DOSHIER & BOWERS
ATTORNEYS AT LAW
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P.O. BOX 797
HARRISON, ARKANSAS 72602-797
BILL F. DOSHIER
DAN R. BOWERS
TELEPHONE

November 16, 1987

Mr. Steven Lingle, Director
Hazardous Site Evaluation Division
Environmental Protection Agency
401 M Street S.W.
Washington, DC 20510

RE: Arkwood Site
Omaha, Arkansas
Site No. ARD084930148

Dear Mr. Lingle:

This firm represents the past and present landowners of the above site. They have been named as PRP's in this case by the Environmental Protection Agency. I believe your file will reflect that the Ormond group is objecting to the EPA determination that this site should be nominated for promulgation to the National Priorities List. Your file should reflect that we have objected to this nomination and have previously met with Dr. Porter and filed some comments with him for inclusion in the record. My clients are firmly convinced that this site is not contaminated to the extent that it meets the requisites for inclusion on the NPL. We object to consideration of this site for nomination to the NPL and desire to present evidence to support our position. In this regard I asked Senator Bumper's office to ascertain if the comment period is still open in this matter and Ms. Debra Merrick of his office has just advised me that you will still receive comments from us on this issue.

Therefore, the Ormond group does desire to submit the following documentation to you at this time supporting our position. The first document that I am submitting herewith is a multi-page listing of the results of sampling and laboratory analysis of approximately 30 samples that were taken from wells and other sites surrounding the Arkwood site in May of 1987. The samples were taken by ERM Southwest, Inc., an engineering firm employed by another PRP herein, Mass Merchandisers, Inc., of Harrison, Arkansas. The laboratory analyses were done by ENSECO and the locations of the samples and the results are reflected in the attached document. For identification purposes I am marking this document Exhibit "A" to this letter. Exhibit "A" reflects that approximately 30 samples were taken from locations

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surrounding the Arkwood site. Your files and maps will probably already reflect the location of the sites and you may already have this information since it was filed with your Dallas office. However, I could not take the chance that this information might be missing from your files. Each sample was tested for soil contamination, groundwater contamination and air contamination. Each sample was not only tested for the presence of pentachlorophenol and cresote (the only chemicals involved in this site), but also all other suspected hazardous chemicals known to modern man. This sampling task cost approximately $50,000.00. We believe that it is significant to the issue before you that all samples showed non-detectable levels of all chemicals except one location. The new Cricket Spring which is located downsteam from the site approximately 100 yards showed 2.3 ppm pentachlorophenol. All other sites were negative. This evidence also proves that the spring itself is clearing up and will soon be below the objectionable levels of penta. We desire that this document be included in the record on the issue of site eligibility for NPL ranking.

The second document which we desire to have included in the records through our comments is marked Exhibit "B" and attached hereto. This document is a report from the engineer employed by the Ormond group to study the site and compile a ranking computation based on that firm's investigation and application of the HRS ranking formula. The engineering firm is Cranmer and Associates, Inc., of Little Rock, Arkansas. This HRS calculation report may have already been filed in your office, but I wanted to make sure that it is properly filed as a comment from my clients. As you can see from the report the CAI engineering firm has investigated the site and applied the formula to the facts and evidence found to exist and has concluded that the site merits a score well below the minimum Superfund required score.

The third document which we desire to submit to the record is a review document which we found in the Dallas file called Potential Hazardous Waste Site - Inspection Report. This document is marked Exhibit "C". It is submitted to support our position that this site is not so contaminated as to justify ranking on the NPL. The report was compiled by the Water Supply Branch of the Dallas office and forwarded to the Superfund Compliance Section. The report states that it is a follow up monitoring of ground and surface water near the inactive wood treatment facility known as Arkwood. The report states that, "Although some surface samples reveal some organics no contaminates were found in any domestic well samples. Surface contaminates do not effect any public water supply, but should certainly be addressed from a water pollution standpoint." The report recommends the installation of monitoring wells around the site to determine migration paths. The report also states that, "although not critical for present local well condition it is certainly worthwhile for possible future threats to groundwater".

Monitoring of the site we do not oppose. Placement on the NPL we do oppose.

I am asking Ms. Merrick to hand carry this letter and attached documents to you for inclusion in the comments record on this issue of promulgation to the National Priorities List.

Very truly yours,

By: _____

DOSHIER and BOWERS
ATTORNEYS FOR HALLIE C. ORMOND
and MARY F. BURKE, Landowners
(Referred to herein as the
ORMOND GROUP)
P. O. BOX 1797
HARRISON, AR 72602-1797
(501) 741-6166

BFD/db

Enclosures

TABLE 1

Sample Numbers and Locations
May 1987 Quarterly Sampling

Arkwood Inc. Site
Omaha, Arkansas

ERM-SOUTHWEST, INC.	ENSECO	Owner/Location
Water Samples		
0 S-1	63653-009	Railroad Tunnel
2.3 PIM S-2	63653-010	New Cricket
0 S-3	63653-001	Old Cricket
S-4	63653-002	Busby
S-10	63653-003	Valley north of site
S-26	63653-004	Valley southwest of site
S-33	63653-013	Walnut Creek Valley
S-36	63653-014	Walnut Creek Valley
S-43	63653-005	Center Sec. 34
S-48	63653-015	Walnut Creek Valley
S-49	63653-006	Valley north of site
S-50	63653-007	Cobb
S-51	63653-027	Vestal
S-80	63653-008	Field Blank
S-81	63653-016	Field Blank
S-82	63653-028	Field Blank
W-1	63653-020	White
W-2	63653-021	Miles
W-3	63653-022	Tate
W-4	63653-023	Tizen
W-6	63653-024	Cook
W-9	63653-019	Letterman
W-10	63653-029	Bishkey
W-11A	63653-017	Birmingham
W-11B	63653-018	Birmingham
W-15A	63653-025	Omaha (City)
W-15B	63653-026	Omaha (City)
W-22B	63653-031	Goddard
W-26	63653-030	Roberts
Sediment Samples		
0 SED-1	63653-032	Cricket Spring Channel
19 SED-2	63653-033	SE end of RR Tunnel

ORGANICS

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-1

Lab I.D.: R12-9 Enseco I.D.: 63653-009

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-1

Laboratory I.D.: R12-9 Enseco I.D.: 63653 009

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HS :GANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-2

Laboratory I.D.: R12-10 Enseco I.D.: 63653-010

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol 2.3	2300	ug/L	500
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

APPENDIX IX CHLORINATED DIOXINS A[illegible]

Client Name: ERM-SOUTHWEST

Client ID: S-2

Laboratory ID: 63653-010 Enseco ID: 63653-010

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87 Analyzed: 05/27/87

Parameter	Result	Units	Reporting Limit
Hexachlorodibenzodioxins	N.D.	ng/L	0.15
Hexachlorodibenzofurans	0.30	ng/L	-
Pentachlorodibenzodioxins	N.D.	ng/L	0.18
Pentachlorodibenzofurans	N.D.	ng/L	0.16
Tetrachlorodibenzodioxins	N.D.	ng/L	0.060
Tetrachlorodibenzofurans	N.D.	ng/L	0.036

N.D. = Not detected

Reported by: Kathy Heese Approved by: Michael Brooks

Sample: 63653-010

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-2

Laboratory ID: 63653-010 Enseco ID: 63653-010

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	68	mg/L	0.1	200.7	05/27/87
Iron	1.0	mg/L	0.05	200.7	05/27/87
Magnesium	3.0	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.8	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-010

Enseco

'NORGANIC P' ' AMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-2

Laboratory ID: 63653-010 Enseco ID: 63653-010

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.04	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	336	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	210	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	8	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	05/20/87
Sulfate	9	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	162	mg/L	5	310.1/403	05/15/87
Bicarb. Alkalinity as CaCO3	162	mg/L	5	310.1/403	05/15/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Ammonia as N	0.1	mg/L	0.1	350.1	05/20/87
Total Cations	3.8	meq/L	0.1	104C	06/15/87
Total Anions	3.7	meq/L	0.3	104C	06/15/87
% Difference	2.1	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-3 OLD CRICKET

Lab I.D.: R12-1 Enseco I.D.: 63653-001

Matrix: Water Sampled: 5/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	5
1,1,1-Trichloroethane	ND	ug/L	25
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	5
Bromodichloromethane	ND	ug/L	10
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	5
Bromoform	ND	ug/L	10
4-Methyl-2-Pentanone	ND	ug/L	5
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	10
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-3

Laboratory I.D.: R12-1 Enseco I.D.: 63653-001

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: EPM-Southwest, Inc.

Client I.D.: S-3

Laboratory I.D : R12-1 Enseco I.D.: 63653-001

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-3

Laboratory ID: 63653-001 Enseco ID: 63653-001

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	43	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.1	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	3.1	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-001

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-3

Laboratory ID: 63653-001 Enseco ID: 63653-001

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.88	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	227	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	120	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	5	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.7	mg/L	0.1	353.2	05/20/87
Sulfate	6	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	94	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	94	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	2.5	meq/L	0.1	104C	06/18/87
Total Anions	2.3	meq/L	0.3	104C	06/18/87
% Difference	3.9	%	0.1	104C	06/18/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-001

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: EPM-Southwest, Inc.

