
 Laboratory Sample Number: 92111098

ANALYTICAL RESULTS SUMMARY
 PURGEABLE ORGANICS
 EPA METHODS 8010 & 8020

Sample Matrix:
 / X / Water, ug/L
 / / Soil, ug/g
 / / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	2.3(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	114 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	95 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZAO70

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/04/92

Date Received: 11/06/92

Date Analyzed 11/17/92

Field Sample Number: WELL NO. 3

Laboratory Sample Number: 92111099

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	108 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	91 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	1.1		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZAO70

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/04/92

Date Received: 11/06/92

Date Analyzed 11/17/92

Field Sample Number: WELL NO. 2

Laboratory Sample Number: 92111100

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	3.2(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	114 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	91 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	0.52		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZAO70

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/05/92

Date Received: 11/06/92

Date Analyzed 11/17/92

Field Sample Number: WELL NO. 10

Laboratory Sample Number: 92111101

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	5.8(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	110 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	101 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/05/92

Date Received: 11/06/92

Date Analyzed 11/17/92

Field Sample Number: WELL NO. D-TOP

Laboratory Sample Number: 92111102

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	5.9(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	109 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	96 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	8.6		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	15		

Engineering-Science

ANALYTICAL RESULTS SUMMARY

ES Job No. ZA070

PURGEABLE ORGANICS

Client MS. SUSAN ROBERTS, ES AUSTIN

EPA METHODS 8010 & 8020

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: 11/05/92

Sample Matrix:

Date Received: 11/06/92

/ X / Water, ug/L

Date Analyzed 11/17/92

/ / Soil, ug/g

Field Sample Number: WELL NO. D-BOTTOM

/ / Other

Laboratory Sample Number: 92111103

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	{1} SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	4.7(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	112 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	106 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	8.9		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	15		

Engineering-Science
 ES Job No. ZA070
 Client MS. SUSAN ROBERTS, ES AUSTIN
 Project CAMP STANLEY GROUNDWATER, AU358.01
 Date Collected: 10/15/92
 Date Received: 11/06/92
 Date Analyzed 11/14/92
 Field Sample Number: TRIP BLANK 001
 Laboratory Sample Number: 92111104

ANALYTICAL RESULTS SUMMARY
 PURGEABLE ORGANICS
 EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L
 / / Soil, ug/g
 / / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	125 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	77 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: --

Date Received: --

Date Analyzed 11/13/92

Field Sample Number: --

Laboratory Sample Number: INSTRUMENT BLANK

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5	(1) SUSPECTED LABORATORY CONTAMINA-	
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5	TION.	
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	13(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	99 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	95 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZAO70

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: --

Date Received: --

Date Analyzed 11/16/92

Field Sample Number: --

Laboratory Sample Number: INSTRUMENT BLANK

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	103 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	86 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Date Collected: --

Date Received: --

Date Analyzed 11/17/92

Field Sample Number: --

Laboratory Sample Number: INSTRUMENT BLANK

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	2.7(1)	% REC	LIMITS
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	SURROGATE 1	101 71-141
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 2	104 57-138
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5		
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science
 Date Reported 11/23/92
 ES Job No. ZA070
 Client MS. SUSAN ROBERTS, ES AUSTIN
 Project CAMP STANLEY GROUNDWATER, AU358.01
 Laboratory Sample Number LCS VMS 115
 Date Analyzed 11/13/92

Sample Matrix:
 / X / Water
 / / Soil
 / / Other

Analytical Parameter	Blank	C1	Matrix Spike Duplicates		SA	Spike Recovery		PR
			C2	RPD		SR	SSR	
1,1-DICHLOROETHENE, ug/L	<0.50	11.2	9.14	20%	10.0	--	11.2	112%
TRICHLOROETHENE, ug/L	<0.50	9.52	9.81	3.0%	10.0	--	9.52	95%

CONTROL LIMITS:

1,1-DICHLOROETHENE	PR = 20 - 169	RPD = 32
TRICHLOROETHENE	PR = 18 - 148	RPD = 21

Relative Percent Difference (RPD) = $\frac{C1 - C2}{(C1+C2)/2} \times 100$
 C1 = Concentration One
 C2 = Concentration Two
 NC - Not Calculated

