Previous

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ALAMEDA POINT
SSIC NO. 5090.3

APPENDIX B – QUARTERLY WELL PURGING AND SAMPLING FORMS

DATA SUMMARY REPORT FOR QUARTERLY GROUNDWATER MONITORING NOVEMBER 1997 – AUGUST 1998

THE ABOVE IDENTIFIED APPENDIX HAS MISSING PAGES. IT COULD NOT BE DETERMINED WHETHER THESE PAGES ARE MISSING OR THE DOCUMENT WAS ISSUED WITHOUT THESE PAGES.

QUESTIONS MAY BE DIRECTED TO:

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APPENDIX

Quarterly Well Purging and Sampling Forms

Quarter 1 – 92 Sheets

Well Purging & Sampling Log

CTO: 108

Sample(s) Collected by: JF

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: D04-02
DATE(S): 11/13/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 97.2

Depth to water measured from TOC (ft): Before Purging: 6.32

Minimum Purge Volume:

Three-inch well 3 x 90.88 ft x 0.367 gal/ft = 100.1 gallons

Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons

Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons

Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1155	0	15.6	6.96	43.3	5	Sal 2.79
During		1220	20	15.2	~~7.55~~	43.3	5	[illegible]
During		1246	40	15.0	7.00	43.1	-4	smells fine
During		1316	60	17.9	7.00	43.2	-6	[illegible]
During		1340	80	15.1	7.01	43.0	-6	[illegible]
During		1412	100.1	15.0	7.00	43.2	-10	water draining
During								clearer
After		Sample time 1415						at ~ 60-70 gallons bailed

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-014	Lab: Recra LabNet
Field ID #: M04-02-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = $\pi r^2 h$

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: CG/JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: D04-03

DATE(S): 11/13/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9500

Depth to water measured from TOC (ft): Before Purging: 6.55

Minimum Purge Volume:
Three-inch well 3 X 8.45 ft x 0.367 gal/ft = 9.4 gallons
Two-inch well 3 X _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		847	0	18.6	6.28	1.74	-5	DO: 6.85
During		850	1	19.4	5.95	5.87	-0	Sal 0.08
During		855	3	19.1	6.67	61.6	10	Water is clear
During		953	57	19.4	6.72	62.4	2	
During		1024	~~76~~ 60	6.99	6.99	58.4	-1	
During		1040	~~98~~ 75	19.1	6.86	62.7	3	
During								
After			54	[illegible]	[illegible]	[illegible] 1045		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-004	Lab: Recra LabNet
Field ID #: D04-03-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~FEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

PROJECT NO 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: CG/JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: DOS-02
DATE(S): 11/13/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 67.00

Depth to water measured from TOC (ft): Before Purging: 7.16

Minimum Purge Volume:
Three-inch well 3 X 59.84 ft X 0.367 gal/ft = 65.9 gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 66 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1155	0	20.3	6.61	38.2	1	clear
During		1159	13	19.6	6.55	39.2	1	clear
During		1201	26	20.1	6.52	40.5	-1*	
During		1204	39	19.9	6.52	40.8	-0	DO: 60.7
During		1207	52	20.0	6.50	40.5	-2	Sal: 2.60
During		1209	66	20.1	6.49	41.0	-0	
During								
After			Sample time 1220					

*CL = clear CO = cloudy TU = turbid * reading negative

Well Sampling

Sample #: 108-S05-003	Lab: Recra LabNet
Field ID #: DOS-02-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	~~TPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-S05-014
Blank Sample Info:	field ID = DOS-02-Q10D
Other Sample Info:	analysis: VOC & metals
	Sample time 1230

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: D07A-02

DATE(S): 11/11/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 59.91

Depth to water measured from TOC (ft): Before Purging: 13.72

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = 61.87 gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1240	0	22.0	6.09	22.4	*	yellow brown no odor	CL
During		1255	12.0	19.5	6.49	24.2	*	Slight odor yellow	CL
During		1317	24.0	19.4	6.41	24.7	*	"	CL
During		1334	36.0	19.3	6.51	24.3	*	"	CL
During		1342	48.0	19.2	6.42	24.4	*	no odor clear	CL
During		1349	62.00	19.3	6.43	24.2	*	"	CL
During									
After			Sample time 1500						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-002	Lab: Recra LabNet
Field ID #: D07A-02-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Test PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

* turbidity measured as negative number

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Project No. 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / TK

Page 1 of 1

Site Location: NAS Alameda

Well Number: DO7C-01 // Sample Time 1645

Date(s): 11/11/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 59.- ft

Depth to water measured from TOC (ft): Before Purging: 5.10

Minimum Purge Volume:
Three-inch well 3 X 53.9 ft x 0.367 gal/ft = 60 gallons
Two-inch well 3 X ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAC	DO	
Initial		1501	0	18.0	7.36	2.69	4	0.13	3.48	START
During		1519	10	17.7	7.05	2.08	4	0.09	2.31	
During		1539	20	17.5	7.02	2.04	4	0.04	2.25	
During		1552	30	17.5	6.96	2.11	5	0.16	2.13	
During		1606	40	17.7	6.92	2.11	6	0.10	2.04	
During		1621	50	17.6	6.95	2.08	6	0.09	2.04	
During		1641	60	17.6	6.93	2.06	4	0.09	1.15	FINISH
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S22-003

Lab: RECRA LAB NET

Field ID #: DO7C-01-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Test HCBs~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER: CLEAR; TRACE BROWN COLOR, NO ODOR OR SHEEN; SOME DRAWDOWN, BUT GOOD RECOVERY. (IF PUMPING, LOWER AT LEAST 30-40 FT INTO WATER COLUMN)

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC/TK

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: D 0901 / SAMPLE TIME 1405

DATE(S): 11/11/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer (LOW PURGE)

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 8.01

Depth to water measured from TOC (ft): Before Purging: 60.35

Minimum Purge Volume:
Three-inch well 3 x 52.34 ft x 0.367 gal/ft = 57.5 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO	
Initial		1223	0	19.8	6.13	20.4	4	1.21	3.93	START
During		1240	10	19.2	6.57	35.4	5	2.24	1.37	
During		1256	20	19.1	6.62	36.0	3	2.38	1.13	
During		1311	30	19.1	6.67	36.8	6	2.34	1.29	
During		1324	40	19.1	6.68	36.7	5	2.33	1.46	
During		1339	50	19.3	6.70	36.9	7	2.34	1.49	
During		1356	60	19.0	6.71	36.6	6	2.32	1.73	FINISH
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S09-003	Lab: RECRA LAB NET
Field ID #: D09-01-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	TERH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