Client I.D.: S-1

Laboratory I.D.: R12-9 Enseco I.D.: 63653-009

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-1

Laboratory ID: 63653-009 Enseco ID: 63653-009

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	52	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.3	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	5.7	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-009

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-1

Laboratory ID: 63653-009 Enseco ID: 63653-009

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.72	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	305	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	170	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	22	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.5	mg/L	0.1	353.2	05/20/87
Sulfate	7	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	108	mg/L	5	310.1/403	05/15/87
Bicarb. Alkalinity as CaCO3	108	mg/L	5	310.1/403	05/15/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	3.0	meq/L	0.1	104C	06/15/87
Total Anions	3.0	meq/L	0.3	104C	06/15/87
% Difference	N.D.	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-2

Lab I.D.: R12-10 Enseco I.D.: 63653-010

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-2

Laboratory I.D.: R12-10 Enseco I.D.: 63653-010

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 8240/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: SED-1 CRICKET SPRING CHANNEL

Lab I.D.: R12-32 Enseco I.D.: 63653-032

Matrix: Soil Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/26/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/kg	10
Bromomethane	ND	ug/kg	10
Vinyl Chloride	ND	ug/kg	10
Chloroethane	ND	ug/kg	10
Methylene Chloride	ND	ug/kg	25
Acetone	ND	ug/kg	100
Carbon Disulfide	ND	ug/kg	5
1,1-Dichloroethene	ND	ug/kg	5
1,1-Dichloroethane	ND	ug/kg	5
1,2-Dichloroethene (cis/trans)	ND	ug/kg	5
Chloroform	ND	ug/kg	5
1,2-Dichloroethane	ND	ug/kg	5
2-Butanone	ND	ug/kg	40
1,1,1-Trichloroethane	ND	ug/kg	5
Carbon Tetrachloride	ND	ug/kg	5
Vinyl Acetate	ND	ug/kg	10
Bromodichloromethane	ND	ug/kg	5
1,2-Dichloropropane	ND	ug/kg	5
trans-1,3-Dichloropropene	ND	ug/kg	5
Trichloroethene	ND	ug/kg	5
Dibromochloromethane	ND	ug/kg	5
1,1,2-Trichloroethane	ND	ug/kg	5
Benzene	ND	ug/kg	5
cis-1,3-Dichloropropene	ND	ug/kg	5
2-Chloroethyl vinyl ether	ND	ug/kg	10
Bromoform	ND	ug/kg	5
4-Methyl-2-Pentanone	ND	ug/kg	10
2-Hexanone	ND	ug/kg	10
1,1,2,2-Tetrachloroethane	ND	ug/kg	5
Tetrachloroethene	ND	ug/kg	5
Toluene	ND	ug/kg	5
Chlorobenzene	ND	ug/kg	5
Ethyl benzene	ND	ug/kg	5
Styrene	ND	ug/kg	5
Total Xylenes	ND	ug/kg	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 8270/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: SED-1

Laboratory I.D.: R12-32 Enseco I.D.: 63653-032

Matrix: Soil Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/26/87 Analyzed: 05/28/87

Parameter	Result	Units Wet wt.	Reporting Limit
Phenol	ND	ug/Kg	6600
bis(2-Chloroethyl)ether	ND	ug/Kg	6600
2-Chlorophenol	ND	ug/Kg	6600
1,3-Dichlorobenzene	ND	ug/Kg	6600
1,4-Dichlorobenzene	ND	ug/Kg	6600
Benzyl alcohol	ND	ug/Kg	6600
1,2-Dichlorobenzene	ND	ug/Kg	6600
2-Methylphenol	ND	ug/Kg	6600
bis(2-Chloroisopropyl)ether	ND	ug/Kg	6600
4-Methylphenol	ND	ug/Kg	6600
N-Nitroso-dipropylamine	ND	ug/Kg	6600
Hexachloroethane	ND	ug/Kg	6600
Nitrobenzene	ND	ug/Kg	6600
Isophorone	ND	ug/Kg	6600
2-Nitrophenol	ND	ug/Kg	6600
2,4-Dimethylphenol	ND	ug/Kg	6600
Benzoic Acid	ND	ug/Kg	32000
bis(2-Chloroethoxy)methane	ND	ug/Kg	6600
2,4-Dichlorophenol	ND	ug/Kg	6600
1,2,4-Trichlorobenzene	ND	ug/Kg	6600
Naphthalene	ND	ug/Kg	6600
4-Chloroaniline	ND	ug/Kg	6600
Hexachlorobutadiene	ND	ug/Kg	6600
4-Chloro-3-methylphenol	ND	ug/Kg	6600
2-Methylnaphthalene	ND	ug/Kg	6600
Hexachlorocyclopentadiene	ND	ug/Kg	6600
2,4,6-Trichlorophenol	ND	ug/Kg	6600
2,4,5-Trichlorophenol	ND	ug/Kg	32000
2-Chloronaphthalene	ND	ug/Kg	6600
2-Nitroaniline	ND	ug/Kg	32000
Dimethyl phthalate	ND	ug/Kg	6600
Acenaphthylene	ND	ug/Kg	6600
3-Nitroaniline	ND	ug/Kg	32000
Acenaphthene	ND	ug/Kg	6600

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 8270/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: SED-1

Laboratory I.D.: R12-32 Enseco I.D.: 63653-032

Matrix: Soil Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/26/87 Analyzed: 05/28/87

Parameter	Result	Units Wet wt.	Reporting Limit
2,4-Dinitrophenol	ND	ug/Kg	32000
4-Nitrophenol	ND	ug/Kg	32000
Dibenzofuran	ND	ug/Kg	6600
2,4-Dinitrotoluene	ND	ug/Kg	6600
2,6-Dinitrotoluene	ND	ug/Kg	6600
Diethyl phthalate	ND	ug/Kg	6600
4-Chlorophenyl phenyl ether	ND	ug/Kg	6600
Fluorene	ND	ug/Kg	6600
4-Nitroaniline	ND	ug/Kg	32000
4,6-Dinitro-2-methylphenol	ND	ug/Kg	32000
N-Nitrosodiphenylamine	ND	ug/Kg	6600
4-Bromophenyl phenyl ether	ND	ug/Kg	6600
Hexachlorobenzene	ND	ug/Kg	6600
Pentachlorophenol	ND	ug/Kg	32000
Phenanthrene	ND	ug/Kg	6600
Anthracene	ND	ug/Kg	6600
Di-n-butyl phthalate	ND	ug/Kg	6600
Fluoranthene	ND	ug/Kg	6600
Pyrene	ND	ug/Kg	6600
Butyl benzyl phthalate	ND	ug/Kg	6600
3,3'-Dichlorobenzidine	ND	ug/Kg	13200
Benzo(a)anthracene	ND	ug/Kg	6600
bis(2-Ethylhexyl)phthalate	ND	ug/Kg	6600
Chrysene	ND	ug/Kg	6600
Di-n-octyl phthalate	ND	ug/Kg	6600
Benzo(b)fluoranthene	ND	ug/Kg	6600
Benzo(k)fluoranthene	ND	ug/Kg	6600
Benzo(a)pyrene	ND	ug/Kg	6600
Indeno(1,2,3-c,d)pyrene	ND	ug/Kg	6600
Dibenzo(a,h)anthracene	ND	ug/Kg	6600
Benzo(g,h,i)perylene	ND	ug/Kg	6600

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: SED-1

Laboratory ID: 63653-032 Enseco ID: 63653-032

Matrix: Sediment Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Antimony	N.D.	mg/kg	5	6010	06/04/87
Arsenic	2.0	mg/kg	0.6	7060	05/29/87
Beryllium	0.3	mg/kg	0.1	6010	06/04/87
Cadmium	N.D.	mg/kg	0.5	6010	06/04/87
Chromium	6	mg/kg	1	6010	06/04/87
Copper	7.9	mg/kg	0.6	6010	06/04/87
Lead	22	mg/kg	5	6010	06/04/87
Mercury	N.D.	mg/kg	0.05	7471	05/30/87
Nickel	15	mg/kg	4	6010	06/04/87
Selenium	N.D.	mg/kg	0.4	7740	06/01/87
Silver	N.D.	mg/kg	0.5	6010	06/04/87
Thallium	N.D.	mg/kg	0.8	7841	06/01/87
Zinc	65	mg/kg	1	6010	06/04/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: SED-1

Laboratory ID: 63653-032 Enseco ID: 63653-032

Matrix: Sediment Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Total Cyanide	N.D.	mg/kg	0.5	9010	05/20/87
Phenolics	2	mg/kg	1	420.1	05/30/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-032

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 8240/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: SED-2 SE END RR TUNNEL

Lab I.D.: R12-33 Enseco I.D.: 63653-033

Matrix: Soil Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/27/87 Analyzed: 05/27/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/kg	10
Bromomethane	ND	ug/kg	10
Vinyl Chloride	ND	ug/kg	10
Chloroethane	ND	ug/kg	10
Methylene Chloride	ND	ug/kg	25
Acetone	ND	ug/kg	70
Carbon Disulfide	ND	ug/kg	5
1,1-Dichloroethene	ND	ug/kg	5
1,1-Dichloroethane	ND	ug/kg	5
1,2-Dichloroethene (cis/trans)	ND	ug/kg	5
Chloroform	ND	ug/kg	5
1,2-Dichloroethane	ND	ug/kg	5
2-Butanone	ND	ug/kg	25
1,1,1-Trichloroethane	ND	ug/kg	5
Carbon Tetrachloride	ND	ug/kg	5
Vinyl Acetate	ND	ug/kg	10
Bromodichloromethane	ND	ug/kg	5
1,2-Dichloropropane	ND	ug/kg	5
trans-1,3-Dichloropropene	ND	ug/kg	5
Trichloroethe[illegible]	ND	ug/kg	5
Dibromochloromethane	ND	ug/kg	5
1,1,2-Trichloroethane	ND	ug/kg	5
Benzene	ND	ug/kg	5
cis-1,3-Dichloropropene	ND	ug/kg	5
2-Chloroethyl vinyl ether	ND	ug/kg	10
Bromoform	ND	ug/kg	5
4-Methyl-2-Pentanone	ND	ug/kg	10
2-Hexanone	ND	ug/kg	10
1,1,2,2-Tetrachloroethane	ND	ug/kg	5
Tetrachloroethene	ND	ug/kg	5
Toluene	ND	ug/kg	5
Chlorobenzene	ND	ug/kg	5
Ethyl benzene	ND	ug/kg	5
Styrene	ND	ug/kg	5
Total Xylenes	ND	ug/kg	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 8270/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: SED-2

Laboratory I.D.: R12-33 Enseco I.D.: 63653-033

Matrix: Soil Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/26/87 Analyzed: 05/28/87