Percent Recovery = $\frac{SSR - SR}{SA} \times 100$
 SSR = Spike Sample Result
 SR = Sample Result
 SA = Spike Added (Concentration)

Engineering-Science

Date Reported 11/23/92

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Laboratory Sample Number LCS VMS 117

Sample Matrix:

/ X / Water

/ / Soil

/ / Other

Date Analyzed 11/16/92

Analytical Parameter	Blank	C1	Matrix Spike Duplicates		SA	Spike Recovery		PR
			C2	RPD		SR	SSR	
1,1-DICHLOROETHENE, ug/L	<0.50	9.49	9.47	0.2%	10.0	--	9.49	95%
TRICHLOROETHENE, ug/L	<0.50	10.5	10.1	3.9%	10.0	--	10.5	105%

CONTROL LIMITS:

1,1-DICHLOROETHENE

PR = 20 - 169

RPD = 32

TRICHLOROETHENE

PR = 18 - 148

RPD = 21

Relative Percent Difference (RPD) = $\frac{C1 - C2}{(C1+C2)/2} \times 100$

C1 = Concentration One

C2 = Concentration Two

NC - Not Calculated

Percent Recovery = $\frac{SSR - SR}{SA} \times 100$

SSR = Spike Sample Result

SR = Sample Result

SA = Spike Added (Concentration)

Engineering-Science

Date Reported 11/23/92

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER, AU358.01

Laboratory Sample Number 92111094

Sample Matrix:

/ X / Water

/ / Soil

/ / Other

Date Analyzed 11/13/92

Analytical Parameter	Blank	C1	Matrix Spike Duplicates		SA	Spike Recovery		PR
			C2	RPD		SR	SSR	
1,1-DICHLOROETHENE, ug/L	<0.50	1,100	1,110	0.9%	1,000	<50.0	1,100	110%
TRICHLOROETHENE, ug/L	<0.50	913	886	3.0%	1,000	<50.0	913	91%

CONTROL LIMITS:

1,1-DICHLOROETHENE PR = 20 - 169

RPD = 32

TRICHLOROETHENE PR = 18 - 148

RPD = 21

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1+C2)/2} \times 100$$

C1 = Concentration One
C2 = Concentration Two

NC - Not Calculated

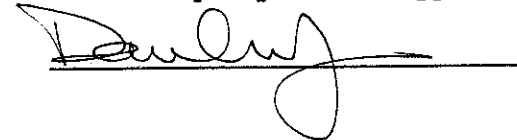
$$\text{Percent Recovery} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spike Sample Result
SR = Sample Result
SA = Spike Added (Concentration)

Engineering-Science
 Date Reported 11/23/92
 ES Job No. ZA070
 Client MS. SUSAN ROBERTS, ES AUSTIN
 Project CAMP STANLEY GROUNDWATER, AU358.01
 Laboratory Sample Number 92111095
 Date Analyzed 11/16/92 - 11/17/92

Sample Matrix:
 / X / Water
 / / Soil
 / / Other

Laboratory Supervisor Approval:



Analytical Parameter	Blank	C1	Matrix Spike Duplicates		SA	Spike Recovery		PR
			C2	RPD		SR	SSR	
1,1-DICHLOROETHENE, ug/L	<0.50	10.0	10.5	4.9%	10.0	<0.50	10.0	100%
TRICHLOROETHENE, ug/L	<0.50	63.9	58.6	8.7%	10.0	52.6	63.9	113%

CONTROL LIMITS:

1,1-DICHLOROETHENE	PR = 20 - 169	RPD = 32
TRICHLOROETHENE	PR = 18 - 148	RPD = 21

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1+C2)/2} \times 100$$

C1 = Concentration One
 C2 = Concentration Two
 NC - Not Calculated

$$\text{Percent Recovery} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spike Sample Result
 SR = Sample Result
 SA = Spike Added (Concentration)

