

12-20-92
Tmg

SCS ENGINEERS

December 22, 1992
File No. 08-89015.06

Mr. Thomas Boston
Chief, Solid Waste Division
Arkansas Department of Pollution
Control and Ecology
8001 National Drive
Little Rock, Arkansas 72209

CSN: ~~72-0144~~ Permit No. ~~162-SR-2~~ - 48886
Media: Air, Water, ~~Solid~~ Hazardous
Sort: Permit, Compliance, Legal, Misc.

SCANNED AND ENTERED

Subject: Sunray Services, Inc. - Fourth Quarter 1992 - Groundwater Analysis

Dear Mr. Boston:

In compliance with condition No. 20, of Solid Waste Disposal Facility Permits No. 162-SR-2 (Site 4) and No. 123-SR-2 (Site 3), attached please find the groundwater analytical data for the water samples collected by Sorrells Research Laboratory, for the period of October 1 to December 31, 1992.

The 11 monitoring wells were purged on November 11, 1992, and sampled on November 12, 1992, under the direction of SCS Engineers personnel. The samples were hand carried to the Sorrells Research Laboratory in Little Rock for the required analytical testing.

If you have any questions or comments, please contact either of the undersigned at your convenience.

Sincerely yours,

Larry D. Lowry
Larry D. Lowry, P.E.
Senior Project Engineer

S. Kirk Ellis
S. Kirk Ellis
Project Manager
SCS ENGINEERS

LDL:SKE:gmh

Enclosures

cc: Randy Holcomb, Sunray, w/o enclosures
Monte Miller, Sunray, w/o enclosures
Glen Carter, Sunray, w/o enclosures





SORRELLS RESEARCH LABORATORY AND FIELD SERVICES



CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received: November 13, 1992

For: Sunray Services
P. O. Box 1301
105 Old Missouri Road
Springdale, AR 72765

JOB: Landfill Monitoring. 40 CFR Part 258

SAMPLE FROM: Well 1 11/12/92 08:45 / Well 2 11/12/92 09:43

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 1	Well 2	Max Cont.	Levels
			DW Stds.	TCLP
Dichloroethane, 1,2-	N.D.	N.D.	0.005	0.5
Dichloroethylene, 1,1-	N.D.	N.D.	0.007	0.7
Dichloroethylene, cis-1,2-	N.D.	N.D.	NA	NA
Dichloroethylene, trans,1-,2-	N.D.	N.D.	NA	NA
Dichloropropane, 1,2-	N.D.	N.D.	NA	NA
Dichloropropene, cis-1,3-	N.D.	N.D.	NA	NA
Dichloropropene, trans, 1,3-	N.D.	N.D.	NA	NA
Ethylbenzene	N.D.	N.D.	NA	NA
Hexanone, 2-	N.D.	N.D.	NA	NA
Methyl bromide	N.D.	N.D.	NA	NA
Methyl chloride	N.D.	N.D.	NA	NA
Methylene bromide	N.D.	N.D.	NA	NA
Methylene chloride	N.D.	N.D.	NA	NA
Methyl ethyl ketone	N.D.	N.D.	NA	NA
Methyl Iodide	N.D.	N.D.	NA	NA
Methyl-2-pentanone, 4-	N.D.	N.D.	NA	NA
Styrene	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 1, 2-	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 2, 2-	N.D.	N.D.	NA	NA
Tetrachloroethylene	0.001	N.D.	NA	0.7
Toluene	N.D.	N.D.	NA	NA
Trichloroethane, 1, 1, 1-	N.D.	N.D.	0.2	NA
Trichloroethane, 1, 1, 2-	N.D.	N.D.	NA	NA
Trichloroethylene	N.D.	N.D.	0.005	0.5
Trichlorofluoromethane	N.D.	N.D.	NA	NA
Trichloropropane, 1, 2, 3-	N.D.	N.D.	NA	NA
Vinyl acetate	N.D.	N.D.	NA	NA
Vinyl chloride	0.007	N.D.	0.02 ^{0.002}	0.2
Xylene, o-	N.D.	N.D.	NA	NA
Xylene, m-	N.D.	N.D.	NA	NA
Xylene, p-	N.D.	N.D.	NA	NA
Xylenes	N.D.	N.D.	NA	NA



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Date Received: November 13, 1992

FOR: Sunray Services
P. O. Box 1301
105 Old Missouri Road
Springdale, AR 72765

JOB: Landfill Monitoring.

40 CFR Part 258

SAMPLE FROM: Well 3 11/12/92 10:09 / Well 4 11/12/92 10:35

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 3	Well 4	Max Cont.	Levels
			DW Stds.	TCLP
Antimony	N.D.	N.D.	NA	NA
Arsenic	N.D.	0.029	0.05	5.0
Barium	N.D.	0.041	1.0	100.0
Beryllium	N.D.	N.D.	NA	NA
Cadmium	N.D.	N.D.	0.01	1.0
Chromium	N.D.	N.D.	0.05	5.0
Cobalt	N.D.	N.D.	NA	NA
Copper	N.D.	N.D.	1.0	100.0
Lead	0.006	N.D.	0.025	2.5
Nickel	N.D.	0.012	NA	NA
Selenium	N.D.	N.D.	0.01	1.0
Silver	N.D.	N.D.	0.05	5.0
Thallium	N.D.	N.D.	NA	NA
Vanadium	N.D.	N.D.	NA	NA
Zinc	0.011	.042	5.0	500.0
Acetone	N.D.	N.D.	NA	NA
Acrylonitrile	N.D.	N.D.	NA	NA
Benzene	N.D.	N.D.	0.005	0.5
Bromochloromethane	N.D.	N.D.	NA	NA
Bromodichloromethane	N.D.	N.D.	NA	NA
Bromoform	N.D.	N.D.	0.1	NA
Carbon disulfide	N.D.	N.D.	NA	NA
Carbon tetrachloride	N.D.	N.D.	0.005	0.5
Chlorobenzene	N.D.	N.D.	NA	100.0
Chloroethane	N.D.	N.D.	NA	NA
Chloroform	N.D.	N.D.	0.1	6
Dibromochloromethane	N.D.	N.D.	0.1	NA
Dibromo-3-chloropropane, 1,2-	N.D.	N.D.	NA	NA
Dibromoethane, 1,2-	N.D.	N.D.	NA	NA
Dichlorobenzene, o-	N.D.	N.D.	NA	NA
Dichlorobenzene, p-	N.D.	N.D.	0.075	NA
Dichloro-2-butene, trans-1,4-	N.D.	N.D.	NA	NA
Dichloroethane, 1,1-	N.D.	N.D.	NA	NA



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JOB: Landfill Monitoring. 40 CFR Part 258

SAMPLE FROM: Well 3 11/12/92 10:09 / Well 4 11/12/92 10:35

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 3	Well 4	Max Cont.	Levels
			DW Stds.	TCLP
Dichloroethane, 1,2-	N.D.	N.D.	0.005	0.5
Dichloroethylene, 1,1-	N.D.	N.D.	0.007	0.7
Dichloroethylene, cis-1,2-	N.D.	N.D.	NA	NA
Dichloroethylene, trans,1-,2-	N.D.	N.D.	NA	NA
Dichloropropane, 1,2-	N.D.	N.D.	NA	NA
Dichloropropene, cis-1,3-	N.D.	N.D.	NA	NA
Dichloropropene, trans, 1,3-	N.D.	N.D.	NA	NA
Ethylbenzene	N.D.	N.D.	NA	NA
Hexanone, 2-	N.D.	N.D.	NA	NA
Methyl bromide	N.D.	N.D.	NA	NA
Methyl chloride	N.D.	N.D.	NA	NA
Methylene bromide	N.D.	N.D.	NA	NA
Methylene chloride	N.D.	N.D.	NA	NA
Methyl ethyl ketone	N.D.	N.D.	NA	NA
Methyl Iodide	N.D.	N.D.	NA	NA
Methyl-2-pentanone, 4-	N.D.	N.D.	NA	NA
Styrene	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 1, 2-	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 2, 2-	N.D.	N.D.	NA	NA
Tetrachloroethylene	N.D.	N.D.	NA	0.7
Toluene	N.D.	N.D.	NA	NA
Trichloroethane, 1, 1, 1-	N.D.	N.D.	0.2	NA
Trichloroethane, 1, 1, 2-	N.D.	N.D.	NA	NA
Trichloroethylene	N.D.	N.D.	0.005	0.5
Trichlorofluoromethane	N.D.	N.D.	NA	NA
Trichloropropane, 1, 2, 3-	N.D.	N.D.	NA	NA
Vinyl acetate	N.D.	N.D.	NA	NA
Vinyl chloride	N.D.	N.D.	0.02	0.2
Xylene, o-	N.D.	N.D.	NA	NA
Xylene, m-	N.D.	N.D.	NA	NA
Xylene, p-	N.D.	N.D.	NA	NA
Xylenes	N.D.	N.D.	NA	NA