MOSTLY CLEAR WATER, FAINT BROWN TINT, FAINT H_2S ODOR

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: CG/JP

Page 1 of 1

Site Location: NAS Alameda

Well Number: D10B-02

Date(s): 11/13/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 60

Depth to water measured from TOC (ft): Before Purging: 5.36

Minimum Purge Volume:
Three-inch well 3 x 54.64 ft x 0.367 gal/ft = 60.15 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 61 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1516	0	18.9	6.51	0.93	-2	DO 6.95
During		1524	12	21.7	6.55	4.88	-1	Sal 0.04
During		1530	24	21.7	6.54	8.00	-2	Water - clear
During		1536	36	21.8	6.54	7.96	-3	
During		1540	48	21.7	6.50	7.94	-3	
During		1548	61	21.7	6.46	8.00	-3	
During								
After			Sample time 1600					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S23-001	Lab: Recra LabNet
Field ID #: D10B-02-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~,
2 ml zinc acetate plus NaOH	~~TPPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M001-E
DATE(S): 10/29/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 19.2

Depth to water measured from TOC (ft): Before Purging: 5.82

Minimum Purge Volume:

Three-inch well 3 X ft x 0.367 gal/ft = gallons

Two-inch well 3 X 13.38 ft. x 0.163 gal/ft = 6.5 gallons

Four-inch well 3 X ft. x 0.653 gal/ft. = gallons

Total purged gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1202	0	20.1	8.53	4.62	—	Water is clear,
During		1207	2.25	20.6	8.64	3.41	—	yellow, with a
During		1212	4.5	20.5	8.64	3.14	—	strong solvent odor
During		1215	6.5	20.4	8.62	3.14	—	
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-0100-01220	Lab:
Field ID #: M001-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	~~TPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: turbidity inoperative; (on meter)

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: MC02-E

DATE(S): 10/29/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): MONITORING

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 19.8'

Depth to water measured from TOC (ft): Before Purging: 4.62'

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons

Two-inch well 3 X 15.18 ft. X 0.163 gal/ft = 7.27 gallons

Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons

Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS				Other
				Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	
Initial	9:55AM	9:55	0	20.3	6.63	28.4		
During	~~10:04~~	10:09	2.5	20.3	6.77	29.0		
During		10:08	5.0	20.2	6.83	28.9		
During		10:15	7.5	19.9	6.82	28.6		
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-001@10:35am

Lab:

Field ID #: MO02-E-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, ~~TPH~~, ~~TEPH~~, ~~TAC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter is inoperative.

WATER IS CLEAR AND YELLOWISH

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = $\pi r^2 h$

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M003-E
DATE(S): 10/29/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 21.2

Depth to water measured from TOC (ft): Before Purging: 6.42

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 14.78 ft. X 0.163 gal/ft = 7.22 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1310	0	20.5	7.77	2.50	—	
During		1319	2.5	20.9	7.77	1.01	—	
During		1322	5.0	20.7	7.75	1.02	—	
During		1325	7.25	20.7	7.74	1.02	—	
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01 ~~[illegible]~~ 003@1330	Lab:
Field ID #: M003-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCB~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	~~TPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter inoperative. Water is clear, colorless, with no odor or sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TA / JM

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M010-A
DATE(S): 10/30/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 15.5
Depth to water measured from TOC (ft): Before Purging: 3.18

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 12.32 ft. X 0.163 gal/ft = 6 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		0910	0	18.4	7.53	3.22	—		
During		0912	2	18.6	7.66	3.93	—		
During		0915	4	18.9	7.54	4.23	—		
During		0918	6	19.0	7.52	4.69	—		
During									
During									
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0010 0920	Lab:
Field ID #: M010-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~[illegible]~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~[illegible]~~, ~~[illegible]~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: turbidity meter inoperative. Water is cloudy, dark gray, with no odor or sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TA/JM

Page 1 of 1

Site Location: NAS Alameda	Well Number: MO13-A
Date(s): 10/30/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.5

Depth to water measured from TOC (ft): Before Purging: 4.60

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 8.9 ft. X 0.163 gal/ft = 4.35 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		0935	0	20.8	7.80	0.875		
During		0938	1.5	20.9	7.60	0.747		
During		0942	3.0	21.0	7.46	0.635		
During		0946	4.5	21.0	7.43	0.585		
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-002 @10:00	Lab:
Field ID #: MO13-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, [redacted], metals, [redacted],
2 ml zinc acetate plus NaOH	[redacted], Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter is inoperative. Water is cloudy, yellowish-brown, with no odor or sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MO17-A
DATE(S): 11/6/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.04

Depth to water measured from TOC (ft): Before Purging: 5.15

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 5.59 ft. X 0.163 gal/ft = 2.55 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		921	0	19.2	7.05	32.8	29	NO odor	CO
During		922	1	19.3	7.04	32.0	161	"	"
During		924	2	19.4	7.18	32.0	92	"	"
During		927	3	19.2	7.14	32.0	59	"	"
During		929	3.5	19.4	7.16	32.1	40	"	"
During		932	4.5	19.2	7.19	32.1	64	"	"
During									
After		Sample Time = 940							

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-003	Lab: ~~La~~ RECRA LAB NET
Field ID #: MO17-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	~~TPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TA / JM

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MO19-E
DATE(S): 10/30/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 40.5

Depth to water measured from TOC (ft): Before Purging: 4.10

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 36.4 ft. X 0.163 gal/ft = 17.7 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1030	0	19.4	7.37	15.1	—	
During		1038	6	17.7	6.92	39.5	—	
During		1046	12	17.3	6.97	40.5		
During		1054	17.75	17.2	7.00	40.5		
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-004 @ 1105	Lab:
Field ID # MO19-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	ID # 108-S02-005 @ 1115
Blank Sample Info:	
Other Sample Info:	Duplicate sample suite is only VOCs, SVOCs, metals.

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC/JP

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SITE LOCATION: NAS Alameda	WELL NUMBER: M021-E
DATE(S): 10/28/97	WELL TYPE (MONITORING, EXTRACTION, ETC.): TIME 1110
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 36.51
Depth to water measured from TOC (ft): Before Purging: 2.76

Minimum Purge Volume:
Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 33.75 ft. x 0.163 gal/ft = 5.50 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 16.50 ~~17~~ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL		
Initial		1030	0	19.7	7.55	25.5	—	1.56		
During	5	1035	3	18.4	7.15	35.2	—	2.22		
During	13	1043	6	17.4	7.02	35.8	—	2.26		
During	20	1050	9	17.1	7.01	35.9	—	2.27		
During	25	1055	12	17.1	7.02	36.3	—	2.30		
During	31	1101	15	17.2	6.99	36.1	—	2.29		
During	35	1105	~~18~~ 17	17.2	7.02	35.9	—	2.27		
After							NOT READING RIGHT ON TURB			

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-006	Lab: RECRA LAB NET
Field ID #: M021-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	TERH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

COC # 1540

WATER: TRANSPARENT, YELLOWISH, FOAMY

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC/JF

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SITE LOCATION: NAS Alameda	WELL NUMBER: MO23E @ 1525
DATE(S): 10/29/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 29.15