Engineering-Science Inc.
 7800 Shoal Creek Blvd, Suite 222W
 Austin, Texas 78757
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CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME		NO. OF CONTAINERS	Analysis Required										REMARKS			
AP 358.01		CAMP STANLEY GROUNDWATER SAMPLING			Volatiles / Metals / etc.													
SAMPLERS (Signatures)				DATE	TIME	MATRIX	SAMPLE IDENTIFICATION											
John Paulk																		
11-3-92	11:15 AM	WATER	Well No. 1	3	X													Preservative is ice
11-3-92	2:00 PM	WATER	Well No. 16	3	X													"
11-3-92	2:40 PM	WATER	Well No. H	3	X													"
11-4-92	9:20 AM	WATER	Well No. 4	3	X													"
11-4-92	10:35 AM	WATER	Well No. G	3	X													"
11-4-92	2:55 PM	WATER	Well No. 2 Well No. 3	3	X													"
11-4-92	3:30 PM	WATER	Well No. 3 Well No. 2	3	X													"
11-4-92	4:10 PM	WATER	Well No. 10	3	X													"
11-5-92	8:39 AM	WATER	Well No. D - TOP	3	X													"
11-5-92	8:55 AM	WATER	Well No. D - BOTTOM	3	X													"
10-5-92	-	WATER	TRIP BLANK 001	1	X													"
10-5-92	-	WATER	TRIP BLANK 002	1	X													"
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Relinquished by: (Signature)		Date	Time	Received by: (Signature)				
John Paulk				11-5-92	10:25 AM	D. L. ... Cottrell				[Signature]		11/6/92	0830	[Signature]				
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Relinquished by: (Signature)		Date	Time	Received by: (Signature)				

White: laboratory returns with data, yellow: laboratory copy, pink: sampler copy

Engineering-Science

ES Job No. ZA070

Client MS. SUSAN ROBERTS, ES AUSTIN

Project CAMP STANLEY GROUNDWATER

Date Collected: 11/24/92

Date Received: 11/25/92

Date Analyzed 12/04/92

Field Sample Number: WELL I

Laboratory Sample Number: 92111440

ANALYTICAL RESULTS SUMMARY

PURGEABLE ORGANICS

EPA METHODS 8010 & 8020

Sample Matrix:

/ X / Water, ug/L

/ / Soil, ug/g

/ / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0		
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	% REC	LIMITS
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 1	86 71 - 141
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5	SURROGATE 2	89 57 - 138
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

Engineering-Science
 ES Job No. ZA070
 Client MS. SUSAN ROBERTS, ES AUSTIN
 Project CAMP STANLEY GROUNDWATER
 Date Collected: --
 Date Received: --
 Date Analyzed 12/04/92
 Field Sample Number: --
 Laboratory Sample Number: INSTRUMENT BLANK

ANALYTICAL RESULTS SUMMARY
 PURGEABLE ORGANICS
 EPA METHOD 8010

Sample Matrix:

/ X / Water, ug/L
 / / Soil, ug/g
 / / Other

Benzyl Chloride	<10	1,3-Dichlorobenzene	<0.5	Trichlorofluoromethane	<5.0
Bromobenzene	<2.0	1,4-Dichlorobenzene	<0.5	Trichloropropane	<2.0
Bromodichloromethane	<0.5	Dichlorodifluoromethane	<5.0	Vinyl Chloride	<5.0
Bromoform	<2.0	1,1-Dichloroethane	<0.5		
Bromomethane	<20	1,2-Dichloroethane	<0.5		
Carbon Tetrachloride	<0.5	1,1-Dichloroethene	<0.5		
Chlorobenzene	<0.5	Trans-1,2-Dichloroethene	<0.5		
Chloroethane	<5.0	Dichloromethane	<2.0		
2-Chloroethyl vinyl Ether	<10	1,2-Dichloropropane	<0.5	% REC	LIMITS
Chloroform	<0.5	Trans-1,3-Dichloropropene	<5.0	SURROGATE 1	104 71 - 141
1-Chlorohexane	<2.0	1,1,2,2,-Tetrachloroethane	<0.5	SURROGATE 2	109 57 - 138
Chloromethane	<10	1,1,1,2-Tetrachloroethane	<0.5		
Chlorotoluene	<2.0	Tetrachlorethene	<0.5		
Dibromochloromethane	<0.5	1,1,1-Trichloroethane	<0.5		
Dibromomethane	<5.0	1,1,2-Trichloroethane	<0.5		
1,2-Dichlorobenzene	<0.5	Trichloroethene	<0.5		