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SAMPLE FROM: Well 3 11/12/92 10:09 / Well 4 11/12/92 10:35

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 3	Well 4	Max Cont.	Levels
			DW Stds.	TCLP
Ammonia nitrogen	0.06	0.056	NA	NA
Bicarbonate	108	172	NA	NA
Calcium	8.2	67	NA	NA
Chloride	19.6	14.4	250	NA
Iron	0.024	0.062	0.3	NA
Magnesium	12.4	2.67	NA	NA
Manganese	N.D.	0.021	0.05	NA
Nitrate	0.017	0.52	10.0	NA
Potassium	15	1.71	NA	NA
Sodium	15.9	4.44	NA	NA
Sulfate	1.61	1.81	250	NA
Chemical oxygen demand	32.5	21	NA	NA
Total dissolved solids	137	194.5	500	NA
Cyanide	N.D.	N.D.	NA	NA
Mercury	N.D.	N.D.	0.002	0.2
pH, units	7.23	8.15	6.5-8.5	<2 OR>12
Specific conductance, us/cm	190	220	NA	NA
Temperature, .c	11.83	13.28	NA	NA

Collected by:

Vern Mahaffey

Analysis by:

KEH/BWG/JBS/KES/KESII/CAS

Sample Preservation and Laboratory Analysis Conducted According to EPA 40 Part 261. Test/Analyst/Time/Coeff./Var./ QA Plan filed with A.D.P.C. & E. Includes 10 % Replication and 10 % Recovery Studies by Random Selection. Calibration Records Maintained.

Copies to:

MR. GLENN CARTER

P.O. BOX 1310

SPRINGDALE, AR 72765

MR. RANDY HOLCOMB

P.O. BOX 1310

SPRINGDALE, AR 72765

MR. KIRK ELLIS

SCS ENGINEERS

10401 HOLMES ROAD, SUITE 400
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SAMPLE FROM: Well 5 11/12/92 11:23 / Well 6 11/12/92 11:50

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 5	Well 6	Max Cont.	Levels
			DW Stds.	TCLP
Antimony	N.D.	N.D.	NA	NA
Arsenic	N.D.	N.D.	0.05	5.0
Barium	0.048	0.088	1.0	100.0
Beryllium	N.D.	N.D.	NA	NA
Cadmium	N.D.	N.D.	0.01	1.0
Chromium	N.D.	N.D.	0.05	5.0
Cobalt	N.D.	N.D.	NA	NA
Copper	0.005	N.D.	1.0	100.0
Lead	0.005	N.D.	0.025	2.5
Nickel	.021	.015	NA	NA
Selenium	N.D.	N.D.	0.01	1.0
Silver	N.D.	N.D.	0.05	5.0
Thallium	N.D.	N.D.	NA	NA
Vanadium	N.D.	N.D.	NA	NA
Zinc	0.068	.07	5.0	500.0
Acetone	N.D.	N.D.	NA	NA
Acrylonitrile	N.D.	N.D.	NA	NA
Benzene	N.D.	N.D.	0.005	0.5
Bromochloromethane	N.D.	N.D.	NA	NA
Bromodichloromethane	N.D.	N.D.	NA	NA
Bromoform	N.D.	N.D.	0.1	NA
Carbon disulfide	N.D.	N.D.	NA	NA
Carbon tetrachloride	N.D.	N.D.	0.005	0.5
Chlorobenzene	N.D.	N.D.	NA	100.0
Chloroethane	N.D.	N.D.	NA	NA
Chloroform	N.D.	N.D.	0.1	6
Dibromochloromethane	N.D.	N.D.	0.1	NA
Dibromo-3-chloropropane, 1,2-	N.D.	N.D.	NA	NA
Dibromoethane, 1,2-	N.D.	N.D.	NA	NA
Dichlorobenzene, o-	N.D.	N.D.	NA	NA
Dichlorobenzene, p-	N.D.	N.D.	0.075	NA
Dichloro-2-butene, trans-1,4-	N.D.	N.D.	NA	NA
Dichloroethane, 1,1-	N.D.	N.D.	NA	NA



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40 CFR Part 258

SAMPLE FROM: Well 5 11/12/92 11:23 / Well 6 11/12/92 11:50

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 5	Well 6	Max Cont.	Levels
			DW Stds.	TCLP
Dichloroethane, 1,2-	N.D.	N.D.	0.005	0.5
Dichloroethylene, 1,1-	N.D.	N.D.	0.007	0.7
Dichloroethylene, cis-1,2-	N.D.	N.D.	NA	NA
Dichloroethylene, trans, 1-,2-	N.D.	N.D.	NA	NA
Dichloropropane, 1,2-	N.D.	N.D.	NA	NA
Dichloropropene, cis-1,3-	N.D.	N.D.	NA	NA
Dichloropropene, trans, 1,3-	N.D.	N.D.	NA	NA
Ethylbenzene	N.D.	N.D.	NA	NA
Hexanone, 2-	N.D.	N.D.	NA	NA
Methyl bromide	N.D.	N.D.	NA	NA
Methyl chloride	N.D.	N.D.	NA	NA
Methylene bromide	N.D.	N.D.	NA	NA
Methylene chloride	0.004	N.D.	NA	NA
Methyl ethyl ketone	N.D.	N.D.	NA	NA
Methyl Iodide	N.D.	N.D.	NA	NA
Methyl-2-pentanone, 4-	N.D.	N.D.	NA	NA
Styrene	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 1, 2-	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 2, 2-	N.D.	N.D.	NA	NA
Tetrachloroethylene	0.004	0.002	NA	0.7
Toluene	N.D.	N.D.	NA	NA
Trichloroethane, 1, 1, 1-	0.001	N.D.	0.2	NA
Trichloroethane, 1, 1, 2-	N.D.	N.D.	NA	NA
Trichloroethylene	0.002	N.D.	0.005	0.5
Trichlorofluoromethane	0.001	0.001	NA	NA
Trichloropropane, 1, 2, 3-	N.D.	N.D.	NA	NA
Vinyl acetate	N.D.	N.D.	NA	NA
Vinyl chloride	N.D.	0.003	0.02	0.2
Xylene, o-	N.D.	N.D.	NA	NA
Xylene, m-	N.D.	N.D.	NA	NA
Xylene, p-	N.D.	N.D.	NA	NA
Xylenes	N.D.	N.D.	NA	NA



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SAMPLE FROM: Well 5 11/12/92 11:23 / Well 6 11/12/92 11:50

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 5	Well 6	Max Cont.	Levels
			DW Stds.	TCLP
Ammonia nitrogen	0.052	0.144	NA	NA
Bicarbonate	334	180	NA	NA
Calcium	94.8	74	NA	NA
Chloride	48.5	25.6	250	NA
Iron	11.3	0.038	0.3	NA
Magnesium	2.08	2.3	NA	NA
Manganese	0.017	0.142	0.05	NA
Nitrate	2.28	3.69	10.0	NA
Potassium	1.98	1.26	NA	NA
Sodium	11.05	5.98	NA	NA
Sulfate	2.22	3.03	250	NA
Chemical oxygen demand	19.5	46	NA	NA
Total dissolved solids	424.25	238	500	NA
Cyanide	N.D.	N.D.	NA	NA
Mercury	N.D.	N.D.	0.002	0.2
pH, units	7.78	7.58	6.5-8.5	<2 OR>1
Specific conductance, us/cm	455	273	NA	NA
Temperature, .c	12.53	12.05	NA	NA

Collected by:
Vern Mahaffey
Analysis by:
KEH/BWG/JBS/KES/KESII/CAS

Sample Preservation and Laboratory Analysis Conducted According to EPA 40 Part 261. Test/Analyst/Time/Coeff./Var./ QA Plan filed with A.D.P.C. & E. Includes 10 % Replication and 10 % Recovery Studies by Random Selection. Calibration Records Maintained.