Parameter	Result	Units Wet wt.	Reporting Limit
Phenol	ND	ug/Kg	1650
bis(2-Chloroethyl)ether	ND	ug/Kg	1650
2-Chlorophenol	ND	ug/Kg	1650
1,3-Dichlorobenzene	ND	ug/Kg	1650
1,4-Dichlorobenzene	ND	ug/Kg	1650
Benzyl alcohol	ND	ug/Kg	1650
1,2-Dichlorobenzene	ND	ug/Kg	1650
2-Methylphenol	ND	ug/Kg	1650
bis(2-Chloroisopropyl)ether	ND	ug/Kg	1650
4-Methylphenol	ND	ug/Kg	1650
N-Nitroso-dipropylamine	ND	ug/Kg	1650
Hexachloroethane	ND	ug/Kg	1650
Nitrobenzene	ND	ug/Kg	1650
Isophorone	ND	ug/Kg	1650
2-Nitrophenol	ND	ug/Kg	1650
2,4-Dimethylphenol	ND	ug/Kg	1650
Benzoic Acid	ND	ug/Kg	8000
bis(2-Chloroethoxy)methane	ND	ug/Kg	1650
2,4-Dichlorophenol	ND	ug/Kg	1650
1,2,4-Trichlorobenzene	ND	ug/Kg	1650
Naphthalene	ND	ug/Kg	1650
4-Chloroaniline	ND	ug/Kg	1650
Hexachlorobutadiene	ND	ug/Kg	1650
4-Chloro-3-methylphenol	ND	ug/Kg	1650
2-Methylnaphthalene	ND	ug/Kg	1650
Hexachlorocyclopentadiene	ND	ug/Kg	1650
2,4,6-Trichlorophenol	ND	ug/Kg	1650
2,4,5-Trichlorophenol	ND	ug/Kg	8000
2-Chloronaphthalene	ND	ug/Kg	1650
2-Nitroaniline	ND	ug/Kg	8000
Dimethyl phthalate	ND	ug/Kg	1650
Acenaphthylene	2300	ug/Kg	1650
3-Nitroaniline	ND	ug/Kg	8000
Acenaphthene	ND	ug/Kg	1650

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 8270/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: SED-2 SE END RR TUNNEL

Laboratory I.D.: R12-33 Enseco I.D.: 63653-033

Matrix: Soil Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/26/87 Analyzed: 05/28/87

Parameter	Result	Units Wet wt.	Reporting Limit
2,4-Dinitrophenol	ND	ug/Kg	8000
4-Nitrophenol	ND	ug/Kg	8000
Dibenzofuran	ND	ug/Kg	1650
2,4-Dinitrotoluene	ND	ug/Kg	1650
2,6-Dinitrotoluene	ND	ug/Kg	1650
Diethyl phthalate	ND	ug/Kg	1650
4-Chlorophenyl phenyl ether	ND	ug/Kg	1650
Fluorene	ND	ug/Kg	1650
4-Nitroaniline	ND	ug/Kg	8000
4,6-Dinitro-2-methylphenol	ND	ug/Kg	8000
N-Nitrosodiphenylamine	ND	ug/Kg	1650
4-Bromophenyl phenyl ether	ND	ug/Kg	1650
Hexachlorobenzene	ND	ug/Kg	1650
Pentachlorophenol	ND	ug/Kg	8000
Phenanthrene	ND	ug/Kg	1650
Anthracene	3700	ug/Kg	1650
Di-n-butyl phthalate	ND	ug/Kg	1650
Fluoranthene	~~ND~~ 2500*	ug/Kg	1650
Pyrene	5400	ug/Kg	1650
Butyl benzyl phthalate	ND	ug/Kg	1650
3,3'-Dichlorobenzidine	ND	ug/Kg	3300
Benzo(a)anthracene	3000	ug/Kg	1650
bis(2-Ethylhexyl)phthalate	ND	ug/Kg	1650
Chrysene	2500	ug/Kg	1650
Di-n-octyl phthalate	ND	ug/Kg	1650
Benzo(b)fluoranthene	3400+	ug/Kg	1650
Benzo(k)fluoranthene	--	-----	----
Benzo(a)pyrene	ND	ug/Kg	1650
Indeno(1,2,3-c,d)pyrene	ND	ug/Kg	1650
Dibenzo(a,h)anthracene	ND	ug/Kg	1650
Benzo(g,h,i)perylene	ND	ug/Kg	1650

+Reported as the sum of benzo(b)fluoranthene and benzo(k)fluoranthene
ND = Not Detected
NA = Not Applicable

* Correction noted in letter from Enseco dated 7/31/87.

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: SED-2

Laboratory ID: 63653-033 Enseco ID: 63653-033

Matrix: Sediment Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Antimony	N.D.	mg/kg	5	6010	06/04/87
Arsenic	2.0	mg/kg	0.6	7060	05/29/87
Beryllium	0.3	mg/kg	0.1	6010	06/04/87
Cadmium	N.D.	mg/kg	0.5	6010	06/04/87
Chromium	5	mg/kg	1	6010	06/04/87
Copper	17	mg/kg	0.6	6010	06/04/87
Lead	30	mg/kg	5	6010	06/04/87
Mercury	0.24	mg/kg	0.05	7471	05/30/87
Nickel	15	mg/kg	4	6010	06/04/87
Selenium	N.D.	mg/kg	0.4	7740	06/01/87
Silver	N.D.	mg/kg	0.5	6010	06/04/87
Thallium	N.D.	mg/kg	0.8	7841	06/01/87
Zinc	110	mg/kg	1	6010	06/04/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-033

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: SED-2

Laboratory ID: 63653-033 Enseco ID: 63653-033

Matrix: Sediment Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Total Cyanide	N.D.	mg/kg	0.5	9010	05/20/87
Phenolics	N.D.	mg/kg	1	420.1	05/30/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-033

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest. Inc.

Client I.D.: S-4

Lab I.D.: R12-2 Enseco I.D.: 63653-002

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-4

Laboratory I.D.: R12-2 Enseco I.D.: 63653-002

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	10
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	50
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	10
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	50
3-Nitroaniline	ND	ug/L	10
Acenaphthene	ND	ug/L	10
	ND	ug/L	50
	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-4

Laboratory I.D.: R12-2 Enseco I.D.: 63653-002

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-4

Laboratory ID: 63653-002 Enseco ID: 63653-002

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	42	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	1.9	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	3.7	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-002

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-4

Laboratory ID: 63653-002 Enseco ID: 63653-002

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.84	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	227	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	150	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	8	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.1	mg/L	0.1	353.2	05/20/87
Sulfate	7	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	90	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	2.4	meq/L	0.1	104C	06/15/87
Total Anions	2.2	meq/L	0.3	104C	06/15/87
% Difference	3.5	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-002

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-10

Lab I.D.: R12-3 Enseco I.D.: 63653-003

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-10

Laboratory I.D.: R12-3 Enseco I.D.: 63653-003

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-10

Laboratory I.D.: R12.3 Enseco I.D.: 63653-003

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-10

Laboratory ID: 63653-003 Enseco ID: 63653-003

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	48	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.5	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.9	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-003

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST
Client ID: S-10
Laboratory ID: 63653-003 Enseco ID: 63653-003
Matrix: Water Sampled: 05/12/87 Received: 05/14/87
Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	8.18	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	251	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	78	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	05/20/87
Sulfate	8	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	116	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	0.1	mg/L	0.1	350.1	05/20/87
Total Cations	2.7	meq/L	0.1	104C	06/15/87
Total Anions	2.5	meq/L	0.3	104C	06/15/87
% Difference	3.7	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-003

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-26

Lab I.D.: R12-4 Enseco I.D.: 63653-004

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-26

Laboratory I.D.: R12-4 Enseco I.D.: 63653-004

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	10
bis(2-Chloroethoxy)methane	ND	ug/L	50
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	10
2-Chloronaphthalene	ND	ug/L	50
2-Nitroaniline	ND	ug/L	10
Dimethyl phthalate	ND	ug/L	50
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	10
Acenaphthene	ND	ug/L	50
	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-26

Laboratory I.D.: R12-4 Enseco I.D.: 63653-004

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-26

Laboratory ID: 63653-004 Enseco ID: 63653-004

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	67	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.7	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	6.4	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-004

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-26

Laboratory ID: 63653-004 Enseco ID: 63653-004

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.92	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	382	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	260	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	36	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.7	mg/L	0.1	353.2	05/20/87
Sulfate	6	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	121	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	3.8	meq/L	0.1	104C	06/15/87
Total Anions	3.6	meq/L	0.3	104C	06/15/87
% Difference	3.1	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-004

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-43

Lab I.D.: R12-5 Enseco I.D.: 63653-005

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-43

Laboratory I.D.: R12-5 Enseco I.D.: 63653-005

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-43

Laboratory I.D.: R12-5 Enseco I.D.: 63653-005

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	[illegible]	ug/L	10
Dibenzo(a,h)anthracene	[illegible]	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-43

Laboratory ID: 63653-005 Enseco ID: 63653-005

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	92	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	3.6	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	4.0	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-005

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-43

Laboratory ID: 63653-005 Enseco ID: 63653-005

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	8.14	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	457	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	230	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	10	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.5	mg/L	0.1	353.2	05/20/87
Sulfate	12	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	209	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	5.1	meq/L	0.1	104C	06/18/87
Total Anions	4.8	meq/L	0.3	104C	06/18/87
% Difference	2.5	%	0.1	104C	06/18/87

N.D. = Not detected

Approved by. Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-49

Lab I.D.: R12-6 Enseco I.D.: 63653-006

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: EPM - Southwest, Inc.

Client I.D.: S-49

Laboratory I.D.: R12-6 Enseco I.D.: 63653-006

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-49

Laboratory I.D.: R12-6 Enseco I.D.: 63653-006

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-49

Laboratory ID: 63653-006 Enseco ID: 63653-006

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	69	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	4.2	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	9.2	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-006

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-49

Laboratory ID: 63653-006 Enseco ID: 63653-006

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.84	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	408	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	200	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	27	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.7	mg/L	0.1	353.2	05/20/87
Sulfate	8	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	149	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	4.2	meq/L	0.1	104C	06/15/87
Total Anions	4.0	meq/L	0.3	104C	06/15/87
% Difference	1.9	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest. Inc.