Depth to water measured from TOC (ft): Before Purging: 4.91

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 29.74 ft. X 0.163 gal/ft = 4.85 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 14.55 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial	~~5~~	1445	0	20.8	10.63	15.7	*	light yellow-orange green, murky	1.12
During		1449	~~8~~ 3	18.6	7.27	30.7	*	clear	1.99
During		1456	~~4~~ 6	18.1	7.08	35.3	*	"	2.4
During		1501	9	17.8	7.07	36.0	*	"	2.28
During		1507	12	17.7	7.06	36.3	*		2.50
During		1515	15	18.1	7.09	35.7	*		2.25
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-007	Lab: ~~U~~ RECRA LabNet
Field ID #: MO23-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen
COC # 1540	

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

* turbidity measured as negative number

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M024 - A @ 900
DATE(S): 11 / 5 / 97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.11

Depth to water measured from TOC (ft): Before Purging: 6.00

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 8.11 ft. X 0.163 gal/ft = 3.9 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		0845	0	18.5	6.33	5.97	*	green color
During			1.0			6.00		cloudy slight odor
During			2.0					"
During			3.0					"
During			4.0					"
During			5.0					"
During								
After		0900	sample time					

**

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-008	Lab: Recra LabNet
Field ID #: M024-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCB, TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

* turbidity measured as nephelometric units (NTU) ** Horiba meter broke down

U&A | Uribe & Associates Environmental Consulting Services

Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JP

Page 1 of 1

Site Location: NAS Alameda

Well Number: MO24-E

Date(s): 11/10/97

Well Type (Monitoring, Extraction, etc.): Monitoring

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 32.10

Depth to water measured from TOC (ft): Before Purging: 6.09

Minimum Purge Volume:

Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons

Two-inch well 3 X 26.01 ft. x 0.163 gal/ft = 12.72 gallons

Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1320	0	19.3	6.86	2.72	8	light brown ^ foaming	CL
During		1324	2.5	18.9	6.87	2.79	*	slick feeling	CL
During		1327	5.0	18.1	6.89	3.35	249	"	CL
During		1331	7.5	18.0	6.87	4.39	*	"	CL
During		1336	10.0	17.8	6.86	4.75	805	"	CL
During		1341	12.75	17.9	6.84	4.70	*	"	CL
During									
After			Sample time			1400			

*CL = clear ^CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-009

Lab: Recra LabNet

Field ID #: MO24-E-QID

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, ~~Pesticides~~, ~~TPPH~~, ~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

PID not with me, so no reading taken, but respirator worn

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

* turbidity measured as negative number

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC/SC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M027-E // SAMPLE TIME 1210 (NOMINAL TIME, PRE LABELED & OUT OF SEQUENCE WITH LAST PART OF PURGE)
DATE(S): 10/30/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 21.75
Depth to water measured from TOC (ft): Before Purging: 4.50

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 17.25 ft. X 0.163 gal/ft = 8.43 x 9 gal gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 9 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		1203	0	20.8	7.52	2.04	(-10)	0.08	4.15		
During		1207	2	20.5	7.04	15.4	(-10)	0.90	2.91		
During		1211	4	20.2	7.07	15.9	(-10)	0.93	3.44		
During		1213	6	20.1	7.11	15.0	(-10)	0.87	3.15		
During		1216	8	20.1	7.14	14.4	(-10)	0.83	3.62		
During		1218	9	20.2	7.13	14.1	(-10)	0.82	3.22		
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-012	Lab: RECRA LAB NET
Field ID #: M027-E-Q10	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Test PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info: MS/MSD (IDENTICAL SET)
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TQ/JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MO28-A
DATE(S): 11/7/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.00

Depth to water measured from TOC (ft): Before Purging: 6.18

Minimum Purge Volume:
- Three-inch well 3 X 7.82 ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X ~~[illegible]~~ ft. X 0.163 gal/ft = 3.84 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1510	0	19.5	6.76	1.46	*	organic matter and black matter	
During		1511	0.75	19.0	6.68	1.35	*	suspended in water odor "	CL
During		1512	1.50	19.3	6.66	1.33	*	"	CL
During		1515	2.25	19.4	6.67	1.32	*	"	CL
During		1517	3.0	19.4	6.67	1.30	*	"	CL
During		1518	4.00	19.3	6.65	1.30	*	"	CL
During									
After			Sample time 1525						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-013	Lab: ~~Lab~~ Recra LabNet
Field ID #: MD28-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

PID not working so respirators worn

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

* turbidity measured as negative #

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: CG/JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: M028-C
Date(s): 11/13/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 90

Depth to water measured from TOC (ft): Before Purging: ~~5.61~~ 5.00

Minimum Purge Volume:
Three-inch well 3 x ~~85.00~~ 84.38 ft x 0.367 gal/ft = 93.98 gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		823	0	16.9	6.07	6.51		water is cloudy	CO
During		829	18	17.8	6.10	12.9	33	& brown	
During			36					water turned	TU
During			54					muddy brown	
During			72					& turbid	
During			94						
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-009	Lab:
Field ID #: M028-C-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC / SLC

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Site Location: NAS Alameda	Well Number: M028-E TIME = 1015
Date(s): 10/30/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 20.05
Depth to water measured from TOC (ft): Before Purging: 5.96

Minimum Purge Volume:
Three-inch well 3 X ____ ft. X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 14.09 ft. X 0.163 gal/ft = 7 gal ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO		
Initial		0915	0	20.4	7.05	1.11	—	0.05	2.91		
During		0920	2	19.9	6.72	1.15	(-10)	0.05	3.12		
During		0923	4	19.6	6.69	1.50	(-10)	0.06	2.86		
During		0926	5	19.4	6.71	1.89	(-10)	0.08	3.16		
During		0930	6	19.5	6.72	2.07	(-10)	0.09	3.18		
During		0932	7	19.5	6.74	2.24	(-10)	0.10	3.29		
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-001	Lab: RECRA LAB NET
Field ID #: M028-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Test HCB~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity,
to pH > 9	~~Nitrate/Nitrite as Nitrogen~~
	(ONLY FIRST FIVE REPEATED ON
	FIELD DUP)

WATER: SLGT GRAY TINT, MILD H_2S ODOR, NO SHEEN.