Copies to:

MR. GLENN CARTER P.O. BOX 1310 SPRINGDALE, AR 72765	MR. RANDY HOLCOMB P.O. BOX 1310 SPRINGDALE, AR 72765	MR. KIRK ELLIS SCS ENGINEERS 10401 HOLMES ROAD, SUITE 400 KANSAS CITY, MO 64131
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JOB: Landfill Monitoring. 40 CFR Part 258

SAMPLE FROM: Well 7 11/12/92 12:15 / Well 8 11/12/92 12:40

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 7	Well 8	Max Cont.	Levels
			DW Stds.	TCLP
Antimony	N.D.	N.D.	NA	NA
Arsenic	N.D.	N.D.	0.05	5.0
Barium	0.07	0.036	1.0	100.0
Beryllium	N.D.	N.D.	NA	NA
Cadmium	N.D.	N.D.	0.01	1.0
Chromium	N.D.	N.D.	0.05	5.0
Cobalt	N.D.	N.D.	NA	NA
Copper	N.D.	N.D.	1.0	100.0
Lead	0.004	0.008	0.025	2.5
Nickel	0.131	0.007	NA	NA
Selenium	N.D.	N.D.	0.01	1.0
Silver	N.D.	N.D.	0.05	5.0
Thallium	N.D.	N.D.	NA	NA
Vanadium	N.D.	N.D.	NA	NA
Zinc	0.144	0.008	5.0	500.0
Acetone	N.D.	N.D.	NA	NA
Acrylonitrile	N.D.	N.D.	NA	NA
Benzene	N.D.	N.D.	0.005	0.5
Bromochloromethane	N.D.	N.D.	NA	NA
Bromodichloromethane	N.D.	N.D.	NA	NA
Bromoform	N.D.	N.D.	0.1	NA
Carbon disulfide	N.D.	N.D.	NA	NA
Carbon tetrachloride	N.D.	N.D.	0.005	0.5
Chlorobenzene	N.D.	N.D.	NA	100.0
Chloroethane	N.D.	N.D.	NA	NA
Chloroform	N.D.	N.D.	0.1	6
Dibromochloromethane	N.D.	N.D.	0.1	NA
Dibromo-3-chloropropane, 1,2-	N.D.	N.D.	NA	NA
Dibromoethane, 1,2-	N.D.	N.D.	NA	NA
Dichlorobenzene, o-	N.D.	N.D.	NA	NA
Dichlorobenzene, p-	N.D.	N.D.	0.075	NA
Dichloro-2-butene, trans-1,4-	N.D.	N.D.	NA	NA
Dichloroethane, 1,1-	N.D.	N.D.	NA	NA



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*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 7	Well 8	Max Cont.	Levels
			DW Stds.	TCLP
Dichloroethane, 1,2-	N.D.	N.D.	0.005	0.5
Dichloroethylene, 1,1-	N.D.	N.D.	0.007	0.7
Dichloroethylene, cis-1,2-	N.D.	N.D.	NA	NA
Dichloroethylene, trans,1-,2-	N.D.	N.D.	NA	NA
Dichloropropane, 1,2-	N.D.	N.D.	NA	NA
Dichloropropene, cis-1,3-	N.D.	N.D.	NA	NA
Dichloropropene, trans, 1,3-	N.D.	N.D.	NA	NA
Ethylbenzene	N.D.	N.D.	NA	NA
Hexanone, 2-	N.D.	N.D.	NA	NA
Methyl bromide	N.D.	N.D.	NA	NA
Methyl chloride	N.D.	N.D.	NA	NA
Methylene bromide	N.D.	N.D.	NA	NA
Methylene chloride	N.D.	N.D.	NA	NA
Methyl ethyl ketone	N.D.	N.D.	NA	NA
Methyl Iodide	N.D.	N.D.	NA	NA
Methyl-2-pentanone, 4-	N.D.	N.D.	NA	NA
Styrene	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 1, 2-	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 2, 2-	N.D.	N.D.	NA	NA
Tetrachloroethylene	N.D.	N.D.	NA	0.7
Toluene	N.D.	N.D.	NA	NA
Trichloroethane, 1, 1, 1-	N.D.	N.D.	0.2	NA
Trichloroethane, 1, 1, 2-	N.D.	N.D.	NA	NA
Trichloroethylene	N.D.	N.D.	0.005	0.5
Trichlorofluoromethane	N.D.	N.D.	NA	NA
Trichloropropane, 1, 2, 3-	N.D.	N.D.	NA	NA
Vinyl acetate	N.D.	N.D.	NA	NA
Vinyl chloride	N.D.	N.D.	0.02	0.2
Xylene, o-	N.D.	N.D.	NA	NA
Xylene, m-	N.D.	N.D.	NA	NA
Xylene, p-	N.D.	N.D.	NA	NA
Xylenes	N.D.	N.D.	NA	NA



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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received: November 13, 1992

FOR: Sunray Services
P. O. Box 1301
105 Old Missouri Road
Springdale, AR 72765

JOB: Landfill Monitoring. 40 CFR Part 258

SAMPLE FROM: Well 9 11/12/92 4:04 / Well 10 11/12/92 3:11

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 9	Well 10	Max Cont.	Levels
			DW Stds.	TCLP
Antimony	N.D.	N.D.	NA	NA
Arsenic	N.D.	0.009	0.05	5.0
Barium	0.081	N.D.	1.0	100.0
Beryllium	N.D.	N.D.	NA	NA
Cadmium	0.001	0.002	0.01	1.0
Chromium	N.D.	N.D.	0.05	5.0
Cobalt	N.D.	N.D.	NA	NA
Copper	N.D.	N.D.	1.0	100.0
Lead	0.007	.002	0.025	2.5
Nickel	0.055	0.083	NA	NA
Selenium	N.D.	N.D.	0.01	1.0
Silver	N.D.	N.D.	0.05	5.0
Thallium	N.D.	N.D.	NA	NA
Vanadium	N.D.	N.D.	NA	NA
Zinc	0.05	0.094	5.0	500.0
Acetone	N.D.	N.D.	NA	NA
Acrylonitrile	N.D.	N.D.	NA	NA
Benzene	0.004	N.D.	0.005	0.5
Bromochloromethane	N.D.	N.D.	NA	NA
Bromodichloromethane	N.D.	N.D.	NA	NA
Bromoform	N.D.	N.D.	0.1	NA
Carbon disulfide	N.D.	N.D.	NA	NA
Carbon tetrachloride	N.D.	N.D.	0.005	0.5
Chlorobenzene	N.D.	N.D.	NA	100.0
Chloroethane	0.004	N.D.	NA	NA
Chloroform	N.D.	N.D.	0.1	6
Dibromochloromethane	N.D.	N.D.	0.1	NA
Dibromo-3-chloropropane, 1,2-	N.D.	N.D.	NA	NA
Dibromoethane, 1,2-	N.D.	N.D.	NA	NA
Dichlorobenzene, o-	N.D.	N.D.	NA	NA
Dichlorobenzene, p-	N.D.	N.D.	0.075	NA
Dichloro-2-butene, trans-1,4-	N.D.	N.D.	NA	NA
Dichloroethane, 1,1-	0.004	N.D.	NA	NA



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8002 STANTON ROAD
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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received: November 13, 1992

For: Sunray Services
P. O. Box 1301
105 Old Missouri Road
Springdale, AR 72765

JOB: Landfill Monitoring. 40 CFR Part 258
SAMPLE FROM: Well 9 11/12/92 4:04 / Well 10 11/12/92 3:11