Client I.D.: S-50

Lab I.D.: R12-7 Enseco I.D.: 63653-007

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-50

Laboratory I.D.: R12-7 Enseco I.D.: 63653-007

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-50

Laboratory I.D.: R12-7 Enseco I.D.: 63653-007

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-50

Laboratory ID: 63653-007 Enseco ID: 63653-007

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	40	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.2	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.5	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-007

Enseco

INORGANIC PARAMETERS

Client Name: EPM-SOUTHWEST

Client ID: S-50

Laboratory ID: 63653-007 Enseco ID: 63653-007

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.83	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	219	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	90	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	05/20/87
Sulfate	7	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	98	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	2.2	meq/L	0.1	104C	06/15/87
Total Anions	2.1	meq/L	0.3	104C	06/15/87
% Difference	3.0	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-007

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-80

Lab I.D.: R12-8 Enseco I.D.: 63653-008

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	52	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-80

Laboratory I.D.: R12-8 Enseco I.D.: 63653-008

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-80

Laboratory I.D.: R12-8 Enseco I.D.: 63653-008

Matrix: Water Sampled: 05/12/87 Received: 05/15/87

Authorized: 05/15/87 Prepared: 05/18/87 Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-80

Laboratory ID: 63653-008 Enseco ID: 63653-008

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	3.3	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	0.2	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	0.26	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-008

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-80

Laboratory ID: 63653-008 Enseco ID: 63653-008

Matrix: Water Sampled: 05/12/87 Received: 05/14/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	6.93	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	36	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	N.D.	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	05/20/87
Sulfate	6	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	11	mg/L	5	310.1/403	05/14/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/14/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	0.2	meq/L	0.1	104C	06/15/87
Total Anions	0.4	meq/L	0.3	104C	06/15/87
% Difference	30	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-33

Lab I.D.: R12-13 Enseco I.D.: 63653-013

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1.1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-33

Laboratory I.D.: R12-13 Enseco I.D.: 63653-013

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	10
bis(2-Chloroethoxy)methane	ND	ug/L	50
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	10
2-Chloronaphthalene	ND	ug/L	50
2-Nitroaniline	ND	ug/L	10
Dimethyl phthalate	ND	ug/L	50
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	10
Acenaphthene	ND	ug/L	50
	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-33

Laboratory I.D.: R12-13 Enseco I.D.: 63653-013

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-33

Laboratory ID: 63653-013 Enseco ID: 63653-013

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	40	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.1	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	4.7	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-013

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-33

Laboratory ID: 63653-013 Enseco ID: 63653-013

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized. 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.95	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	218	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	140	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	10	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.9	mg/L	0.1	353.2	05/20/87
Sulfate	6	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	89	mg/L	5	310.1/403	05/15/87
Bicarb. Alkalinity as CaCO3	89	mg/L	5	310.1/403	05/15/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	2.4	meq/L	0.1	104C	06/15/87
Total Anions	2.3	meq/L	0.3	104C	06/15/87
% Difference	1.1	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-013

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-36

Lab I.D.: R12-14 Enseco I.D.: 63653-014

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-36

Laboratory I.D.: R12-14 Enseco I.D.: 63653-014

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-36

Laboratory I.D.: R12-14 Enseco I.D.: 63653-014

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-36

Laboratory ID: 63653-014 Enseco ID: 63653-014

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	61	mg/L	0.1	200.7	05/27/87
Iron	0.05	mg/L	0.05	200.7	05/27/87
Magnesium	5.7	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	5.4	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-014

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-36

Laboratory ID: 63653-014 Enseco ID: 63653-014

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.58	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	339	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	190	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	15	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	1.1	mg/L	0.1	353.2	05/20/87
Sulfate	10	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	145	mg/L	5	310.1/403	05/15/87
Bicarb. Alkalinity as CaCO3	145	mg/L	5	310.1/403	05/15/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Ammonia as N	N.D	mg/L	0.1	350.1	05/20/87
Total Cations	3.8	meq/L	0.1	104C	06/15/87
Total Anions	3.6	meq/L	0.3	104C	06/15/87
% Difference	1.9	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-014

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-48

Lab I.D.: R12-15 Enseco I.D.: 63653-015

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

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HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-48

Laboratory I.D.: R12-15 Enseco I.D.: 63653-015

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-48

Laboratory I.D.: R12-15 Enseco I.D.: 63653-015

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-48

Laboratory ID: 63653-015 Enseco ID: 63653-015

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	46	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.2	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.6	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-015

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-48

Laboratory ID: 63653-015 Enseco ID: 63653-015

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.64	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	229	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	80	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	05/20/87
Sulfate	7	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	112	mg/L	5	310.1/403	05/15/87
Bicarb. Alkalinity as CaCO3	112	mg/L	5	310.1/403	05/15/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	2.5	meq/L	0.1	104C	06/15/87
Total Anions	2.4	meq/L	0.3	104C	06/15/87
% Difference	3.3	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-015

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-81

Lab I.D.: R12-16 Enseco I.D.: 63653-016

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	41	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-81

Laboratory I.D.: R12-16 Enseco I.D.: 63653-016

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-81

Laboratory I.D.: R12-16 Enseco I.D.: 636[illegible] 016

Matrix: Water Sampled: 05/13/87 Received: 05/16/87

Authorized: 05/16/87 Prepared: 05/19/87 Analyzed: 05/21/87

Parameter	Result	Units	Reporting limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name. ERM-SOUTHWEST

Client ID: 5-81

Laboratory ID: 63653-016 Enseco ID: 63653-016

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	N.D.	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	N.D.	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	N.D.	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-016

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-81

Laboratory ID: 63653-016 Enseco ID: 63653-016

Matrix: Water Sampled: 05/13/87 Received: 05/15/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	4.85	units	0.01	150.1	05/15/87
Specific Conductance @ 25C	16	umhos/cm	1	120.1/9050	05/15/87
Total Dissolved Solids	N.D.	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	05/21/87
Sulfate	N.D.	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/15/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	N.D.	meq/L	0.1	104C	06/15/87
Total Anions	N.D.	meq/L	0.3	104C	06/15/87
% Difference	N.D.	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-11A

Lab I.D.: R12-17 Enseco I.D.: 63653-017

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-11A

Laboratory I.D.: P12-17 Enseco I.D.: 63653-017

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-11A

Laboratory I.D.: R12-17 Enseco I.D.: 63653-017

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-11A

Laboratory ID: 63653-017 Enseco ID: 63653-017

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	66	mg/L	0.1	200.7	05/27/87
Iron	0.06	mg/L	0.05	200.7	05/27/87
Magnesium	33	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.6	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-017

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-11A

Laboratory ID: 63653-017 Enseco ID: 63653-017

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.81	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	498	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	240	mg/L	10	160.1	05/20/87
Fluoride	0.2	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	05/20/87
Sulfate	57	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	224	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	224	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	6.1	meq/L	0.1	104C	06/15/87
Total Anions	5.7	meq/L	0.3	104C	06/15/87
% Difference	3.5	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-11B

Lab I.D.: R12-18 Enseco I.D.: 63653-018

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-11B

Laboratory I.D.: R12-18 Enseco I.D.: 63653-018

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-11B

Laboratory I.D.: R12-18 Enseco I.D.: 63653-018

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-11B

Laboratory ID: 63653-018 Enseco ID: 63653-018

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	44	mg/L	0.1	200.7	05/27/87
Iron	1.7	mg/L	0.05	200.7	05/27/87
Magnesium	19	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.7	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-018

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-11B

Laboratory ID: 63653-018 Enseco ID: 63653-018

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.68	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	319	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	260	mg/L	10	160.1	05/20/87
Fluoride	0.5	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	05/20/87
Sulfate	17	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	165	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	165	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	3.9	meq/L	0.1	104C	06/15/87
Total Anions	3.7	meq/L	0.3	104C	06/15/87
% Difference	3.1	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-018

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-9

Lab I.D.: R12-19 Enseco I.D.: 63653-019

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/16/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-9

Laboratory I.D.: R12-19 Enseco I.D.: 63653-019

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-9

Laboratory I.D.: R12-19 Enseco I.D.: 63653-019

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-9

Laboratory ID: 63653-019 Enseco ID: 63653-019

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	67	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	33	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.5	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-019

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-9

Laboratory ID: 63653-019 Enseco ID: 63653-019

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.85	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	488	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	310	mg/L	10	160.1	05/20/87
Fluoride	0.3	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	05/20/87
Sulfate	63	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	226	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	226	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	6.1	meq/L	0.1	104C	06/15/87
Total Anions	5.9	meq/L	0.3	104C	06/15/87
% Difference	2.3	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-019

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-1

Lab I.D.: R12-20 Enseco I.D.: 63653-020

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-1

Laboratory I.D.: R12-20 Enseco I.D.: 63653-020

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-1

Laboratory I.D.: R12-20 Enseco I.D.: 63653-020

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-1

Laboratory ID: 63653-020 Enseco ID: 63653-020

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	88	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	41	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.5	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-020

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-1

Laboratory ID: 63653-020 Enseco ID: 63653-020

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.33	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	601	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	410	mg/L	10	160.1	05/20/87
Fluoride	0.2	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	05/20/87
Sulfate	105	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	267	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	267	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	7.8	meq/L	0.1	104C	06/15/87
Total Anions	7.5	meq/L	0.3	104C	06/15/87
% Difference	1.9	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-020

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-2

Lab I.D.: R12-21 Enseco I.D.: 63653-021

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-2

Laboratory I.D.: R12-21 Enseco I.D.: 63653-021

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-2

Laboratory I.D.: R12-21 Enseco I.D.: 63653-021

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-2

Laboratory ID: 63653-021 Enseco ID: 63653-021

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	78	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	33	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.1	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-021

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-2

Laboratory ID: 63653-021 Enseco ID: 63653-021

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.48	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	510	umhos/cm	1	120.1/9050	05/20/87
Total Dissolved Solids	320	mg/L	10	160.1	05/20/87
Fluoride	0.2	mg/L	0.1	340.2	05/23/87
Chloride	4	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	05/20/87
Sulfate	75	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	235	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	235	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	6.7	meq/L	0.1	104C	06/15/87
Total Anions	6.4	meq/L	0.3	104C	06/15/87
% Difference	2.4	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-3

Lab I.D.: R12-22 Enseco I.D.: 63653-022

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-3

Laboratory I.D.: R12-22 Enseco I.D.: 63653-022

Matrix: Water Sampled: 05/14/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	10
bis(2-Chloroethoxy)methane	ND	ug/L	50
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	10
2-Chloronaphthalene	ND	ug/L	50
2-Nitroaniline	ND	ug/L	10
Dimethyl phthalate	ND	ug/L	50
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	10
Acenaphthene	ND	ug/L	50
	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-3

Laboratory I.D.: R12-22 Enseco I.D.: 63653-022

Matrix: Water Sampled: 05/14/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/20/87 Analyzed: 05/22/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-3

Laboratory ID: 63653-022 Enseco ID: 63653-022

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	76	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	23	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	3.0	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-3

Laboratory ID: 63653-022 Enseco ID: 63653-022

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.45	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	408	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	330	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	8	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.5	mg/L	0.1	353.2	05/20/87
Sulfate	24	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	244	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	244	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	5.8	meq/L	0.1	104C	06/15/87
Total Anions	5.6	meq/L	0.3	104C	06/15/87
% Difference	1.5	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: EDM - Southwest, Inc.