Quality Control Samples:

Duplicated Sample Info: 108-S01-002 (M028-E-Q10D) ~~(IDENTICAL SET)~~
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM/TA

Page 1 of 1

Site Location: NAS Alameda

Well Number: ~~[illegible]~~ M029-E

Date(s): 10/29/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 19.9

Depth to water measured from TOC (ft): Before Purging: 4.34

Minimum Purge Volume:
- Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 15.56 ft. x 0.163 gal/ft = 7.5 gallons
- Four-inch well 3 X ____ ft. x 0.653 gal/ft.³ = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1430	0	20.6	8.02	1.62	—	
During		1435	2.5	20.7	8.04	1.55	—	
During		1441	5.0	20.5	8.07	1.64	—	
During		1445	7.5	20.5	8.09	1.53	—	
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-015@1450

Field ID #: M029-E-Q10

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Lab:

Filtered? Y/N: For metals analysis only

Analysis Requested: VOCs, SVOCs, metals, ~~[illegible]~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter inoperative. Water is cloudy, with no odor or sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200 42-002
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWS/TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M03-04 | SAMPLE TIME 1610

DATE(S): 11/03/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): MONITORING

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 11.0

Depth to water measured from TOC (ft): Before Purging: 6.41

Minimum Purge Volume:
- Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
- Two-inch well 3 X 4.59 ft. X 0.163 gal/ft = 2.24 ≈ 3 gallons
- Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
- Total purged ~~3~~ 2.5 gallons → DRY

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	Other DO	
Initial		1412	0	—	—	—	—	START		
During		1413	0.5	22.9	6.55	7.99	(-10)	0.43	2.56	
During		1415	1.0	23.1	6.56	8.30	(-10)	0.45	2.37	
During		1417	1.5	23.1	6.57	8.28				
During		1418	2.0	23.0	6.59	8.80				
During		1419	2.5	23.0	6.6	9.10				
During		~~1422~~	~~3.0~~							
After	12 min	1424				BAILS	DRY @	~2.8 gal		

*CL = clear CO = cloudy TU = turbid (RETURN LATER TO SAMPLE)

Well Sampling

Sample #: 108-S03-001	Lab: RECRA LAB NET
Field ID #: M03-04-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

WATER: CLEAR, SLIGHTLY YELLOW, STRONG PETROLEUM ODOR

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC/TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M03-05 // SAMPLE TIME 1505

DATE(S): 11/03/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 10.00
Depth to water measured from TOC (ft): Before Purging: 6.41

Minimum Purge Volume:
Three-inch well 3 X ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 X 3.54 ft. x 0.163 gal/ft = 1.75 ≈ 2.0 gallons
Four-inch well 3 X ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged ___ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO	
Initial		1447	0	—	—	—	—	-	-	START
During		1450	0.5	23.3	7.13	6.96	(-10)	0.37	2 ti	
During		1452	1.0	23.3	7.14	6.79				
During		1453	1.5	23.3	7.16	—				
During		1455	2.0	23.4	7.16	6.80				
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S03-002
Field ID #: M03-05-Q10
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Lab:
Filtered? Y/N: For metals analysis only
Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCB~~, ~~TPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

CLEAR WITH OLIVE COLOR, DARK ORGANIC (?) PARTICULATES

Quality Control Samples:

Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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Well Purging & Sampling Log

Sample(s) Collected by: DWC/TA

Project No: 200-42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: M03-07 // Sample Time 1320
Date(s): 11/03/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.0

Depth to water measured from TOC (ft): Before Purging: 3.77

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 9.23 ft. x 0.163 gal/ft = 4.5 ≈ 5 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO		
Initial		1306	0	22.8	6.68	1.37	(-10)	0.06	2.54		
During		1310	1	23.1	6.62	1.42	(-10)	0.06	2.56		
During		1312	2	23.2	6.62	1.46		0.07	2.62		
During		1314	3	23.1	6.62	1.57		0.07	2.55		
During		1315	4	23.0	6.62	1.63		~~0.07~~	~~2.64~~		
During		1317	5	22.9	6.63	1.59	72	0.07	2.64		
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S03-~~S~~003	Lab: RECRA LAB NET
Field ID #: M03-07-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

WATER: LIGHT BROWN, SLIGHTLY FOAMY, NO ODOR.
FILTERS CLEAR

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M030-E

DATE(S): 10/29/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): Monitoring

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.9

Depth to water measured from TOC (ft): Before Purging: 5.34

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.56 ft. x 0.163 gal/ft = 5.1 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1350	0	21.5	7.56	0.97	—	
During		1357	1.75	21.5	7.56	0.737	—	
During		1359	3.5	22.0	7.55	0.742	—	
During		1401	5.25	21.6	7.59	0.747	—	
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-0050 1405

Lab:

Field ID #: M030-E-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides, TPH~~, ~~TPH, TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter inoperative; water is slightly cloudy, amber, with no odor or sheen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWL/JP

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SITE LOCATION: NAS Alameda	WELL NUMBER: M031-E @ 1615
DATE(S): 10/29/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 18.54

Depth to water measured from TOC (ft): Before Purging: 3.77

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 14.77 ft. X 0.163 gal/ft = 2.41 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 7.25 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Salinity
Initial		1550	0	20.3	7.53	1.37	*	water clear with particulates	.40
During		1554	1.5	21.0	7.51	1.79	*	"	0.08
During		1557	3.0	21.1	7.55	1.68	*	"	0.07
During		1600	4.5	21.1	7.57	1.52	*	"	0.07
During		1604	6.0	21.1	7.52	1.69	*	brownish tint	0.07
During		1605	7.5	21.2	7.53	1.79	*	less particulate	0.08
During								"	
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-004	Lab: RECRA LabNet
Field ID #: M031-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	TEPH, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

COC #1540

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

* turbidity measured as negative number

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M034-A // SAMPLE TIME 0935

DATE(S): 11/04/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): LOCK & CAP INSTALLED

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.5 (LIST)

Depth to water measured from TOC (ft): Before Purging: 4.36

Minimum Purge Volume:
Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 8.14 ft. x 0.163 gal/ft = 4.0 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft.* ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)*	Other SAL	DO		
Initial		0920	0	21.0	8.13	0.798	(-10)	0.03	3.11	START	
During		0922	1	21.4	8.23	0.796	(-10)	0.03	2.82		
During		0925	2	21.4	8.13	0.772	(-10)	0.03	2.86		
During		0927	3	21.3	8.10	0.759	(-10)	0.03	2.94		
During		0929	4	21.4	8.11	0.766	(-10)	0.03	2.91		
During		0932	5	21.4	8.11	0.753	(-10)	0.03	2.77	STOP	
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-007

Lab: RECRA LAB NET

Field ID #: M034-A-R10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCB~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER: SLIGHTLY GRAY, CLEAR, STRONG ODOR, POSSIBLY PETROLEUM; FOAMY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DLuC / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M035-A / SAMPLE TIME 1040

DATE(S): 11/04/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 13.9
Depth to water measured from TOC (ft): Before Purging: 6.06