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 9	Well 10	Max Cont.	Levels
			DW Stds.	TCLP
Dichloroethane, 1,2-	N.D.	N.D.	0.005	0.5
Dichloroethylene, 1,1-	N.D.	N.D.	0.007	0.7
Dichloroethylene, cis-1,2-	N.D.	N.D.	NA	NA
Dichloroethylene, trans,1-,2-	N.D.	N.D.	NA	NA
Dichloropropane, 1,2-	N.D.	N.D.	NA	NA
Dichloropropene, cis-1,3-	N.D.	N.D.	NA	NA
Dichloropropene, trans, 1,3-	N.D.	N.D.	NA	NA
Ethylbenzene	N.D.	N.D.	NA	NA
Hexanone, 2-	N.D.	N.D.	NA	NA
Methyl bromide	N.D.	N.D.	NA	NA
Methyl chloride	N.D.	N.D.	NA	NA
Methylene bromide	N.D.	N.D.	NA	NA
Methylene chloride	N.D.	N.D.	NA	NA
Methyl ethyl ketone	N.D.	N.D.	NA	NA
Methyl Iodide	N.D.	N.D.	NA	NA
Methyl-2-pentanone, 4-	N.D.	N.D.	NA	NA
Styrene	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 1, 2-	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 2, 2-	N.D.	N.D.	NA	NA
Tetrachloroethylene	N.D.	N.D.	NA	0.7
Toluene	N.D.	N.D.	NA	NA
Trichloroethane, 1, 1, 1-	N.D.	N.D.	0.2	NA
Trichloroethane, 1, 1, 2-	N.D.	N.D.	NA	NA
Trichloroethylene	N.D.	N.D.	0.005	0.5
Trichlorofluoromethane	N.D.	N.D.	NA	NA
Trichloropropane, 1, 2, 3-	N.D.	N.D.	NA	NA
Vinyl acetate	N.D.	N.D.	NA	NA
Vinyl chloride	N.D.	N.D.	0.02	0.2
Xylene, o-	N.D.	N.D.	NA	NA
Xylene, m-	N.D.	N.D.	NA	NA
Xylene, p-	N.D.	N.D.	NA	NA
Xylenes	N.D.	N.D.	NA	NA



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LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received: November 13, 1992

FOR: Sunray Services
P. O. Box 1301
105 Old Missouri Road
Springdale, AR 72765

JOB: Landfill Monitoring. 40 CFR Part 258

SAMPLE FROM: Well 10D 11/12/92 3:24 / Well 11 11/12/92 2:45

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 10D	Well 11	Max Cont.	Levels
			DW Stds.	TCLP
Antimony	N.D.	N.D.	NA	NA
Arsenic	0.009	N.D.	0.05	5.0
Barium	N.D.	0.048	1.0	100.0
Beryllium	N.D.	N.D.	NA	NA
Cadmium	0.002	N.D.	0.01	1.0
Chromium	0.008	0.007	0.05	5.0
Cobalt	N.D.	N.D.	NA	NA
Copper	0.002	0.009	1.0	100.0
Lead	0.004	N.D.	0.025	2.5
Nickel	0.076	0.006	NA	NA
Selenium	N.D.	N.D.	0.01	1.0
Silver	N.D.	N.D.	0.05	5.0
Thallium	N.D.	N.D.	NA	NA
Vanadium	N.D.	N.D.	NA	NA
Zinc	0.08	0.026	5.0	500.0
Acetone	N.D.	N.D.	NA	NA
Acrylonitrile	N.D.	N.D.	NA	NA
Benzene	N.D.	N.D.	0.005	0.5
Bromochloromethane	N.D.	N.D.	NA	NA
Bromodichloromethane	N.D.	N.D.	NA	NA
Bromoform	N.D.	N.D.	0.1	NA
Carbon disulfide	N.D.	N.D.	NA	NA
Carbon tetrachloride	N.D.	N.D.	0.005	0.5
Chlorobenzene	N.D.	N.D.	NA	100.0
Chloroethane	N.D.	N.D.	NA	NA
Chloroform	N.D.	0.002	0.1	6
Dibromochloromethane	N.D.	N.D.	0.1	NA
Dibromo-3-chloropropane, 1,2-	N.D.	N.D.	NA	NA
Dibromoethane, 1,2-	N.D.	N.D.	NA	NA
Dichlorobenzene, o-	N.D.	N.D.	NA	NA
Dichlorobenzene, p-	N.D.	N.D.	0.075	NA
Dichloro-2-butene, trans-1,4-	N.D.	N.D.	NA	NA
Dichloroethane, 1,1-	N.D.	N.D.	NA	NA



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LABORATORY ANALYSIS

Date of Report: December 10, 1992
 Date Received: November 13, 1992

For: Sunray Services
 P. O. Box 1301
 105 Old Missouri Road
 Springdale, AR 72765

JOB: Landfill Monitoring. 40 CFR Part 258

SAMPLE FROM: Well 10D 11/12/92 3:24 / Well 11 11/12/92 2:45

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 10D	Well 11	Max Cont.	Levels
			DW	TCLP
			Stds.	
Dichloroethane, 1,2-	N.D.	N.D.	0.005	0.5
Dichloroethylene, 1,1-	N.D.	N.D.	0.007	0.7
Dichloroethylene, cis-1,2-	N.D.	N.D.	NA	NA
Dichloroethylene, trans,1-,2-	N.D.	N.D.	NA	NA
Dichloropropane, 1,2-	N.D.	N.D.	NA	NA
Dichloropropene, cis-1,3-	N.D.	N.D.	NA	NA
Dichloropropene, trans, 1,3-	N.D.	N.D.	NA	NA
Ethylbenzene	N.D.	N.D.	NA	NA
Hexanone, 2-	N.D.	N.D.	NA	NA
Methyl bromide	N.D.	N.D.	NA	NA
Methyl chloride	N.D.	N.D.	NA	NA
Methylene bromide	N.D.	N.D.	NA	NA
Methylene chloride	N.D.	N.D.	NA	NA
Methyl ethyl ketone	N.D.	N.D.	NA	NA
Methyl Iodide	N.D.	N.D.	NA	NA
Methyl-2-pentanone, 4-	N.D.	N.D.	NA	NA
Styrene	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 1, 2-	N.D.	N.D.	NA	NA
Tetrachloroethane, 1, 1, 2, 2-	N.D.	N.D.	NA	NA
Tetrachloroethylene	N.D.	N.D.	NA	0.7
Toluene	N.D.	N.D.	NA	NA
Trichloroethane, 1, 1, 1-	N.D.	N.D.	0.2	NA
Trichloroethane, 1, 1, 2-	N.D.	N.D.	NA	NA
Trichloroethylene	N.D.	N.D.	0.005	0.5
Trichlorofluoromethane	N.D.	N.D.	NA	NA
Trichloropropane, 1, 2, 3-	N.D.	N.D.	NA	NA
Vinyl acetate	N.D.	N.D.	NA	NA
Vinyl chloride	N.D.	N.D.	0.02	0.2
Xylene, o-	N.D.	N.D.	NA	NA
Xylene, m-	N.D.	N.D.	NA	NA
Xylene, p-	N.D.	N.D.	NA	NA
Xylenes	N.D.	N.D.	NA	NA



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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received: November 13, 1992

Sunray Services
P. O. Box 1301
105 Old Missouri Road
Springdale, AR 72765

JOB: Landfill Monitoring. 40 CFR Part 258
SAMPLE FROM: Well 10D 11/12/92 3:24 / Well 11 11/12/92 2:45

*Please Note - Reported in Milligrams per Liter or Standard units.

ANALYTE	Well 10D	Well 11	Max Cont.	Levels
			DW	TCLP
			Stds.	
Ammonia nitrogen	0.06	0.049	NA	NA
Bicarbonate	154	160	NA	NA
Calcium	56.1	72	NA	NA
Chloride	19.4	13.5	250	NA
Iron	0.051	0.048	0.3	NA
Magnesium	6.63	0.704	NA	NA
Manganese	0.018	0.021	0.05	NA
Nitrate	0.04	3.58	10.0	NA
Potassium	1.89	2.28	NA	NA
Sodium	10.2	3.77	NA	NA
Sulfate	6.66	3.63	250	NA
Chemical oxygen demand	20	17	NA	NA
Total dissolved solids	165	209	500	NA
Cyanide	N.D.	N.D.	NA	NA
Mercury	N.D.	N.D.	0.002	0.2
pH, units	7.55	7.55	6.5-8.5	<2 OR>1
Specific conductance, us/cm	220	220	NA	NA
Temperature, .c	11.93	11.93	NA	NA

Collected by:

Vern Mahaffey

Analysis by:

KEH/BWG/JBS/KES/KESII/CAS

Sample Preservation and Laboratory Analysis Conducted According to EPA 40 Part 261. Test/Analyst/Time/Coeff./Var./ QA Plan filed with A.D.P.C. & E. Includes 10 % Replication and 10 % Recovery Studies by Random Selection. Calibration Records Maintained.