Client I.D.: W-4

Lab I.D.: R12-23 Enseco I.D.: 63653-023

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-4

Laboratory I.D.: R12-23 Enseco I.D.: 63653-023

Matrix: Water Sampled: 05/14/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/20/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-4

Laboratory I.D.: R12-23 Enseco I.D.: 63653-023

Matrix: Water Sampled: 05/14/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/20/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST
Client ID: W-4
Laboratory ID: 63653-023 Enseco ID: 63653-023
Matrix: Water Sampled: 05/14/87 Received: 05/16/87
Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	95	mg/L	0.1	200.7	05/27/87
Iron	2.8	mg/L	0.05	200.7	05/27/87
Magnesium	47	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.0	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-023

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-4

Laboratory ID: 63653-023 Enseco ID: 63653-023

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.40	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	689	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	380	mg/L	10	160.1	05/20/87
Fluoride	0.4	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	05/20/87
Sulfate	145	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	273	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	273	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	8.8	meq/L	0.1	104C	06/15/87
Total Anions	8.5	meq/L	0.3	104C	06/15/87
% Difference	2.0	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-6

Lab I.D.: R12-24 Enseco I.D.: 63653-024

Matrix: Water Sampled: 05/14/87 Received: 05/18/87

Authorized: 05/18/87 Prepared: NA Analyzed: 05/20/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-6

Laboratory I.D.: R12-24 Enseco I.D.: 63653-024

Matrix: Water Sampled: 05/14/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-6

Laboratory I.D.: R12-24 Enseco I.D.: 63653-024

Matrix: Water Sampled: 05/14/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-6

Laboratory ID: 63653-024 Enseco ID: 63653-024

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	63	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	34	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	1.9	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-024

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-6

Laboratory ID: 63653-024 Enseco ID: 63653-024

Matrix: Water Sampled: 05/14/87 Received: 05/16/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.53	units	0.01	150.1	05/16/87
Specific Conductance @ 25C	488	umhos/cm	1	120.1/9050	05/16/87
Total Dissolved Solids	280	mg/L	10	160.1	05/20/87
Fluoride	0.2	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	05/20/87
Sulfate	57	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	234	mg/L	5	310.1/403	05/16/87
Bicarb. Alkalinity as CaCO3	234	mg/L	5	310.1/403	05/16/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/16/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	6.0	meq/L	0.1	104C	06/15/87
Total Anions	5.9	meq/L	0.1	104C	06/15/87
% Difference	1.2	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample; 63653-024

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest. Inc.

Client I.D.: W-15A

Lab I.D.: R12-25 Enseco I.D.: 63653-025

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 525/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-15A

Laboratory I.D.: R12-25 Enseco I.D.: 63653-025

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-15A

Laboratory I.D.: R12-25 Enseco I.D.: 63653-025

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST
Client ID: W-15A
Laboratory ID: 63653-025 Enseco ID: 63653-025
Matrix: Water Sampled: 05/15/87 Received: 05/18/87
Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	60	mg/L	0.1	200.7	05/27/87
Iron	0.12	mg/L	0.05	200.7	05/27/87
Magnesium	31	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.3	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-15A

Laboratory ID: 63653-025 Enseco ID: 63653-025

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.92	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	470	umhos/cm	1	120.1/9050	05/21/87
Total Dissolved Solids	230	mg/L	10	160.1	05/20/87
Fluoride	0.4	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	05/20/87
Sulfate	69	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	206	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	206	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	5.7	meq/L	0.1	104C	06/15/87
Total Anions	5.6	meq/L	0.3	104C	06/15/87
% Difference	0.7	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-025

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-15B

Lab I.D.: R12-26 Enseco I.D.: 63653-026

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest. Inc.

Client I.D.: W-15B

Laboratory I.D.: R12-26 Enseco I.D.: 63653-026

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	10
bis(2-Chloroethoxy)methane	ND	ug/L	50
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-metnylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	10
2-Chloronaphthalene	ND	ug/L	50
2-Nitroaniline	ND	ug/L	10
Dimethyl phthalate	ND	ug/L	50
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	10
Acenaphthene	ND	ug/L	50
	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-15B

Laboratory I.D.: R12-26 Enseco I.D.: 63653-026

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	10
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	50
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	10
Phenanthrene	ND	ug/L	50
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	10
Benzo(a)anthracene	ND	ug/L	20
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-15B

Laboratory ID: 63653-026 Enseco ID: 63653-026

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	53	mg/L	0.1	200.7	05/27/87
Iron	0.06	mg/L	0.05	200.7	05/27/87
Magnesium	25	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.0	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-15B

Laboratory ID: 63653-026 Enseco ID: 63653-026

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.93	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	399	umhos/cm	1	120.1/9050	05/21/87
Total Dissolved Solids	210	mg/L	10	160.1	05/20/87
Fluoride	0.3	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	05/20/87
Sulfate	38	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	195	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	195	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	4.8	meq/L	0.1	104C	06/15/87
Total Anions	4.7	meq/L	0.3	104C	06/15/87
% Difference	0.9	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-026

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-51

Lab I.D.: R12-27 Enseco I.D.: 63653-027

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

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HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest. Inc.

Client I.D.: S-51

Laboratory I.D.: R12-27 Enseco I.D.: 63653-027

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-51

Laboratory I.D.: R12-27 Enseco I.D.: 63653-027

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-51

Laboratory ID: 63653-027 Enseco ID: 63653-027

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	76	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	2.8	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	12	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-027

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-51

Laboratory ID: 63653-027 Enseco ID: 63653-027

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.58	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	441	umhos/cm	1	120.1/9050	05/20/87
Total Dissolved Solids	330	mg/L	10	160.1	05/20/87
Fluoride	0.1	mg/L	0.1	340.2	05/23/87
Chloride	69	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	2.1	mg/L	0.1	353.2	05/20/87
Sulfate	N.D.	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	110	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	110	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	0.2	mg/L	0.1	350.1	05/20/87
Total Cations	4.6	meq/L	0.1	104C	06/15/87
Total Anions	4.3	meq/L	0.3	104C	06/15/87
% Difference	2.9	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-027

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-82

Lab I.D.: R12-28 Enseco I.D.: 63653-028

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	38	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: S-82

Laboratory I.D.: R12-28 Enseco I.D.: 63653-028

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: S-82

Laboratory I.D.: R12-28 Enseco I.D.: 63653-028

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST
Client ID: S-82
Laboratory ID: 63653-028 Enseco ID: 63653-028
Matrix: Water Sampled: 05/15/87 Received: 05/18/87
Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	N.D.	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	N.D.	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	N.D.	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-028

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: S-82

Laboratory ID: 63653-028 Enseco ID: 63653-028

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	6.19	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	8	umhos/cm	1	120.1/9050	05/20/87
Total Dissolved Solids	N.D.	mg/L	10	160.1	05/20/87
Fluoride	N.D.	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	05/20/87
Sulfate	N.D.	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	10	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	10	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	N.D.	meq/L	0.1	104C	06/15/87
Total Anions	N.D.	meq/L	0.3	104C	06/15/87
% Difference	N.D.	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63653-028

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-10

Lab I.D.: R12-29 Enseco I.D.: 63653-029

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-10

Laboratory I.D.: R12-29 Enseco I.D.: 62653-029

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-10

Laboratory I.D.: R12-29 Enseco I.D.: 63653-029

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

001728

Enseco

METALS PARAMETERS

Client Name: ERM-SOUTHWEST
Client ID: W-10
Laboratory ID: 63653-029 Enseco ID: 63653-029
Matrix: Water Sampled: 05/15/87 Received: 05/18/87
Authorized: 05/14/87

001729

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	67	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	29	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.1	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 63653-029

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-10

Laboratory ID: 63653-029 Enseco ID: 63653-029

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.84	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	524	umhos/cm	1	120.1/9050	05/20/87
Total Dissolved Solids	270	mg/L	10	160.1	05/20/87
Fluoride	0.4	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	05/20/87
Sulfate	59	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	216	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	216	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	5.8	meq/L	0.1	104C	06/15/87
Total Anions	5.6	meq/L	0.3	104C	06/15/87
% Difference	2.1	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-26

Lab I.D.: K12-30 Enseco I.D.: 63653-030

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-26

Laboratory I.D.: R12-30 Enseco I.D.: 63653-030

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND-Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-26

Laboratory I.D.: R12-30 Enseco I.D.: 63653-030

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-26

Laboratory ID: 63653-030 Enseco ID: 63653-030

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	129	mg/L	0.1	200.7	05/27/87
Iron	0.12	mg/L	0.05	200.7	05/27/87
Magnesium	5.3	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	4.5	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-26

Laboratory ID: 63653-030 Enseco ID: 63653-030

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.52	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	637	umhos/cm	1	120.1/9050	05/20/87
Total Dissolved Solids	370	mg/L	10	160.1	05/20/87
Fluoride	0.1	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	4.1	mg/L	0.1	353.2	05/20/87
Sulfate	30	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	294	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	294	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	N.D.	mg/L	0.1	350.1	05/20/87
Total Cations	7.1	meq/L	0.1	104C	06/15/87
Total Anions	6.8	meq/L	0.3	104C	06/15/87
% Difference	2.0	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

Enseco Method 624/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-22B

Lab I.D.: R12-31 Enseco I.D.: 63653-031

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: NA Analyzed: 05/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl Chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene Chloride	ND	ug/L	25
Acetone	ND	ug/L	25
Carbon Disulfide	ND	ug/L	5
1,1-Dichloroethene	ND	ug/L	5
1,1-Dichloroethane	ND	ug/L	5
1,2-Dichloroethene (cis/trans)	ND	ug/L	5
Chloroform	ND	ug/L	5
1,2-Dichloroethane	ND	ug/L	5
2-Butanone	ND	ug/L	25
1,1,1-Trichloroethane	ND	ug/L	5
Carbon Tetrachloride	ND	ug/L	5
Vinyl Acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5
1,2-Dichloropropane	ND	ug/L	5
trans-1,3-Dichloropropene	ND	ug/L	5
Trichloroethene	ND	ug/L	5
Dibromochloromethane	ND	ug/L	5
1,1,2-Trichloroethane	ND	ug/L	5
Benzene	ND	ug/L	5
cis-1,3-Dichloropropene	ND	ug/L	5
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5
4-Methyl-2-Pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5
Tetrachloroethene	ND	ug/L	5
Toluene	ND	ug/L	5
Chlorobenzene	ND	ug/L	5
Ethyl benzene	ND	ug/L	5
Styrene	ND	ug/L	5
Total Xylenes	ND	ug/L	5

ND = Not Detected
NA = Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS

Enseco Method 625/HSL List

Client Name: ERM - Southwest, Inc.