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 1.84 ft. X 0.163 gal/ft = 3.9 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		10:29	0	20.5	8.27	.703		
During		10:30	1	20.8	8.20	.711		
TC During		10:31	2	20.8	8.16	~~.731~~ .713		
During		10:32	3	20.8	8.14	.693		
During		10:34	4	20.7	8.12	.688		
During		10:35	5	20.8	8.12	.692		
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-008
Field ID #: M035-A-Q10
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Lab: RECRA LAB NET
Filtered? Y/N: For metals analysis only
Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPH~~, ~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER: ORANGE-BROWN, CLOUDY, NO ODOR, NO SHEEN

DOUBLE SAMPLE VOLUME FOR MS/MSD

Quality Control Samples:

Duplicated Sample Info: MS/MSD
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC / JP

PAGE 21 OF 51

SITE LOCATION: NAS Alameda	WELL NUMBER: M036-A @ 1230
DATE(S): 10 / 29 / 97	WELL TYPE (MONITORING, EXTRACTION, ETC.): M036-A Sample time 1230
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing ~~2.82~~

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.81

Depth to water measured from TOC (ft): Before Purging: 2.82

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.99 ft. X 0.163 gal/ft = 1.96 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Salinity %
Initial	~~1210~~	1210	0	20.7	6.47	10.4	909	Strong H_2S odor forming bubbles	0.45
During		1212	1	21.0	6.43	8.34	>999	odor	0.45
During		1214	2	21.0	6.42	7.76	731	petroleum odor?	0.42
During		1216	3	21.3	6.44	7.75	795	odor	0.42
During		1219	4	21.1	6.48	7.63	650	Bay Mud silt present in water	0.41
During		1221	5	21.3	6.42	7.78	643	water clearing up	0.42
During		1223	6	21.4	6.43	7.65	544		0.41
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-010	Lab: RECRA LabNet
Field ID #: M036-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Visible hydrocarbon sheen when pouring bottles
COC # 1540

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 QX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: CGLJP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M036-B
DATE(S): 11/13/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 100

Depth to water measured from TOC (ft): Before Purging: 2.46

Minimum Purge Volume:
Three-inch well 3 x 97.54 ft x 0.367 gal/ft = 107.4 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 110 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		950	0	18.2	6.30	12.7	3	cloudy brown	
During		958	22	18.3	6.32	12.8	*		
During		1002	44	18.2	6.35	12.7	1	clear	
During		1005	66	18.1	6.34	12.8	2	clear	
During		1008	88	18.0	6.35	12.9	2	clear	
During		1012	110	17.9	6.35	12.9	1	DO 2.72	
During									
After			Sample time 1020						

*CL = clear CO = cloudy TU = turbid * reads negative

Well Sampling

Sample #: 108-S02-011	Lab: Recra LabNet
Field ID #: M036-B-Q10	Filtered? ~~Y~~N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity,
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 102396 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC/JP

SITE LOCATION: NAS Alameda	WELL NUMBER: MW36-E @ 1345
DATE(S): 10/29/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 29.55

Depth to water measured from TOC (ft): Before Purging: 3.10

Minimum Purge Volume:

Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 26.45 ft. X 0.163 gal/ft = 4.32 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 13 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Salinity %
Initial		1309	0	18.6	7.07	32.2	*	light yellowish grey - slight fecing	2.01
During		1316	2.5	19.4	7.10	32.1	*	"	2.01
During		1320	5.0	18.5	7.09	33.7	*	"	2.12
During		1325	7.5	18.2	7.02	34.1	*	"	2.15
During		1330	10.0	18.2	7.02	33.7	*	"	2.12
During		1335	13.0	18.2	7.05	33.8	*		2.12
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-012	Lab: RECKA Laboratory
Field ID #: MD36-E-Q10	Filtered? (Y)N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen
COC # 1540	

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

* turbidity measured as negative number

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC / JP

Page 1 of 1

Site Location: NAS Alameda

Well Number: M037-A

Date(s): 11 / 5 / 97

Well Type (Monitoring, Extraction, etc.): Monitoring

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 17.95

Depth to water measured from TOC (ft): Before Purging: 5.10

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 12.85 ft. x 0.163 gal/ft = 6.2 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		0940	0	19.6	6.89	18.4	*	TU greyish
During		0945	1.25	19.7	6.91			color slight
During			2.50					odor
During			3.75					"
During			5.00					"
During			6.25					"
During								
After		1000	sample time					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-013

Field ID #: M037-A-Q10

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Lab:

Filtered? Y/N: For metals analysis only

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Previous measurements from 10/30/97 may be useful. (attached)

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/95 OX KH

* Horiba shuts off when try to get turbidity. We tried to coax the [illegible]

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / TK

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M037-B

SAMPLE TIME: 1540

DATE(S): 11/10/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: GRUNDFOS SUBMERSIBLE PUMP ~~Disposable bailer~~

MEASUREMENT REFERENCE DATUM: Top of Casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 87.2

Depth to water measured from TOC (ft): Before Purging: 5.49

Minimum Purge Volume:

Three-inch well 3 x 81.71 ft x 0.367 gal/ft = 90 gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged ~95 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO	
Initial		1455	0	—	—	—	—		—	DRAWS DOWN
During		1507	15	17.8	7.30	6.68	(-10)	0.35	3.35	FAST, HAD
During		—	30	—	—	—	—	—	—	TO SHUT OFF
During		1513	45	17.8	7.13	6.71	(-10)	0.35	4.07	
During		1517	60	17.8	7.14	6.73	"	0.36	3.68	
During		1522	75	17.7	7.04	6.74	"	0.36	3.36	
During		1528	90	17.7	6.98	6.75	"	0.36	3.53	FINISH
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-014

Lab: RECRA LAB NET

Field ID #: M037-B-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPH~~, ~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

~~CLEAR~~ ~~CLEAR~~ CLEAR, H_2S ODOR. SUBSTANTIAL DRAWDOWN AT 5 gal/min; SHUT OFF + LOWER PUMP + PURGE @ 4 gpm

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / SLC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M037-E / SAMPLE TIME 1540

DATE(S): 10/30/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 25.25
Depth to water measured from TOC (ft): Before Purging: 8.21

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 17.04 ft. X 0.163 gal/ft = 8.3 ≈ 4 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		1507	0	20.8	6.68	35.2	45	2.23	9.10		
During		1515	2	19.2	6.78	37.5	(-10)	2.38	3.53		
During		1519	4	18.7	6.79	37.6	25	2.34	3.04		
During		1523	6	18.7	6.82	37.9	103	2.40	3.05		
During		1530	8	18.4	6.81	37.9	532	2.41	3.08		
During		1533	9	18.3	6.81	37.7	300	2.40	2.93		
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-015
Lab: RECRA LAB NET
Field ID #: M037-E-Q10
Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9
Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER CLOUDY, GRAY-BROWN, NO ODOR OR SHEEN

Quality Control Samples:

Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JA

PAGE 1 OF 2

SITE LOCATION: NAS Alameda

WELL NUMBER: MO38-A

DATE(S): 10/30/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): Monitoring

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15

Depth to water measured from TOC (ft): Before Purging: 8.27

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 6.73 ft. X 0.163 gal/ft = 3 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged ___ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1510	0	22.3	6.73	31.3	—		
During		1512	1	22.8	6.74	26.9	—		
During		1514	2	22.2	6.76	30.6			
During			3						
During									
During									
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-016 @ 1635

Lab: RECRA LAB NET

Field ID #: MO38-A-Q10

Filtered? ON: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter inoperative. Water is cloudy, black with a slight petroleum odor.