Copies to:

MR. GLENN CARTER

P.O. BOX 1310

SPRINGDALE, AR 72765

MR. RANDY HOLCOMB

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MR. KIRK ELLIS

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(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: RINSE WATER

ANALYTE		RESULT	UNITS	METHOD
Acetone	<	0.001	mg/Liter	8260
Acrylonitrile	<	0.001	mg/Liter	8260
Benzene	<	0.001	mg/Liter	8260
Bromochloromethane	<	0.001	mg/Liter	8260
Bromodichloromethane	<	0.001	mg/Liter	8260
Bromoform	<	0.001	mg/Liter	8260
Carbon disulfide	<	0.001	mg/Liter	8260
Carbon tetrachloride	<	0.001	mg/Liter	8260
Chlorobenzene	<	0.001	mg/Liter	8260
Chloroethane	<	0.001	mg/Liter	8260
Chloroform	<	0.001	mg/Liter	8260
Dibromochloromethane	<	0.001	mg/Liter	8260
Dibromo-3-chloropropane, 1,2-	<	0.001	mg/Liter	8260
Dibromoethane, 1,2-	<	0.001	mg/Liter	8260
Dichlorobenzene, o-	<	0.001	mg/Liter	8260
Dichlorobenzene, p-	<	0.001	mg/Liter	8260
Dichloro-2-butene, trans-1,4-	<	0.001	mg/Liter	8260
Dichloroethane, 1,1-	<	0.001	mg/Liter	8260
Dichloroethane, 1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, 1,1-	<	0.001	mg/Liter	8260
Dichloroethylene, cis-1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, trans-1,2-	<	0.001	mg/Liter	8260
Dichloropropane, 1,2-	<	0.001	mg/Liter	8260
Dichloropropene, cis-1,3-	<	0.001	mg/Liter	8260
Dichloropropene, trans, 1,3-	<	0.001	mg/Liter	8260
Ethylbenzene	<	0.001	mg/Liter	8260
Hexanone, 2-	<	0.001	mg/Liter	8260
Methyl bromide	<	0.001	mg/Liter	8260
Methyl chloride	<	0.001	mg/Liter	8260
Methylene bromide	<	0.001	mg/Liter	8260
Methylene chloride	<	0.001	mg/Liter	8260
Methyl ethyl ketone	<	0.001	mg/Liter	8260



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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: RINSE WATER

ANALYTE		RESULT	UNITS	METHOD
Methyl iodide	<	0.001	mg/Liter	8260
Methyl-2-pentanone, 4-	<	0.001	mg/Liter	8260
Styrene	<	0.001	mg/Liter	8260
Tetrachloroethane, 1, 1, 1, 2-	<	0.001	mg/Liter	8260
Tetrachloroethane, 1, 1, 2, 2	<	0.001	mg/Liter	8260
Tetrachloroethylene	<	0.001	mg/Liter	8260
Toluene	<	0.001	mg/Liter	8260
Trichloroethane, 1, 1, 1-	<	0.001	mg/Liter	8260
Trichloroethane, 1, 1, 2-	<	0.001	mg/Liter	8260
Trichloroethylene	<	0.001	mg/Liter	8260
Trichlorofluoromethane	<	0.001	mg/Liter	8260
Trichloropropane, 1, 2, 3-	<	0.001	mg/Liter	8260
Vinyl acetate	<	0.001	mg/Liter	8260
Vinyl chloride	<	0.001	mg/Liter	8260
Xylene, o-	<	0.001	mg/Liter	8260
Xylene, m-	<	0.001	mg/Liter	8260
Xylene, p-	<	0.001	mg/Liter	8260
Xylenes	<	0.001	mg/Liter	8260



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LITTLE ROCK, ARKANSAS 72209

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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: RINSE WATER

ANALYTE	RESULT UNITS	METHOD
---------	--------------	--------

Collected by:
VERN MAHAFFEY on 11/11/92 at 17:47
Analysis by :
K. E. Sorrells, M. S.

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 261. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C. & E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained. See Attached.

Copies to:
MR. GLENN CARTER

MR. RANDY HOLCOMB

P.O. BOX 1310

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SPRINGDALE, AR 72765-

SPRINGDALE, AR 72765-

MR. KIRK ELLIS
SCS ENGINEERS

10401 HOLMES ROAD, SUITE 400
KANSAS CITY, MO 64131-

Laboratory Number: L034.012

DKS Reviewed By: K. E. Sorrells, M.S. [] _____



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(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: WASH WATER

ANALYTE		RESULT	UNITS	METHOD
Acetone	<	0.001	mg/Liter	8260
Acrylonitrile	<	0.001	mg/Liter	8260
Benzene	<	0.001	mg/Liter	8260
Bromochloromethane	<	0.001	mg/Liter	8260
Bromodichloromethane	<	0.001	mg/Liter	8260
Bromoform	<	0.001	mg/Liter	8260
Carbon disulfide	<	0.001	mg/Liter	8260
Carbon tetrachloride	<	0.001	mg/Liter	8260
Chlorobenzene	<	0.001	mg/Liter	8260
Chloroethane	<	0.001	mg/Liter	8260
Chloroform	<	0.001	mg/Liter	8260
Dibromochloromethane	<	0.001	mg/Liter	8260
Dibromo-3-chloropropane, 1,2-	<	0.001	mg/Liter	8260
Dibromoethane, 1,2-	<	0.001	mg/Liter	8260
Dichlorobenzene, o-	<	0.001	mg/Liter	8260
Dichlorobenzene, p-	<	0.001	mg/Liter	8260
Dichloro-2-butene, trans-1,4-	<	0.001	mg/Liter	8260
Dichloroethane, 1,1-	<	0.001	mg/Liter	8260
Dichloroethane, 1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, 1,1-	<	0.001	mg/Liter	8260
Dichloroethylene, cis-1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, trans-1,2-	<	0.001	mg/Liter	8260
Dichloropropane, 1,2-	<	0.001	mg/Liter	8260
Dichloropropene, cis-1,3-	<	0.001	mg/Liter	8260
Dichloropropene, trans, 1,3-	<	0.001	mg/Liter	8260
Ethylbenzene	<	0.001	mg/Liter	8260
Hexanone, 2-	<	0.001	mg/Liter	8260
Methyl bromide	<	0.001	mg/Liter	8260
Methyl chloride	<	0.001	mg/Liter	8260
Methylene bromide	<	0.001	mg/Liter	8260
Methylene chloride	<	0.001	mg/Liter	8260
Methyl ethyl ketone	<	0.001	mg/Liter	8260



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For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: WASH WATER

ANALYTE		RESULT UNITS	METHOD
Methyl iodide	<	0.001 mg/Liter	8260
Methyl-2-pentanone, 4-	<	0.001 mg/Liter	8260
Styrene	<	0.001 mg/Liter	8260
Tetrachloroethane, 1, 1, 1, 2-	<	0.001 mg/Liter	8260
Tetrachloroethane, 1, 1, 2, 2	<	0.001 mg/Liter	8260
Tetrachloroethylene	<	0.001 mg/Liter	8260
Toluene	<	0.001 mg/Liter	8260
Trichloroethane, 1, 1, 1-	<	0.001 mg/Liter	8260
Trichloroethane, 1, 1, 2-	<	0.001 mg/Liter	8260
Trichloroethylene	<	0.001 mg/Liter	8260
Trichlorofluoromethane	<	0.001 mg/Liter	8260
Trichloropropane, 1, 2, 3-	<	0.001 mg/Liter	8260
Vinyl acetate	<	0.001 mg/Liter	8260
Vinyl chloride	<	0.001 mg/Liter	8260
Xylene, o-	<	0.001 mg/Liter	8260
Xylene, m-	<	0.001 mg/Liter	8260
Xylene, p-	<	0.001 mg/Liter	8260
Xylenes	<	0.001 mg/Liter	8260



**SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES**



CHEMISTS
ECOLOGISTS
CONSULTANTS
PLANNERS

8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992

Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: WASH WATER

ANALYTE	RESULT UNITS	METHOD
---------	--------------	--------

Collected by:
VERN MAHAFFEY on 11/11/92 at 17:55
Analysis by :
K. E. Sorrells, M. S.

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 261. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C. & E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained. See Attached.

Copies to:
MR. GLENN CARTER

MR. RANDY HOLCOMB

P.O. BOX 1310

P.O. BOX 1310

SPRINGDALE, AR 72765-

SPRINGDALE, AR 72765-

MR. KIRK ELLIS
SCS ENGINEERS

10401 HOLMES ROAD, SUITE 400
KANSAS CITY, MO 64131-

Laboratory Number: L034.013

DKS Reviewed By: K. E. Sorrells, M.S. []



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8002 STANTON ROAD
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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: DISTILLED WATER.