Client I.D.: W-22B

Laboratory I.D.: R12-31 Enseco I.D.: 63653-031

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	ug/L	10
bis(2-Chloroethyl)ether	ND	ug/L	10
2-Chlorophenol	ND	ug/L	10
1,3-Dichlorobenzene	ND	ug/L	10
1,4-Dichlorobenzene	ND	ug/L	10
Benzyl alcohol	ND	ug/L	10
1,2-Dichlorobenzene	ND	ug/L	10
2-Methylphenol	ND	ug/L	10
bis(2-Chloroisopropyl)ether	ND	ug/L	10
4-Methylphenol	ND	ug/L	10
N-Nitroso-dipropylamine	ND	ug/L	10
Hexachloroethane	ND	ug/L	10
Nitrobenzene	ND	ug/L	10
Isophorone	ND	ug/L	10
2-Nitrophenol	ND	ug/L	10
2,4-Dimethylphenol	ND	ug/L	10
Benzoic Acid	ND	ug/L	50
bis(2-Chloroethoxy)methane	ND	ug/L	10
2,4-Dichlorophenol	ND	ug/L	10
1,2,4-Trichlorobenzene	ND	ug/L	10
Naphthalene	ND	ug/L	10
4-Chloroaniline	ND	ug/L	10
Hexachlorobutadiene	ND	ug/L	10
4-Chloro-3-methylphenol	ND	ug/L	10
2-Methylnaphthalene	ND	ug/L	10
Hexachlorocyclopentadiene	ND	ug/L	10
2,4,6-Trichlorophenol	ND	ug/L	10
2,4,5-Trichlorophenol	ND	ug/L	50
2-Chloronaphthalene	ND	ug/L	10
2-Nitroaniline	ND	ug/L	50
Dimethyl phthalate	ND	ug/L	10
Acenaphthylene	ND	ug/L	10
3-Nitroaniline	ND	ug/L	50
Acenaphthene	ND	ug/L	10

ND=Not Detected
NA-Not Applicable

HAZARDOUS SUBSTANCE LIST (HSL) SEMIVOLATILE ORGANICS Cont.

Enseco Method 625/HSL List

Client Name: ERM-Southwest, Inc.

Client I.D.: W-22B

Laboratory I.D.: R12-31 Enseco I.D.: 63653-031

Matrix: Water Sampled: 05/15/87 Received: 05/19/87

Authorized: 05/19/87 Prepared: 05/21/87 Analyzed: 05/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	ug/L	50
4-Nitrophenol	ND	ug/L	50
Dibenzofuran	ND	ug/L	10
2,4-Dinitrotoluene	ND	ug/L	10
2,6-Dinitrotoluene	ND	ug/L	10
Diethyl phthalate	ND	ug/L	10
4-Chlorophenyl phenyl ether	ND	ug/L	10
Fluorene	ND	ug/L	10
4-Nitroaniline	ND	ug/L	50
4,6-Dinitro-2-methylphenol	ND	ug/L	50
N-Nitrosodiphenylamine	ND	ug/L	10
4-Bromophenyl phenyl ether	ND	ug/L	10
Hexachlorobenzene	ND	ug/L	10
Pentachlorophenol	ND	ug/L	50
Phenanthrene	ND	ug/L	10
Anthracene	ND	ug/L	10
Di-n-butyl phthalate	ND	ug/L	10
Fluoranthene	ND	ug/L	10
Pyrene	ND	ug/L	10
Butyl benzyl phthalate	ND	ug/L	10
3,3'-Dichlorobenzidine	ND	ug/L	20
Benzo(a)anthracene	ND	ug/L	10
bis(2-Ethylhexyl)phthalate	ND	ug/L	10
Chrysene	ND	ug/L	10
Di-n-octyl phthalate	ND	ug/L	10
Benzo(b)fluoranthene	ND	ug/L	10
Benzo(k)fluoranthene	ND	ug/L	10
Benzo(a)pyrene	ND	ug/L	10
Indeno(1,2,3-c,d)pyrene	ND	ug/L	10
Dibenzo(a,h)anthracene	ND	ug/L	10
Benzo(g,h,i)perylene	ND	ug/L	10

ND = Not Detected
NA = Not Applicable

METALS PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-22B

Laboratory ID: 63653-031 Enseco ID: 63653-031

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	52	mg/L	0.1	200.7	05/27/87
Iron	N.D.	mg/L	0.05	200.7	05/27/87
Magnesium	27	mg/L	0.1	200.7	05/27/87
Potassium	N.D.	mg/L	5	200.7	05/27/87
Sodium	2.5	mg/L	0.05	200.7	05/27/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: ERM-SOUTHWEST

Client ID: W-22B

Laboratory ID: 63653-031 Enseco ID: 63653-031

Matrix: Water Sampled: 05/15/87 Received: 05/18/87

Authorized: 05/14/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.93	units	0.01	150.1	05/20/87
Specific Conductance @ 25C	453	umhos/cm	1	120.1/9050	05/20/87
Total Dissolved Solids	270	mg/L	10	160.1	05/20/87
Fluoride	0.4	mg/L	0.1	340.2	05/23/87
Chloride	N.D.	mg/L	3	300.0	05/21/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	05/20/87
Sulfate	45	mg/L	5	300.0	05/21/87
Total Alkalinity as CaCO3	197	mg/L	5	310.1/403	05/20/87
Bicarb. Alkalinity as CaCO3	197	mg/L	5	310.1/403	05/20/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Hydroxide Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	05/20/87
Ammonia as N	0.2	mg/L	0.1	350.1	05/20/87
Total Cations	4.9	meq/L	0.1	104C	06/15/87
Total Anions	4.9	meq/L	0.3	104C	06/15/87
% Difference	0.3	%	0.1	104C	06/15/87

N.D. = Not detected

Approved by: Lindsay Breyer

REVIEW

Potential Hazardous Waste Site - Inspection Report

Exhibit "C"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Site Name Arkwood, Inc

Site Location Omaha, AR

Site Number ARD084930148 Date of Survey 7/29/87

REPLY TO: 6-SF

Inspected by _____ State ___ FIT ✓ TAT ___

MEMORANDUM

Other (specify) _____

DATE: August 31, 1987

Received From mckee

SUBJECT: Potential Hazardous Waste Site - Site Inspection Report

Date rec'd by Water Supply Branch 8/21/87

FROM: Oscar Cobra, Jr., P.E., Chief
Water Supply Branch (6W-S)

Type samples: + spring

___ on-site	___ on-site	___ on-site	___ on-site
___ SOIL	___ SURFACE WATER	✓ GROUND WATER	✓ DRINKING WATER
___ off-site	✓ off-site	✓ off-site	✓ off-site

Superfund Compliance Section (6H-ES)

Type contaminant(s):

✓ ORGANICS ___ INORGANICS ___ RADIONUCLIDES ___ MICROBIOLOGICAL

Summary: This report involves follow up monitoring of ground and surface water near an inactive wood treating facility. Although some surface samples reveals organics no contaminants were found in domestic well samples. Surface contaminants do not affect our public water supply, but should certainly be addressed from a water pollution standpoint. FIT recommends the installation of monitoring wells around the site to determine migration pattern. Although not critical for present local well condition, it is certainly worthwhile for possible future threat to groundwater.

Concurrence:

F. Warren Norris 8/24/87

Signature and Date

OERR INFORMATION FORM ITEM #: AL-704074

ACTIVITY	HSCD	ERD	HSED	OPM	IOD
Prepare Briefing/ Talking Points					
Concur/ Comment on Pkg					
Prepare Approp. Response			✓		
FOIA Request					
Information Request					
OD# POD#					

NOV 27 1987

001742

SUBJECT: ARKWOOD SITE/NATIONAL PRIORITIES LIST

FROM: BUMPERS

DATE ASSIGNED: 11/27/87 DATE DUE: 12/04/87 RETURN TO:

COMMENTS:

ATTACHMENT: ✓ YES ___ NO ___ CONCURRENCE: ___ YES ___ NO ___ (if appropriate) ___

PROGRAM CONTACT: ___
(Name) (Program) (Phone)

Exhibit "B"

STATUS OF THE SITE

Introduction

The following paragraphs describe the procedures and comparisons utilized by CAI when evaluating and ranking the Site. The Site was a small, single cylinder operation, about 1% the size of the American Creosote Works, a Superfund site in Pensacola Florida, which operated for 80 years before being abandoned. The Site operation was also much smaller than the Koppers plant in Texarkana. A residential community, Carver Terrace, is built on top of the abandoned Koppers site. The Koppers site is not considered by EPA to be an imminent hazard. The Site, even at its peak in 1981, was never considered an emergency by ADPC&E, but a condition which could pose long-range risks to the environment and people living nearby if actions were not taken to curtail PCP and creosote migration off-Site. The Site has not, does not and will not present an imminent and substantial risk to man or the environment. The environmental status of the Site has been steadily improving since production ceased in 1984. The plant was dismantled in 1986 and surface waste disposal sites stabilized in 1987. The Site does require additional remedial actions to be taken if migration of PCP in groundwater is to be curtailed in the near future, however no irreparable harm will during the orderly development of a RI/FS Plan by CAI. CAI believes that the GMI RI/FS posed significant risk to man and the environment if implemented. CAI believes that the GMI plan should be stayed pending a careful analysis and justification of the need to penetrate the Site aquitard.

Preliminary Assessments

The first step in CAI's evaluation of the Site was to obtain and review available reports, documentation and regulatory actions. Very useful "preliminary assessments" had been conducted by ADPC&E and contractors of MMI such as MCE and GMI. The lead environmental agency was the ADPC&E until 1985. The US EPA assumed the lead when the Site was proposed for listing on the NPL.

Site Inspections

Various Site inspection and evaluation teams, including CAI, have compiled voluminous documentation describing the Site. Work plans have been prepared. Groundwater, soil, surface water, stream sediment and sludge from lagoons have been sampled and analyzed for their contents. The average inspection required taking ten to twelve samples for analysis. Hundreds of analytical chemistry procedures have been performed. In addition to sampling, inspections included a reconnaissance of the Site's layout and terrain in order to document all buildings or structures, access roads, the location of nearby residences. Finally, surveys of vicinity wells and springs have been performed.

The preliminary assessments by ADPC&E indicated a release of PCP and possible components of creosote from the Site. These releases were considered to have the potential to threaten human health or the environment. The State agreed to accept a remedial action plan prepared by MCE for MMI prior to EPA taking the lead.

The remedial action taken by MMI and landowners have for the most part exceeded those actions previously acceptable to ADPC&E.