1515 Bailed dry after 2 gallons/2 purge volumes.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Sample 108-S02-016 collected 10/30/97/1635 for VOCs Anions and Nitrate/Nitrite as Nitrogen. Due to poor recovery/yield remainder of sample aliquot will be collected/submitted at later date.

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2 casing = 0.163 gal./ft.
V_3 casing = 0.367 gal./ft.
V_4 casing = 0.653 gal./ft.
$V_{4.5}$ casing = 0.826 gal./ft.
V_6 casing = 1.47 gal./ft.
V_8 casing = 2.61 gal./ft.

Frank WMP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by: DWR/TA

Project No. 200-42-202
CTO: 108

Page 2 of 2

Site Location: NAS Alameda	Well Number: M038-A
Date(s): 11/06/97	Well Type (Monitoring, Extraction, etc.): SAMPLE TIME 0840 ON 11/07/97
Purging Equipment: Disposable bailer	Measurement Referen: Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 15
Depth to water measured from TOC (ft): Before Purging: 10.33

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 4.67 ft. X 0.163 gal/ft = 2.323 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total Purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO		
Initial		1625	0	—	—	—	—	—	—	START	
During		1626	0.5	22.0	6.49	30.1	NOT READING	1.87	—		
During		1628	1.0	22.2	6.52	30.2	115	1.88	2.19		
During		1632	~~1.5~~ 1.25	21.8	6.57	31.9	180	2.00	2.36	BAILS	DRY
During			2.0								
During			2.5								
During			3.0								
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0016	Lab: RECRA LAB NET
Field ID #: M038-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

OLIVE GREEN, FOAMY WATER, ODOR, NOT SURE WHAT.
BAILS DRY (RECOVERS VERY SLOW). DRY @ ~1.25 gal.
VISIBLE SHEEN ON WATER SURFACE

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info: REQUIRES REPEATED TRIPS DURING DAY; BAILS DRY DURING SAMPLING AFTER LESS THAN 2 LITERS, UNABLE TO COLLECT FULL SAMPLE IN ONE DAY

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 102398 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: M038-A
Date(s): 11/10/97 11-11-97 11-12-97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.90

Depth to water measured from TOC (ft): Before Purging: 13.13

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 1.77 ft. X 0.163 gal/ft = 0.87 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 1.00 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1230	0					
During		bailed dry @ 1.00 gallons						
During								
During								
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0102	Lab: Recra LabNet
Field ID #: M038-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

11/11/97 - 1 L amber ~~SVOA taken~~ TDS/AIK
1 500mL poly unpreserved Anions/NITR-N
11/12/97 1 L ~~pol~~ amber SVOA taken
11/13/97 1 L amber PCB/Pest taken

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info: 108-S02-103 on 11-12-97 for SVOC

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M038-B || SAMPLE TIME 1455

DATE(S): 11/07/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: GRUNDFOS SUBMERSIBLE ~~Disposable bailer~~ PUMP

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 80

Depth to water measured from TOC (ft): Before Purging: 11.02

Minimum Purge Volume:

~~Three-inch well~~ 3 x 68.98 ft x 0.367 gal/ft = 80 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ~84 gallons

	~~Time Since Purging Started (min)~~ WATER LEVEL	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial	11.02	1409	0	18.4	6.91	30.2	(-10)	1.88	4.55	SALISTA	CT
During	—	1415	15	18.1	6.81	30.7	"	1.92	4.75		
During	18.5	1420	30	18.4	6.76	30.4	"	1.89	4.16		
During	18.4	1425	45	~~17.3~~	6.90	30.9	"	1.93	3.85		
During	—	1430	60	18.5	6.84	~~DUE 5 3 30.7~~	~~CLOUDY~~	~~1.89~~	~~3.09~~	~~DUE~~	
During	—	1435	75	18.7	6.76	30.7	"	1.91	3.29		
During	—	1438	~84	—	—	—	—	—	—	SHUT OFF	PUMP
After	11.5	1445									

*CL = clear CO = cloudy TU = turbid EXCELLENT RECOVERY.

Well Sampling

Sample #: 108-S02-017

Lab: RECRA LAB NET

Field ID #: M038-B-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~, ~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER: CLEAR, ONLY TRACE FOAM, NO ODOR

Quality Control Samples:

Duplicated Sample Info: ~~M038-~~ 108-S02-018 (FIELD DUP FOR M038-B-Q10D)

Blank Sample Info:

Other Sample Info: FIELD DUP TIME 1510

VOC'S + METALS ONLY

SAMPLES COLLECTED WITH DISPOSABLE BAILER

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-4L-202
CTO:108

Well Purging & Sampling Log

Sample(s) collected by: JM

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M038-E

DATE(S): 10/30/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): MONITORING

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 25

Depth to water measured from TOC (ft): Before Purging: 10.19

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 14.82 ft. X 0.163 gal/ft = 7.2 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS				Other
				Temp (°C)	pH	Conductivity (~~umhos/cm~~) mS/cm	Turbidity (NTUs)	
Initial		1540	0	20.6	6.88	39.6		
During		1543	2.5	20.5	6.87	40.8		
During		1547	5.0	20.7	6.85	40.6		
During		1550	7.25	20.5	6.86	40.6		
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-019@1600

Lab:

Field ID #: M038-E-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter is inoperative. Water grey ish green with no odor or sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 102396 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM

Page 1 of 1

Site Location: NAS Alameda	Well Number: M039-A
Date(s): 10/30/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.0

Depth to water measured from TOC (ft): Before Purging: 12.90

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 2.10 ft. x 0.163 gal/ft = 1.0 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*
Initial		1248	0	21.0	6.62	7.70	—	
During		1252	0.25	20.9	6.54	6.78		
During		1259	0.5	20.9	6.53	6.50		
During		1257	1.0	20.9	6.52	6.48		
During								
During								
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-020	Lab:
Field ID #: M039-A-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, ~~TPH~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter inoperative. Water is cloudy, black, with a petroleum sheen and heavy petroleum odor.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / TK

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M039-B

SAMPLE TIME: 1225

DATE(S): 11/10/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): MONITORING