ANALYTE		RESULT	UNITS	METHOD
Acetone	<	0.001	mg/Liter	8260
Acrylonitrile	<	0.001	mg/Liter	8260
Benzene	<	0.001	mg/Liter	8260
Bromochloromethane	<	0.001	mg/Liter	8260
Bromodichloromethane	<	0.001	mg/Liter	8260
Bromoform	<	0.001	mg/Liter	8260
Carbon disulfide	<	0.001	mg/Liter	8260
Carbon tetrachloride	<	0.001	mg/Liter	8260
Chlorobenzene	<	0.001	mg/Liter	8260
Chloroethane	<	0.001	mg/Liter	8260
Chloroform	<	0.001	mg/Liter	8260
Dibromochloromethane	<	0.001	mg/Liter	8260
Dibromo-3-chloropropane, 1,2-	<	0.001	mg/Liter	8260
Dibromoethane, 1,2-	<	0.001	mg/Liter	8260
Dichlorobenzene, o-	<	0.001	mg/Liter	8260
Dichlorobenzene, p-	<	0.001	mg/Liter	8260
Dichloro-2-butene, trans-1,4-	<	0.001	mg/Liter	8260
Dichloroethane, 1,1-	<	0.001	mg/Liter	8260
Dichloroethane, 1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, 1,1-	<	0.001	mg/Liter	8260
Dichloroethylene, cis-1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, trans-1,2-	<	0.001	mg/Liter	8260
Dichloropropane, 1,2-	<	0.001	mg/Liter	8260
Dichloropropene, cis-1,3-	<	0.001	mg/Liter	8260
Dichloropropene, trans, 1,3-	<	0.001	mg/Liter	8260
Ethylbenzene	<	0.001	mg/Liter	8260
Hexanone, 2-	<	0.001	mg/Liter	8260
Methyl bromide	<	0.001	mg/Liter	8260
Methyl chloride	<	0.001	mg/Liter	8260
Methylene bromide	<	0.001	mg/Liter	8260
Methylene chloride	<	0.001	mg/Liter	8260
Methyl ethyl ketone	<	0.001	mg/Liter	8260



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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: DISTILLED WATER.

ANALYTE		RESULT	UNITS	METHOD
Methyl iodide	<	0.001	mg/Liter	8260
Methyl-2-pentanone, 4-	<	0.001	mg/Liter	8260
Styrene	<	0.001	mg/Liter	8260
Tetrachloroethane, 1, 1, 1, 2-	<	0.001	mg/Liter	8260
Tetrachloroethane, 1, 1, 2, 2	<	0.001	mg/Liter	8260
Tetrachloroethylene	<	0.001	mg/Liter	8260
Toluene	<	0.001	mg/Liter	8260
Trichloroethane, 1, 1, 1-	<	0.001	mg/Liter	8260
Trichloroethane, 1, 1, 2-	<	0.001	mg/Liter	8260
Trichloroethylene	<	0.001	mg/Liter	8260
Trichlorofluoromethane	<	0.001	mg/Liter	8260
Trichloropropane, 1, 2, 3-	<	0.001	mg/Liter	8260
Vinyl acetate	<	0.001	mg/Liter	8260
Vinyl chloride	<	0.001	mg/Liter	8260
Xylene, o-	<	0.001	mg/Liter	8260
Xylene, m-	<	0.001	mg/Liter	8260
Xylene, p-	<	0.001	mg/Liter	8260
Xylenes	<	0.001	mg/Liter	8260



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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: DISTILLED WATER.

ANALYTE	RESULT UNITS	METHOD
---------	--------------	--------

Collected by:
/ERN MAHAFFEY on 11/12/92 at 17:50
Analysis by :
K. E. Sorrells, M. S.

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 261. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C.& E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained. See Attached.

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MR. RANDY HOLCOMB

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SPRINGDALE, AR 72765-

SPRINGDALE, AR 72765-

MR. KIRK ELLIS
SCS ENGINEERS

10401 HOLMES ROAD, SUITE 400
KANSAS CITY, MO 64131-

Laboratory Number: L034.016

DKS Reviewed By: K. E. Sorrells, M.S. [] _____



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LABORATORY AND FIELD SERVICES

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: TYPE I WATER. FIELD BLANK

ANALYTE		RESULT	UNITS	METHOD
Acetone	<	0.001	mg/Liter	8260
Acrylonitrile	<	0.001	mg/Liter	8260
Benzene	<	0.001	mg/Liter	8260
Bromochloromethane	<	0.001	mg/Liter	8260
Bromodichloromethane	<	0.001	mg/Liter	8260
Bromoform	<	0.001	mg/Liter	8260
Carbon disulfide	<	0.001	mg/Liter	8260
Carbon tetrachloride	<	0.001	mg/Liter	8260
Chlorobenzene	<	0.001	mg/Liter	8260
Chloroethane	<	0.001	mg/Liter	8260
Chloroform	<	0.001	mg/Liter	8260
Dibromochloromethane	<	0.001	mg/Liter	8260
Dibromo-3-chloropropane, 1,2-	<	0.001	mg/Liter	8260
Dibromoethane, 1,2-	<	0.001	mg/Liter	8260
Dichlorobenzene, o-	<	0.001	mg/Liter	8260
Dichlorobenzene, p-	<	0.001	mg/Liter	8260
Dichloro-2-butene, trans-1,4-	<	0.001	mg/Liter	8260
Dichloroethane, 1,1-	<	0.001	mg/Liter	8260
Dichloroethane, 1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, 1,1-	<	0.001	mg/Liter	8260
Dichloroethylene, cis-1,2-	<	0.001	mg/Liter	8260
Dichloroethylene, trans-1,2-	<	0.001	mg/Liter	8260
Dichloropropane, 1,2-	<	0.001	mg/Liter	8260
Dichloropropene, cis-1,3-	<	0.001	mg/Liter	8260
Dichloropropene, trans, 1,3-	<	0.001	mg/Liter	8260
Ethylbenzene	<	0.001	mg/Liter	8260
Hexanone, 2-	<	0.001	mg/Liter	8260
Methyl bromide	<	0.001	mg/Liter	8260
Methyl chloride	<	0.001	mg/Liter	8260
Methylene bromide	<	0.001	mg/Liter	8260
Methylene chloride	<	0.001	mg/Liter	8260
Methyl ethyl ketone	<	0.001	mg/Liter	8260



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LITTLE ROCK, ARKANSAS 72209

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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: TYPE I WATER. FIELD BLANK

ANALYTE		RESULT	UNITS	METHOD
Methyl iodide	<	0.001	mg/Liter	8260
Methyl-2-pentanone, 4-	<	0.001	mg/Liter	8260
Styrene	<	0.001	mg/Liter	8260
Tetrachloroethane, 1, 1, 1, 2-	<	0.001	mg/Liter	8260
Tetrachloroethane, 1, 1, 2, 2	<	0.001	mg/Liter	8260
Tetrachloroethylene	<	0.001	mg/Liter	8260
Toluene	<	0.001	mg/Liter	8260
Trichloroethane, 1, 1, 1-	<	0.001	mg/Liter	8260
Trichloroethane, 1, 1, 2-	<	0.001	mg/Liter	8260
Trichloroethylene	<	0.001	mg/Liter	8260
Trichlorofluoromethane	<	0.001	mg/Liter	8260
Trichloropropane, 1, 2, 3-	<	0.001	mg/Liter	8260
Vinyl acetate	<	0.001	mg/Liter	8260
Vinyl chloride	<	0.001	mg/Liter	8260
Xylene, o-	<	0.001	mg/Liter	8260
Xylene, m-	<	0.001	mg/Liter	8260
Xylene, p-	<	0.001	mg/Liter	8260
Xylenes	<	0.001	mg/Liter	8260



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LABORATORY ANALYSIS

Date of Report: December 10, 1992
Date Received : November 13, 1992

For: SUNRAY SERVICES
P.O. BOX 1310
105 OLD MISSOURI ROAD
SPRINGDALE, AR 72765-

Job: QUALITY ASSURANCE.

Sample From: TYPE I WATER. FIELD BLANK

ANALYTE	RESULT UNITS	METHOD
---------	--------------	--------

Collected by:
VERN MAHAFFEY on 11/12/92 at 17:47
Analysis by :
K. E. Sorrells, M. S.