The purpose of the EPA Site inspection was to examine the Site first-hand and supposedly learn enough to guide the ranking of the Site for possible placement of the National Priorities List (NPL). Although these regulatory actions were major efforts they were not expected to, and indeed did, not provide all the information required for formulation of a remedial action plan acceptable to EPA.

The results of several inspections and studies by contractors have been provided to EPA. Nevertheless EPA has demonstrated a continued determination to place the Site on the NPL. Placement on the NPL is of great significance because NPL sites are eligible for long-term remedial response actions using Superfund money and EPA's authorities are enhanced. In order to rank the sites and set priorities, EPA and the State use a special scoring system called the Hazardous Ranking System (HRS). If used properly, the HRS takes into consideration the types and quantities of wastes at the Site the extent of contamination that has already occurred, especially of ground water, and the numbers of people living or working near the Site who could be exposed to migrating hazardous chemicals escaping from the Site. There were significant errors made by EPA in the HRS ranking of the Site. These errors will now be discussed in detail.

Waste Quantity Calculation

The quantity of PCP and creosote remaining at the Site has been controversial and has been recalculated by various parties. EPA estimated a total quantity of waste at the Site to be 6,234 tons. EPA grossly overestimated the quantity present. The quantity cited by EPA was calculated erroneously as follows. Mr. Bob Barker of MMI provided estimates of product loss to ADPC&E representatives in 1981. Mr. Barker stated that the plant produced a total of 500 gallons of waste per year EPA multiplied this 500 gallon per year figure by the 22 years that the plant was in operation, for a total of 11,000 gallons. EPA then added to this total the same waste located in the Railroad Ditch Pit and Sawdust Pile. The Railroad Ditch Pit contains sludge and soil contaminated with creosote and pentachlorophenol. The volume of the Railroad Ditch Pit was estimated by EPA to be 67 cubic yards (40 feet long, 15 feet wide, and 3 feet deep). The Sawdust Pile at the east end of the Site was estimated to be 6,111 cubic yards (275 feet long, 150 feet wide and 4 feet deep).

MMI, via its attorney Alan Gates, was the first party to take formal issue with EPA's calculations. Mr. Gates correctly responded during the EPA-NPL comment period that the waste quantity calculations for the Site improperly recorded wastes more than once and consequently overstated the total quantity of waste at the Site. CAI has confirmed Mr. Gates points and expanded the evaluation quantitatively.

CAI has estimated the quantities of waste released at the Site. Several assumptions were made prior to initiation of calculations.

1. No PCP was used until 1968. Creosote was used exclusively from 1965 to 1968.
2. After 1968, the average split between PCP and creosote was 50%.
3. Sales for 1984 were estimated for 6 months of operation.
4. Sale dollars are related to production volume after adjustments for inflation which was estimated at 5% per year.
5. The creosote:oil mix ratio was 1:1.
6. The PCP:oil mix ratio was 1:19.
7. 500 gallons of waste was released in 1981.
8. 60% of the posts were treated in 1965 increasing to 90% in 1981.
9. Changes in operations occurred in 1982 which resulted in only 100 gallons being lost.

The following table provides the details of the CAI calculations. It has been estimated that approximately 1,771 gallons of creosote and 150 gallons of PCP were released on the Site over a 20 year period. A considerable portion of this material has been lost from the Site by the processes of rainwater scouring, on-Site burning and spontaneous volatilization.

Cranmer and Associates, Inc.

Year	Value of 1984 Dollar* ($)	Adjusted Sales	% Treated††† Creosote	% Treated††† PCP	Creosote Waste (gallons)	PCP Waste (gallons)	Total (gallons)
1965	0.38	384,210	60	—	72	—	72
1966	0.40	1,030,000	62	—	250	—	250
1967	0.42	1,400,000	64	—	260	—	260
1968	0.44	1,104,545	33	33	100	100	200
1969	0.46	1,215,217	34	34	110	110	210
1970	0.49	1,440,816	35	35	120	120	240
1971	0.51	1,717,647	36	36	140	140	280
1972	0.54	2,103,704	37	37	180	180	360
1973	0.57	3,378,947	38	38	280	280	560
1974	0.60	4,890,000	39	39	360	360	720
1975	0.63	2,371,428	40	40	180	180	360
1976	0.67	3,088,059	41	41	220	220	440
1977	0.70	2,714,285	42	42	180	180	360
1978	0.84	3,513,513	43	43	260	260	520
1979	0.77	3,506,493	44	44	240	240	480
1980	0.81	3,456,790	45	45	200	200	400
1981	0.86	3,516,279**	45	45	220	220	440
1982	0.90	2,368,888	45	45	140	140	280
1983	0.95	1,578,947***	45*	45*	20	20	40
1984	1.00	750,000***	45*	45*	10	10	20
Total					3,542 x 0.5†	2,960 x 0.05††	
Amount of Pure Chemical (gallons)					1,770	150	1,920

* Assume 5% inflation rate as average between 1965 - 1985.
** Loss estimated as 500 gallons.
*** Loss reduced by 80% due to operational charges.
† Mix was 50% creosote:50% oil.
†† Mix was 5% PCP:95% oil.
††† Assume 60% treated in 1965 increasing to 90% treated in 1981, steady thereafter.
* Change in operating procedure effects 80% reduction in waste loss.

The majority of surface pollution at the Site was due to product loss due to excess treatment chemicals dripping from stored posts and convenience spraying in the storage yard. The vast majority of this material was lost continuously from the Site over the years with little chance of concentrating in the environment.

Waste confined in Sinkholes and Pits has been concentrated and protected from rain water runoff. Areas of concentrated waste remain at the Site. The wastes in these areas is contained, concentrated and a large portion can be effectively and efficiently removed and properly disposed of.

Minor dispersed micopockets exist in the microcaverns underlying the Site. Some connections between channels are possible, even likely, but the dispersed micropockets are not practical targets for remedial action and do not represent imminent and substantial hazards to man or the environment.

PCP levels as high as 1.6% have been reported in the Sinkhole. The volume has been reported to be 4 cubic yards. Therefore, 12 gallons of PCP may be in the Sinkhole. The railroad Ditch Pit area has had quantities between 1 and 5% PCP reported on the near surfaces. If one assumes that the volume is 68 cubic yards, then up to a maximum of gallons of PCP may be present with a best estimate of less than 125 gallons.

There could be up to 10 gallons of PCP in the Ash Pile.

If we assume that a 10,000 square feet area around the Trolley/Treatment Cylinder Area is contaminated to a depth of 3 feet at an average of 100 ppm, a total of 40 gallons of PCP could be recovered.

Previous calculations have relied on Mr. Barker's estimate that 500 gallons of wood treating chemicals, including oil, being lost in 1981. If PCP were used for 16 years (1968-1984) and if 5% PCP solutions represented 50% of sales, then 150 gallons of PCP would have been released at the Site. This is in reasonable agreement with the estimates based on analytical chemistry data.

Estimates of PCP by Analytical Chemistry		By Bob Barker
Sinkhole	12 gallons	
Railroad Ditch Pit	125 gallons	
Ash Pile	10 gallons	
Trolley/Treatment Area	40 gallons	
Total	187 gallons	150 gallons

CAI was unable to confirm that the expected large quantities of creosote remain on the Site. A partial explanation is that creosote burns more readily than PCP. Major creosote components are more soluble in water than PCP. Finally, major creosote components are lighter than water while PCP is twice as dense and sinks.

EPA has not been unaware of their HRS scoring errors. Important points relative to the quantity of waste at the Site were made in comments from Alan Gates, attorney for MMI, to EPA. Mr. Gates pointed out that the first item in EPA's calculations represented an estimate of waste generated over the operating life of the plant. The railroad ditch is one of the areas where EPA double counted. All of the wastes placed in the railroad ditch had already been counted once as part of the total waste released. It was inappropriate to count the wastes a second time. The total volume of the contaminated soil in the railroad ditch is undoubtedly larger than the volume of waste which is contaminating the soil. Mr. Gates' point was that it is inappropriate to add soil or other matrices at a Site to the amount of chemical waste present. Only the amount of the contaminating hazardous substance is to be included in the waste quantity calculation according to the Uncontrolled Hazardous Waste Site Ranking Users Manual. 47 Federal Register 31187, at 31229 (published July 16, 1982). CAI followed upon Alan Gates' point and calculated the PCP in the Railroad Ditch Pit to be 1.5 cubic yards.

Calculation of total waste in the Sawdust Pile represented another significant error in the EPA estimate of waste quantity. The pile of sawdust and shavings at the east end of the Site had been generated by wood planing equipment and had been used exclusively on untreated wood. The sawdust and shavings themselves originally contained no treatment chemicals. Evidence obtained by MMI indicated, however, that the Sawdust Pile,in 1986, was contaminated with pentachlorophenol in the low parts per million range.* The most reasonable source of the pentachlorophenol observed in the Sawdust Pile was derived from Bob Barker's statement that MMI's used the liquid wastes for dust control purposes.

The wastes in the Sawdust Pile, just as in the case of the Railroad Ditch Pit, were counted twice by EPA. Inclusion of the entire volume of the Sawdust Pile improperly added a substantial volume of soil and sawdust. Mr. Alan Gates also noted that the dimensions attributed to the Sawdust Pile by EPA overstated its volume by more than two orders of magnitude. MMI photographed and surveyed the Sawdust Pile. MMI's measurements indicated that the Sawdust Pile had a surface area of 2,108 square feet and an average depth of six to nine inches. These dimensions resulted in a total volume of less than 60 cubic yards. CAI estimated that in May 1987, the volume of the Sawdust Pile was less than 40 cubic yards.

Why was there such a large descrepancy for the Sawdust Pile? EPA's estimate of 6,111 cubic yards for the volume of the sawdust pile had been based upon an April 1985 memorandum from Doice Hughes, a geologist with ADPC&E, to Tim Perdue in the EPA Region VI Office. According to Mr. Gates, MMI discussed its photograph and survey with Mr. Hughes. Mr. Hughes indicated that the dimensions he originally reported to EPA were only an estimate and later indicated that he did not question the accuracy of MMI's measurements. CAI estimated that less than one pound of PCP exists in the Sawdust Pile. EPA has been inconsistent in its treatment of the Sawdust Pile at the Site as a hazardous waste. For example, EPA, in PD-4 suggested that discarded PCP-treated wood could be buried or burned in incinerators.

The obvious exaggeration by EPA of quantities of PCP and creosote present at the Site makes the situation appear far worse than it is. It is the opinion of CAI that the Site should not be included on the NPL. The Site's HRS score, when calculated correctly, clearly does not justify NPL inclusion.