PURGING EQUIPMENT: GRUNDFOS SUBMERSIBLE PUMP ~~Disposable bailer~~

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 62.8

Depth to water measured from TOC (ft): Before Purging: 12.26

Minimum Purge Volume:
Three-inch well 3 x 50.54 ft x 0.367 gal/ft = 57 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	~~Time Since Purging Started (min)~~ WTR LVL	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO	
Initial	12.26	1146	0	19.1	6.32	28.1	(-10)	1.74	5.40	
During	—	1149	10	19.0	6.55	32.4	—	2.03	5.27	
During	—	1152	20	19.0	6.63	32.6	—	2.04	5.78	
During	—	1155	30	19.0	6.68	32.0	(-10)	2.01	5.08	
During	—	1158	40	19.1	6.70	32.3	(-10)	2.02	4.52	
During	—	1201	50	19.1	6.72	32.4	(-10)	2.03	5.05	
During	—	1204	60	19.0	6.72	32.5	(-10)	2.04	4.80	SHUT OFF PUMP
After	12.47	1240								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-021

Lab: RECRA LAB NET

Field ID #: M039-B-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPH~~, ~~TEPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

MOSTLY CLEAR, FIZZES WHEN POURED

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WIP: Well P&S 100396 OX KH

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PROJECT NO. 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M039-E
DATE(S): 10/30/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 21.5

Depth to water measured from TOC (ft): Before Purging: 12.79

Minimum Purge Volume:
- Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 5.71 ft. x 0.163 gal/ft = 4.25 gallons
- Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1415	0	20.5	6.83	9.5	—		
During		1419	1.5	20.8	6.85	9.7	—		
During		1421	3.0	20.8	6.90	9.7	—		
During		1423	4.25	20.6	6.87	9.7	—		
During									
During									
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-022@1430	Lab:
Field ID #: M039-E-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~[illegible]~~, ~~[illegible]~~,
2 ml zinc acetate plus NaOH	~~[illegible]~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Turbidity meter inoperative. Water is cloudy, black, with a strong petroleum odor and sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC/TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M04-05 / SAMPLE TIME ~~0925~~ 1025
DATE(S): 11/03/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.5

Depth to water measured from TOC (ft): Before Purging: 5.49

Minimum Purge Volume:
- Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 8.01 ft. x 0.163 gal/ft = 3.9 x 4 gals gallons
- Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		10:11	0	22.5	6.83	0.755	(-10)	START
During		10:13	1	22.6	6.79	0.761	↓	
During		10:15	2	22.7	6.78	0.759	↓	
During		10:16	3	22.6	6.79	0.749	↓	
During		10:17	4	22.6	6.75	0.743	↓	
During		10:18	5	22.5	6.75	0.743	✓	
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-001	Lab: RECRA LAB NET
Field ID #: M04-05-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

WATER IS PALE BROWN, NON TURBID, NO ODOR, NO SHEEN.
CLEARS WITH FILTERING

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
- r = well radius in feet
- h = ht. of water col. in feet
- vol. of col. = $\pi r^2 h$
- 7.48 gal./ft.^{3}
- V_2" casing = 0.163 gal./ft.
- V_3" casing = 0.367 gal./ft.
- V_4" casing = 0.653 gal./ft.
- $V_{4.5}$" casing = 0.826 gal./ft.
- V_6" casing = 1.47 gal./ft.
- V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M04-06 // SAMPLE TIME 1200

DATE(S): 11/03/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): MONITORING

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.5

Depth to water measured from TOC (ft): Before Purging: 4.67

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons

Two-inch well 3 X 9.83 ft. X 0.163 gal/ft = 4.31 ~~5~~ gallons

Four-inch well 3 X ____ ft. X 0.653 gal/ft.³ ____ gallons

Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		1146	0	19.2	6.72	0.732	(-10)	0.03	3.08		
During		1148	1	19.3	6.73	0.736	6	"	3.02		
During		1149	2	19.3	6.86	0.787					
During		1152	3	19.5	6.91	0.829					
During		1154	4	19.6	6.87	0.826	206				
During		1156	5	19.7	6.76	0.772	435				
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-002	Lab: RECRA LAB NET
Field ID #: M04-06-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~PCBs~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

WATER: DARK BROWN, MOD TURBID, NO SHEEN, NO ODOR
FILTERS CLEAR

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M04-07 // SAMPLE TIME 1110

DATE(S): 11/03/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.5

Depth to water measured from TOC (ft): Before Purging: 5.67

Minimum Purge Volume:

Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons

Two-inch well 3 X 7.33 ft. x 0.163 gal/ft = 3.5 ≈ 4 gallons

Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1050	0	22.4	7.36	2.46		START PURGE
During		1052	1	23.3	7.32	2.43		
During		1055	2	23.3	7.36	2.48		
During		1057	3	23.3	7.38	2.47		
During		1059	4	23.2	7.37	2.49		
During		1100	5	23.2	7.37	2.46	56	
During								
After								

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-003

Lab: RECRA LAB NET

Field ID #: M04-07-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER - YELLOWISH BROWN, NO ODOR, NO SHEEN, SLIGHTLY TURBID. FILTERS CLEAR

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Project No.: 200-42-202
CTO: 108

Sample(s) Collected by: [illegible]

Page 1 of 1

Site Location: NAS Alameda	Well Number: MC5-[illegible]
Date(s): 11/13/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.77

Depth to water measured from TOC (ft): Before Purging: 7.88 5.89 = water column

Minimum Purge Volume:

Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 5.89 ft. x 0.163 gal/ft = 2.88 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft.³ ____ gallons
Total purged 4 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		900	0	19.7	6.27	32.7	448	Sulfur odor
During		903	1	19.9	6.63	33.0	321	"
During		904	2	19.8	6.94	32.5	311	"
During		905	2 1/2	19.9	7.08	31.0	307	"
During		910	3 1/2	19.8	7.22	29.6	Log #	"
During		911	3 3/4	19.8	7.30	29.0	Log #	"
During		912	4	19.8	7.30	29.0	Log #	"
After	Sample Time = 920							

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-003	Lab:
Field ID #: MD5-01-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TP, SC

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SITE LOCATION: NAS Alameda	WELL NUMBER: MW5-[illegible]
DATE(S): 11 / 3 / 97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) [illegible]

Depth to water measured from TOC (ft): Before Purging: 3.57

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X [illegible] ft. X 0.163 gal/ft = [illegible] gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		955	0	23.1	7.17	23.9	*	CL Clear, no [illegible]
During		956	1	23.5	7.33	10.5	*	"
During		957	2	23.7	7.13	18.1	*	
During		959	3	23.4	7.44	7.55	*	"
During		1002	4	23.4	7.43	7.00	*	Slight odor, [illegible]
During		1004	5	24.0	7.43	6.04	*	
During								
After	Sample Time = 1010							

*CL = clear CO = cloudy TU = turbid * = neg. # (-10)

Well Sampling

Sample #: 108-S05-0084	Lab: RECRA LAB NET
Field ID #: M05-02-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, JP