Sample preservation and Laboratory Analysis conducted according to EPA 40 CFR Part 261. Test/Analyst/Time/Coeff./Var./ QA plan filed with A.D.P.C. & E. Includes 10 % replication and 10 % recovery studies by random selection. Calibration records maintained. See Attached.

Copies to:
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MR. RANDY HOLCOMB

P.O. BOX 1310

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SPRINGDALE, AR 72765-

SPRINGDALE, AR 72765-

MR. KIRK ELLIS
SCS ENGINEERS

10401 HOLMES ROAD, SUITE 400
KANSAS CITY, MO 64131-

Laboratory Number: L034.017

DKS Reviewed By: K. E. Sorrells, M.S. [] _____



SORRELLS RESEARCH

WPCF



LABORATORY AND FIELD SERVICES

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8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

QUALITY ASSURANCE

November 13, 1992

The following QA represents SRA's Quality Assurance values for this report.
Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
AMMONIA NITROGEN	KEH	11/21/92	1500	11/23/92	1500	71.40	0.0	28
CALCIUM	KESII	12/03/92	1639	12/03/92	1654	0.05	0.0	11
CHLORIDE	KEH	11/23/92	1410	11/23/92	1500	6.30	95.0	12
IRON	KESII	11/30/92	1829	12/01/92	1525	1.12	98.9	34
MAGNESIUM	KESII	12/04/92	1601	12/04/92	1551	0.00	0.0	13
MANGANESE	KESII	12/01/92	1514	12/01/92	1525	8.30	0.0	9
NITRATE	JBS	11/24/92	800	11/25/92	0	0.00	130.0	11
POTASSIUM	KESII	12/03/92	1453	12/03/92	1515	2.59	97.4	24
SODIUM	KESII	12/03/92	1202	12/03/92	1217	1.30	0.0	15
SULFATE	KEH	11/23/92	1520	11/23/92	1610	4.71	86.0	12
CHEMICAL OXYGEN DEMAND	KEH	11/23/92	1200	11/30/92	1130	0.64	93.0	13
TOTAL DISSOLVED SOLIDS	JBS	11/19/92	900	11/23/92	1030	2.80	94.1	12
CYANIDE	BWG	11/23/92	915	11/24/92	1500	10.60	72.5	12
MERCURY	KESII	12/04/92	1215	12/04/92	1305	0.00	92.5	15
BIOCHEMICAL OXYGEN DEMAND	KEH	11/19/92	900	11/24/92	1230	0.80	121.0	16
VOLATILES (Q.A.)	KES	11/13/92	2055	11/14/92	1336	1.49	92.3	11

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
40 CFR Part 258 TEST/ANALYST/TIME/COEF. VAR.* QA PLAN filed with
ADPC*E. Include replication.

KES = K. E. Sorrells
JBS = James B. Sorrells
CAS = Cecil A. Sorrells
KES = Karl E. Sorrells

KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells



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**SORRELLS RESEARCH
LABORATORY AND FIELD SERVICES**



8002 STANTON ROAD
LITTLE ROCK, ARKANSAS 72209

(501) 562-8139

QUALITY ASSURANCE

November 13, 1992

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Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. REC.	# IN BAT.
ANTIMONY	KESII	12/07/92	1554	12/07/92	1640	2.40	106.4	13
ARSENIC	KESII	11/19/92	1900	11/20/92	1758	0.02	125.0	26
BARIUM	KESII	12/08/92	1450	12/08/92	1530	0.00	0.0	6
BERYLLIUM	KESII	12/07/92	1430	12/07/92	1446	7.00	110.7	12
CADMIUM	KESII	12/04/92	1959	12/04/92	2051	6.90	102.0	13
CHROMIUM	KESII	12/07/92	155	12/07/92	415	9.10	110.6	12
COBALT	KESII	12/07/92	1655	12/07/92	1724	0.00	106.5	11
COPPER	KESII	11/18/92	1952	11/18/92	2057	9.00	116.7	12
LEAD	KESII	12/06/92	1801	12/06/92	1906	6.80	93.4	12
NICKEL	KESII	11/23/92	1852	11/23/92	2002	7.30	108.5	12
SELENIUM	KESII	11/19/92	1900	11/20/92	1758	5.07	126.0	22
SILVER	KESII	12/07/92	1331	12/07/92	1345	0.00	110.3	11
THALLIUM	KESII	12/07/92	1554	12/07/92	1632	0.00	99.1	12
TANADIUM	KESII	12/07/92	1616	12/07/92	0	0.00	0.0	11
ZINC	KESII	11/24/92	2117	11/24/92	2130	0.80	98.7	10

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
Sample preservation and laboratory analysis conducted according to EPA
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KESII = K. E. Sorrells
KEH = Kevin E. Hall
BWG = Ben W. Glover
CKS = Chandra K. Sorrells

QUALITY ASSURANCE

November 12, 1992

The following QA represents SRA's Quality Assurance values for this report.
 Any analysis performed but not needed by your facility should be disregarded.

ANALYTE	ANALYST	BEG. DATE	BEG. TIME	FIN. DATE	FIN. TIME	S.D. %	SPK. # REC.	IN BAT.
EXTRACT TCLP, NON-VOLATIL	BWG	11/16/92	1315	11/16/92	1445	0.00	0.0	2
EXTRACT TCLP, VOLATILE	BWG	11/16/92	1315	11/16/92	1445	0.00	0.0	2
ARSENIC	KESII	11/20/92	1100	11/20/92	1230	2.00	103.0	8
BARIUM	KESII	12/08/92	1450	12/08/92	1530	0.00	0.0	6
CADMIUM	KESII	12/04/92	1959	12/04/92	2051	6.90	102.0	13
CHROMIUM	KESII	12/07/92	420	12/07/92	519	1.90	110.6	8
LEAD	KESII	12/06/92	1910	12/06/92	1929	5.70	93.4	4
MERCURY	KESII	12/04/92	1215	12/04/92	1305	0.00	92.5	15
SELENIUM	KESII	11/19/92	1900	11/19/92	1911	0.40	107.0	3
SILVER	KESII	12/07/92	1347	12/07/92	1353	0.00	110.3	6
VOLATILES (Q.A.)	KES	11/18/92	1128	11/19/92	1144	1.29	95.4	7
SEMI-VOLATILES (Q.A.)	KES	11/23/92	1821	11/24/92	255	18.40	65.0	6
IGNITABILITY	BWG	11/16/92	1440	11/16/92	1450	4.20	88.7	2
CORROSIVITY PH>12.5 OR <2	BWG	11/16/92	1630	11/16/92	1640	1.30	0.0	1
SOLIDS	BWG	11/16/92	1110	11/16/92	1120	0.10	0.0	2
TOTAL RELEASABLE CYANIDE	BWG	11/24/92	1000	11/25/92	1425	10.60	72.5	3
TOTAL RELEASABLE SULFIDE	BWG	11/24/92	1000	11/25/92	1315	50.00	88.9	4

Field PH/TEMP/D.O. Sampler or Courier/ at time of sampling or pick up
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KESII = K. E. Sorrells
 KEH = Kevin E. Hall
 BWG = Ben W. Glover
 CKS = Chandra K. Sorrells

Wells 001-011

CHAIN OF CUSTODY RECORD

LAB# L034.001-017

NAME OF COMPANY, CITY, OR PROJECT		SAMPLER (signature)				
SWRAY 37027		Vern Matloff Glenn Court				
SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
Wash	11-11-91	5:47P		X	8	see Attche
River	11	5:57P		"	8	ghes T.
M W 1	11-12-91	9:57A 8:45A		"	8	
2	"	10:55A	9:47A	Y	4	
3	"	11:15A 10:07A		"	4	
4	"	11:29A 10:35A		"	4	
5	"	12:37P 11:23A		"	4	
6	"	2:57P 11:58A		"	4	
7	"	3:23P 12:15P		"	4	

72 samples

RELINQUISHED BY: (signature)

James W. Kinder 6:07P 11/12/92

RECEIVED BY: (signature)

Vern Matloff

DATE/TIME

5:00 PM 11-12-92

DISPATCHED BY: (signature)

RECEIVED FOR LABORATORY BY: DATE/TIME

1100 11-13-92

Method of Shipment (CIRCLE ONE)

UPS

BUS

WALK-IN

SEA COURIER

OTHER COURIER

NOTES:

STANDARD METHODS PRESERVATION per EPA 40 CFR part 136

PH -

SHOW PRESERVATION; e.g.: C 4 = cool to 4.C.