EPA further exaggerated the Site's status with erroneous HRS groundwater scores. EPA's HRS Groundwater Targets value was based, in part, on the assumption that there were "no significant aquitards" separating the shallow groundwater system in the immediate vicinity of the Site (which has shown trace contamination by PCP and possibly creosote), and the deep aquifer that supplies the Omaha municipal water system and other groundwater users within a three mile radius.

*The documentation Record of EPA's HRS scoring indicates that the sawdust pile was included in the calculation of waste quantity because two 1979 soil and sawdust samples taken by the ADPC & E showed pentachlorophenol contamination at levels of 30,000 and 23,000 ppm. MMI questioned the levels of pentachlorophenol reported in these samples and they took three samples from three different portions of the sawdust pile for independent verification. The samples taken by MMI were analyzed by the McKesson Environmental Services Laboratory in Dublin, CA. The analytical results showed penrachlorophenol at 0.5 ppm, 2.1 ppm, and 170 ppm.

Considerable data exists which contradicts EPA's opinion and alleviates CAI's initial concern. MMI retained Geraghty & Miller to conduct a geohydrologic investigation of the Site and the surrounding area. Geraghty & Miller, in their initial Site assessment and monitoring data indicated that contaminants had been found to reside only in the shallow (less than 50 feet below land surface) interconnected solution cavities found at the base of the limestone formation. Water that entered the shallow drainage system flowed laterally westward through the shallow solution features, emerging as a spring along Cricket ~~Creek~~ Road about 400 yards from the Site. Most of the domestic wells within about a mile of the Site had been tested; only three wells located in a very small area between the Site and spring contained the contaminants. It was believed that the contaminants entered the wells via the shallow solution channels because the wells were cased only into the top of the limestone (and not to the depth of the solution channels), and a 300-foot thick confining bed existed below the shallow water-bearing zone.

It was GMI's belief, and CAI concurs, that the 2100-foot Omaha municipal water well is not in any way threatened by waste from the Site. Several hydrogeologic reasons supported this conclusion:

1. The hydraulic gradient at the Site has been determined to be northwestward (the Omaha well was located to the northeast);

2. The distance between the Site and the Omaha well is about one mile;

3. Several domestic water wells are located between the Site and the Omaha well that have not been found to be contaminated and , if designated as such, could act as an early warning system;

4. Several thick aquicludes existed between the shallow zone in which contamination has been observed and the aquifer that was tapped by the Omaha well; and

5. A properly cased 900-foot well that was located on the Site itself had been sampled repeatedly and was free of any contamination.

Water Well Inventory and Construction Details of Wells Within Three Mile Radius of the Site.

Well Owner	Use of Well	Date Well Completed	Depth Interval of Water Producing Formation (ft)	Type of Formation	Depth to Water (ft-bls)	Total Depth of Well (ft-bls)
Omaha City Well*	Municipal			Dolomite		2100
John Atchison	Domestic	09-08-80	780-785	Limestone	400	795
Frank Atchison	Domestic	09-08-78	525-530	Limestone	380	550
Robert Behrens	Domestic	07-17-82	274-274.5	Limestone	240	565
Robert Behrens	Domestic	01-26-80	280-300	Limestone	350	400
Robert Behrens - abandoned	Domestic	01-26-80	280-300	Limestone	350	496
Dean Curhow	Domestic	10-20-78	664-670	Limestone	410	775
Mildred Davidson	Domestic	10-20-78	660-665	Limestone	–	687
Bud Essary	Domestic	07-15-76	210-215	Limestone	160	300
Bud Essary	Domestic	07-20-81	640-650	Limestone	300	688
Clifford Ford	Domestic	10-02-75	384-385	Limestone	250	415
Clinton Hicks	Domestic	09-18-72	470-480	Limestone	360	650
John Huston	Domestic	12-10-79	441-445	Limestone	350	496
Fernam Jones	Domestic	03-15-79	520-530	Limestone	450	550
Norman Klasener	Domestic	10-30-77	450-470	Sandstone	375	505
James Lovell	Domestic	11-20-74	400-440	Limestone	300	480
Leonard Matlock	Domestic	08-20-76	645-690	Sandstone	430	705
McGinnis	Domestic	07-29-75	593-594	Limestone	400	610
Charles McMahon, Jr.	Domestic	06-15-77	348-352	Limestone	—	412
Don Moore	Domestic	07-28-75	519.5-520	Limestone	350	550
New Hope Baptist Church	Domestic	05-17-71	190-195	Sandstone	330	555
Nelson Rice	Domestic	09-74	—	—	—	783
Sid Richardson	Domestic	01-08-77	770-772	Limestone	375	775
John Robinson*	Domestic	07-15-73	600-610	Limestone	480	640
T.C. Sallee	Domestic	08-01-73	580-690	Limestone	430	710
Cam Tong	Domestic	05-17-71	725-730	Limestone	380	735
John Wood, Sr.	Domestic	02-23-73	145-253	Limestone	—	253
Nelson Rice	Domestic	09-74	—	—	—	783
Omaha School Well	Domestic	—	—	—	—	—
Cathy Duggan	Domestic	—	—	—	—	—
Binam	Domestic	—	—	—	—	—
Birmingham	Domestic	—	—	—	—	—
Birmingham - abandoned	Domestic	—	—	—	—	—
David Miles	Domestic	—	—	—	—	—
O.C. White	Domestic	—	—	—	—	—
O.C. White	Domestic	—	—	—	—	—
Tate	Domestic	—	—	—	—	—
Site*	Industrial	—	—	—	—	—
House w/ Satellite Dish	Domestic	—	—	—	—	—
Turney	Domestic	—	—	—	—	—

*The Omaha City water supply is located within one mile of the Site. The total depth of the well is 1315' with a casing depth of 60'. The only water well sample taken was from the Site. The depth of the well is unknown, however, the pump (submergable) was set at 920'.

Cranmer and Associates, Inc.

PENTACHLOROPHENOL ANALYSIS OF GROUND AND SURFACE WATER

Date	Cricket Spring	Behren Cistern	Behren Well	RR Spring South	Canning Fact. Spring	Miles Well	Birmingham Old Well	Birmingham New Well	Binam Well	RR Culvert Sludge	RR Ditch Runoff	Site Run-off
1982												
04-14	8.3	5.6		5.6	0.005				ND	0.005		
06-29	2.7	0.48		0.004					0.004			
07-26	0.013		0.0003	0.0002					0.0001		0.24	
08-23												0.087
10-09	0.004		0.001	0.046					ND			
10-30	0.002		ND	0.0002								0.010
12-14	0.002		ND	0.0002								0.004
1983												
01-15	0.002		0.0009	0.0015								
01-31	0.006		0.00009									
02-23	0.001		0.0005	ND								
04-01	0.003		0.0001	0.0003								
05-03	0.0006		0.00008	0.0003								0.002
05-27	4.0		0.0006	0.0004					0.0001			
06-28	10.0		ND	0.03								0.87
08-01	4.2		ND	0.011								
09-07	9.0		0.0033	0.029								
09-30	97.0		0.0002									
10-31	15.0		0.0011	0.0046								2.0
11-30	10.0		0.0002	0.14								2.6
1984												
01-06	5.7		0.0031	0.012								
02-03	11.0		0.37	0.002					ND			
02-20				0.012								0.28
02-28	7.4		0.0019	0.28					0.0028			
03-13	0.023										7.7	10.6
03-23	5.6		ND	0.100								
05-11	4.6		0.0002	0.057						0.57		4.2
06-01	5.7		0.0005	0.051					0.0081			
08-24	54.0			0.0039					4 tests			
10-07	9.2			0.0099					in '85 &			
12-07	5.5								'86 no			0.23
12-19	3.7			0.017		0.011			PCP			
1985												
05-20	1.9			ND	ND	ND	ND	ND				
06-04	4.5			ND			ND					
11-25				ND								
1986												
03-04	ND		ND			ND	ND					
03-1[illegible]		ND		0.01			ND	ND				
03-31	1.4				ND							
06-24	ND	ND	ND	ND	ND	ND	ND	ND				
09-24	5.1											
1987												
01-16	0.83	ND	ND	ND	ND		ND	ND	ND			
03-17	3.6											0.091
05-15	2.31								(Also Duggan Well tested: ND)			

Omm[illegible] City wells: No PCP in NUmerous 1982-1987 tests
[illegible] well: No PCP in numerous 1982-1987 tests
W[illegible]ut Creek: No PCP in numerous 1982-1987 tests
Cri[illegible] Creek: No PCP in numerous 1982-1987 tests

Based upon the data generated by GMI, MCE, CAI and others (See preceding table), MMI and CAI believe that two corrections should be made in the Groundwater Targets value for the Site. First, the Groundwater Use factor should be reduced from 3 to 2, because users of domestic wells in the vicinity of the Site had a municipal water supply available nearby which draws from an alternate, unthreatened source. Second, the population served by domestic wells in the immediate vicinity of the Site which could have been affected by contamination in the shallow groundwater system totaled less than ten houses, or a scoring equivalent of 38 people. This near-Site population fell into the 1 to 100 population range that was assigned a scoring value of 1. Use of this revised population value, together with the revised Groundwater Use factor, lowered the Groundwater Targets score from 29 to 16. The revision of the Groundwaters Targets value, in turn, lowered the overall HRS score for the Site from 34.21 originally proposed by EPA to a corrected score of 18.87.

When the corrections for total Quantity of Waste and Groundwater Targets are included in the HRS calculation, the final score for the Site is reduced from 34.21 to 14.52. An itemized comparison of the original and revised MMI-HRS calculations as submitted to EPA by Alan Gates, Esq., follows. A HRS score of 14.52 is far below the level required for a NPL listing.

HRS CALCULATIONS

	Original EPA Proposed	Waste Quantity Revised	Groundwater Targets Revised	Both Revisions
Line 1 - Observed Release	45	45	45	45
Line 4 - Waste Characteristics				
Toxicity/Persistence	18	18	18	18
Hazardous Waste Quantity	3	2	8	2
	26	20	26	20
Line 5 - Targets				
Groundwater Use (X 3)	9	9	6	6
Distance to nearest well/population served	20	20	10	10
	29	29	16	16
Line 1 X Line 4 X Line 5	33,930	26,100	18,720	14,400
Divided by 57,330	0.5918367	0.455259	0.3265306	0.2511773
Multiplied by 100	59.18367	45.5259	32.65306	25.11773
Divided by 1.73	34.2	26.32	18.87	14.52