STANLEY3

QUALITY CONTROL RESULTS SUMMARY

Engineering-Science
Date Reported 12/14/92
ES Job No. ZA070
Client MS. SUSAN ROBERTS, ES AUSTIN
Project CAMP STANLEY GROUNDWATER
Laboratory Sample Number LCS
Date Analyzed 12/04/92

Sample Matrix:
/ X / Water
/ / Soil
/ / Other

Table with 9 columns: Analytical Parameter, Blank, C1, Matrix Spike Duplicates (C2, RPD), SA, Spike Recovery (SR, SSR), and PR. Rows include 1,1-DICHLOROETHENE and TRICHLOROETHENE.

CONTROL LIMITS:

Table with 3 columns: Analytical Parameter, PR range, and RPD. Rows include 1,1-DICHLOROETHENE and TRICHLOROETHENE.

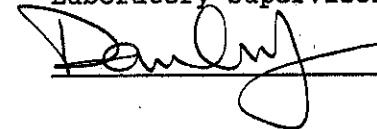
Relative Percent Difference (RPD) = (C1 - C2) / ((C1+C2)/2) X 100
C1 = Concentration One
C2 = Concentration Two
NC - Not Calculated

Percent Recovery = (SSR-SR) / SA X 100
SSR = Spike Sample Result
SR = Sample Result
SA = Spike Added (Concentration)

Engineering-Science
Date Reported 12/14/92
ES Job No. ZA070
Client MS. SUSAN ROBERTS, ES AUSTIN
Project CAMP STANLEY GROUNDWATER
Laboratory Sample Number 92121016

Sample Matrix:
/ X / Water
/ / Soil
/ / Other

Laboratory Supervisor Approval:



Date Analyzed 12/05/92

Analytical Parameter	Blank	C1	Matrix Spike Duplicates		SA	Spike Recovery		PR
			C2	RPD		SR	SSR	
1,1-DICHLOROETHENE, ug/L	<0.50	9.03	9.32	3.2%	10.0	<0.50	9.03	90%
TRICHLOROETHENE, ug/L	<0.50	9.69	10.1	4.1%	10.0	<0.50	9.69	97%

CONTROL LIMITS:

1,1-DICHLOROETHENE	PR= 20 - 169	RPD= 32
TRICHLOROETHENE	PR= 18 - 148	RPD= 21

Relative Percent Difference (RPD) = $\frac{C1 - C2}{(C1+C2)/2} \times 100$

C1 = Concentration One
C2 = Concentration Two

NC - Not Calculated

Percent Recovery = $\frac{SSR-SR}{SA} \times 100$

SSR = Spike Sample Result
SR = Sample Result
SA = Spike Added (Concentration)

Engineering Science Inc.
 7800 Shoal Creek Blvd, Suite 222W
 Austin, Texas 78757
 512/467-6200 FAX 512/467-7044

CHAIN OF CUSTODY RECORD

PROJECT NO. AU 358.02		PROJECT NAME CAMP STANLEY LW EVALUATION			NO. OF CONTAINERS	Analysis Required										REMARKS				
SAMPLERS (Signatures) <i>Paul Pondermick</i>						eliminated hydrocarbons (GOLD)														
DATE	TIME	MATRIX	SAMPLE IDENTIFICATION																	
11-24-92	1145	water	WELL I		3	X														
																				preserved w/ice
Relinquished by: (Signature) <i>Paul Pondermick</i>		Date 11/24/92	Time	Received by: (Signature) <i>D. Duffy</i>		Relinquished by: (Signature)		Date	Time	Received by: (Signature)										
Relinquished by: (Signature)		Date	Time	Received by: (Signature) <i>W. Cottrell</i>		Relinquished by: (Signature)		Date	Time	Received by: (Signature)										

White: laboratory returns with data, yellow: laboratory copy, pink: sampler copy