Temp -

SC2 = Sulfuric Acid to pH < 2.

Flow -

MC2 = Nitric Acid to pH < 2.

(T) = Thiosulfate for dechlorination

Cl2 -

SHOW EACH TYPE CONTAINER ON SEPARATE LINE.

D.O. -

SORRELLS RESEARCH ASSOCIATES, INC. (501) 562-8139

L
D

CHAIN OF CUSTODY RECORD

LAB#

NAME OF COMPANY, CITY, OR PROJECT:		SAMPLER(S) (signature)				
Sun Bay		Deen M. Hoffmann				
SAMPLE COLLECTION LOCATION	DATE	TIME	COMP	GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
16 W 8	11-12-92	12:40P		X	8	
" " 9	5:45	4:24P		"	"	
" " 10	"	3:11P		"	"	
DUP	"	3:24P		"	"	
Site 3 hochut e	"	5:00P		"	7	
Site 4	"	4:45P		"	4	
Dist H ₂ O	"	5:40P		"	8	
Type H ₂ O	"	5:47P		"	4	
16 W 11	"	2:45P		"	8	

016

60 samples

RELINQUISHED BY: (signature)

RECEIVED BY: (signature)

DATE/TIME

6:07P
 Dennis W. Kiefer 11/12/92

Deen M. Hoffmann

6:00

DISPATCHED BY: (signature)

RECEIVED FOR LABORATORY BY: DATE/TIME

Method of Shipments
 (CIRCLE ONE)

UPS

BUS

WALK-IN

SEA COURIER

OTHER COURIER

NOTES:

STANDARD METHODS PRESERVATION per EPA 40 CFR part 136

SHOW PRESERVATION; e.g.: C 4 = cool to 4.C.

S₂ = Sulfuric Acid to pH < 2.

N₂ = Nitric Acid to pH < 2.

(T) = Thiosulfate for dechlorination

SHOW EACH TYPE CONTAINER ON SEPARATE LINE.

Well Logging Data Form

TODAY'S DATE 11-11-92

JOB: SURVEY

Samplers Signature(s) Donna Krasch Alan Cant

at well
6-87
17.9°C
15.9°C

Pump \approx 75 gal/min
Well # 1

Pre Purge
Pre-Depth level 76.21' 4:50A
6:25"

Post Purge
Post-Depth level 75.85'

Purge
Time 9:50A
6 min 25 sec

WASH WATER
WELL # 2 WATER WELL # 3 WATER WELL #

DATE	TIME	PH	SAMPLE	TEMP
11/12/92	8:45A		7.6	17.6
			7.6	17.1
			7.6	17.1
			7.4	17.5

CONDUCTIVITY	TEMP	PH
710	17.6	7.6
710	17.7	7.6
720	17.6	7.6
720	17.5	7.4

TEMPERATURE	TEMP	PH
12.1	17.1	7.6
10.5	17.1	7.6
10.5	17.1	7.6
12.3	17.1	7.4

Other: _____

Well Furgung Data Form

TODAY'S DATE 11/11/92

JOB SURVEY

Samplers Signature(s) Devin E. McWhiffers Allen Carter

	Well # <u>2</u>	Well # <u>3</u>	Well # <u>4</u>	Well #
Pre-Purge Pre-Depth level	<u>37.00</u>	<u>40.51</u>	<u>36.60</u>	
Pre-Monitor Post-Depth level	<u>37.25</u>	<u>56.00</u>	<u>62.15</u>	
Purge Time	<u>10:55A</u> 5 min 45 sec	<u>11:18A</u> 3 min 05 sec	<u>11:37A</u> 5 min 30 sec	

Sample Temp 9:43A
1/12/92 PH:

7.5

10:57A

7.0

10:35A

8.0

7.6

7.3

8.1

7.6

7.3

8.2

7.6

7.3

8.3

Conductivity: 170

190

220

170

190

220

170

190

220

170

190

220

Temperature: 12.3

10.8

12.6

12.2

11.6

13.5

12.4

12.3

13.6

12.2

12.6

13.4

Other: _____

Well Purging Data Form

TODAY'S DATE 11/11/92

JOB Survey

Samplers Signature(s) Donna Makoff

Allen Curtis

	Well # <u>5</u>	Well # <u>6</u>	Well # <u>7</u>	Well #
Pre Purge Pre-Depth level	<u>72.42</u>	<u>28.42</u>	<u>85.39</u>	
Post Purge Post-Depth level	<u>72.28</u>	<u>28.65</u>	<u>86.69</u>	
Purge Time	<u>12:27</u> 5 min 15 sec	<u>2:36</u> 30 min 5 sec	<u>3:23</u> 12 min 15 sec	

	11:23A	11:50A	12:15P
11/12/92 pH:	<u>7.6</u>	<u>7.5</u>	<u>7.2</u>
	<u>7.8</u>	<u>7.7</u>	<u>7.3</u>
	<u>7.8</u>	<u>7.5</u>	<u>7.5</u>
	<u>7.9</u>	<u>7.6</u>	<u>7.3</u>

Conductivity:	<u>450</u>	<u>285</u>	<u>660</u>
	<u>450</u>	<u>270</u>	<u>670</u>
	<u>460</u>	<u>270</u>	<u>670</u>
	<u>460</u>	<u>270</u>	<u>660</u>

Temperature:	<u>11.6</u>	<u>11.7</u>	<u>12.1</u>
	<u>12.7</u>	<u>11.5</u>	<u>12.4</u>
	<u>13.1</u>	<u>12.2</u>	<u>11.7</u>
	<u>12.7</u>	<u>12.8</u>	<u>12.3</u>

Other: _____

Well Furging Data Form

TODAY'S DATE 11/11/92

JOE Sunray

Samplers Signature(s) Dean Makoff Jim Coats

	Well # <u>8</u>	Pump flow rate 50 gpm Well # <u>9</u>	Well # <u>10</u>	Well #
Pre-Purge Pre-Depth level	<u>35.65</u>	<u>72.40</u>	<u>42.19</u>	
Post-Monitor Post-Depth level	<u>36.27</u>	<u>72.63</u>		
Purge Time	<u>5:01p</u> 4min 10sec	<u>5:19p</u> 12min 30sec	<u>4:42p</u> 2min 45sec	

11/12/92	PH:	12:40p SAMPLE TIME	4:04p	3:11p
		<u>7.3</u>	<u>7.6</u>	<u>7.3</u>
		<u>7.5</u>	<u>7.7</u>	<u>7.6</u>
		<u>7.4</u>	<u>7.6</u>	<u>7.7</u>
		<u>7.6</u>	<u>7.6</u>	<u>7.7</u>

Conductivity:	<u>230</u>	<u>490</u>	<u>190</u>
	<u>230</u>	<u>490</u>	<u>190</u>
	<u>230</u>	<u>490</u>	<u>190</u>
	<u>230</u>	<u>490</u>	<u>190</u>

Temperature:	<u>12.4</u>	<u>13.4</u>	<u>11.8</u>
	<u>12.6</u>	<u>13.6</u>	<u>12.2</u>
	<u>13.1</u>	<u>13.8</u>	<u>12.5</u>
	<u>12.8</u>	<u>13.8</u>	<u>12.4</u>

Other: _____

Well Purging Data Form

TODAY'S DATE 11/11/92

JOB Sunray Tenttown

Samplers Signature(s) Don E. Madsen Alan Galt

Well # 11

Distilled Water TYPE ①

Pre Purge
Pre-Depth level 60.29

Post Purge
Post-Depth level 59.85

Purge Time 4:15 p
4:00 - 4:15

Date	pH	Time	Well #	Well #
1/12/92	2:45 p		<u>7.2</u>	<u>5:47</u>
			<u>7.6</u>	<u>7.9</u>
			<u>7.6</u>	<u>7.8</u>
			<u>7.8</u>	<u>7.8</u>

Conductivity:	<u>220</u>	<u>0</u>	
	<u>220</u>	<u>0</u>	
	<u>220</u>	<u>0</u>	
	<u>220</u>	<u>0</u>	

Temperature:	<u>10.8</u>	<u>8.2</u>	
	<u>12.2</u>	<u>8.7</u>	
	<u>12.4</u>	<u>8.8</u>	
	<u>12.3</u>	<u>9.1</u>	

Other: _____