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SITE LOCATION: NAS Alameda	WELL NUMBER: MW5-05-B
DATE(S): 11/4/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 11.31
Depth to water measured from TOC (ft): Before Purging: 5.72

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = 2.45 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 3.75 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other (Color, Odor, Viscosity, etc.)
Initial		1257	0	22.5	7.00	.725	*	Strong odor
During		1259	.75	22.5	7.0	.849	*	"
During		1302	1.50	21.9	7.21	.723	*	"
During		1304	2.25	22.7	7.19	.758	*	"
During		1305	3.00	22.6	7.07	.732	*	"
During		1306	3.75	22.6	7.01	.701	*	"
During								
After		Sample Time = 1310						

*CL = clear CO = cloudy TU = turbid * = neg # (-10)

Well Sampling

Sample #: 108-S05-005	Lab: RECRA LAB
Field ID #: MW5-05-G10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

DTD = 114 ppm in well − Background = 1.7 ppm

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Project No 200-42-202
CTO: 108

Sample(s) Collected by: SC, JP

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Site Location: NAS Alameda	Well Number: MC5-04
Date(s): 11/4/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.01

Depth to water measured from TOC (ft): Before Purging: 6.51

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 8.50 ft. X 0.163 gal/ft = ___ gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged ___ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1015	0	22.8	7.33	6.99	*		
During		1018	1	23.3	7.33	6.59	*		
During		1020	2	23.0	7.36	6.05	*		
During		1023	3	23.2	7.30	5.67	*		
During		1025	4	23.3	7.29	5.55	*		
During		1026	5	23.4	7.31	5.08	*		
During									
After	Sample time = 1030								

*CL = clear *CO = cloudy TU = turbid α = neg # (-10)

Well Sampling

Sample #: 108-S05-006	Lab: RECRA LAB
Field ID #: M05-04-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

PID - Background = 0.2 ppm
PID = 0.2 ppm

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: [illegible]

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SITE LOCATION: NAS Alameda

WELL NUMBER: M05-05

DATE(S): 11/4/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.74

Depth to water measured from TOC (ft): Before Purging: 7.12

Minimum Purge Volume:

Three-inch well	3 x	___ ft x 0.367 gal/ft =	___	gallons
Two-inch well	3 x	6.62 ft. x 0.163 gal/ft =	3.23	gallons
Four-inch well	3 x	___ ft. x 0.653 gal/ft. =	___	gallons

Total purged 5.00 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		916	0	20.1	7.50	4.66	-0	Odor	CL
During		918	1	20.5	7.61	2.02	108	"	"
During		920	2	20.5	7.55	2.32	369	"	"
During		921	3	20.6	7.49	2.91	339	"	"
During		923	4	20.6	7.48	2.65	360	"	"
During		925	5	20.7	7.45	2.87	349	"	"
During									
After		Sample Time = 0935							

*CL = clear CO = cloudy TU = turbid -X = neg. ft (-10)

Well Sampling

Sample #: 108-S05-007	Lab: RCRA LAB
Field ID #: M03-05-Q10	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, Metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

PID = 0.6 ppm Background = 0.2 ppm

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JP SC

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Site Location: NAS Alameda

Well Number: MC5-06

Date(s): 11/3/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 5.17.3 ~.21

Depth to water measured from TOC (ft): Before Purging: 13.38

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 24.63 ft. x 0.163 gal/ft = 4.01 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1030	0	22.1	7.57	5.48	*	CC
During		1032	1	22.4	8.11	1.03	40	CC
During		1033	2	22.1	7.98	1.04	406	CC "
During		1035	3	22.5	7.90	1.23	827	CC "
During		1036	4	22.5	7.78	2.39	512	CC "
During		1037	5	22.4	7.88	1.73	[illegible]	CC "
During								
After	Sample Time = 1045						972	

*CL = clear CO = cloudy TU = turbid a = neg # (-10)

Well Sampling

Sample #: 108-S05-008

Lab: DFCRA LAB NET

Field ID #: MC5-06-010

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JP, SC

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Site Location: NAS Alameda

Well Number: MC5-[illegible]

Date(s): 11/3/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 16.99

Depth to water measured from TOC (ft): Before Purging: 7.13

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X [illegible] ft. x 0.163 gal/ft = 4.5 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1132	0	22.4	7.28	2.27	*	clear	CO
During		1133	1	22.5	7.27	.791	*	"	"
During		1135	2	22.7	7.18	.859	*	"	"
During		1136	3	22.8	7.20	.955	*	"	"
During		1140	4	22.8	7.14	1.83	60	"	"
During		1141	5	22.8	7.17	1.65	879	"	"
During									
After	Sample	Time	1145						

*CL = clear CO = cloudy TU = turbid * = neg # (-10)

Well Sampling

Sample #: 108-S05-009

Lab: DECON LAB NET

Field ID #: MC5-07-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JP SC

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Site Location: NAS Alameda	Well Number: MOS-[illegible]
Date(s): 1/3/97	Well Type (Monitoring/Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.92

Depth to water measured from TOC (ft): Before Purging: [illegible]

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X [illegible] ft. X 0.163 gal/ft = [illegible] gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1206	0	23.8	7.42	2.06	*	Silt	
During		1207	1	23.4	7.28	818	*		
During		1210	2	24.1	7.31	975	551		
During		1212	3	24.0	7.46	1.29	*		
During		1213	4	23.7	7.40	1.44	999>		
During		1215	5	23.5	7.41	1.38	999>		
During									
After		Sample	Time =			1225			

*CL = clear CO = cloudy TU = turbid * = neg # (-10)

Well Sampling

Sample #: 108-S05-010	Lab: RECRA LAB NET
Field ID #: MOS-OR-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^{2}h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC/JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: MC5-C9
Date(s): 11/4/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.47

Depth to water measured from TOC (ft): Before Purging: 7.33

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X ____ ft. X 0.163 gal/ft = 3.6 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 5.00 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		839	0	20.3	6.20	1.73	*	1" odor	TU
During		840	1	21.0	6.63	1.72	906	"	TU
During		841	2	21.1	6.88	1.73	853	"	"
During		843	3	21.2	7.09	1.76	890	"	"
During		845	4	21.3	7.19	1.74	876	"	"
During		847	5	21.3	7.30	1.75	802	"	"
During									
After		Sample Time = 855							

*CL = clear CO = cloudy TU = turbid * = no #

Well Sampling

Sample #: 108-S05-011	Lab: RECRA LAB
Field ID #: MC5-C9-Q1C	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, AA Ions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by: JC, TP

Project No: 200-42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: MC5-1C
Date(s): 11/3/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.52

Depth to water measured from TOC (ft): Before Purging: 7.44

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X ____ ft. X 0.163 gal/ft = 3.43 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1430	0	[illegible]	8.52	[illegible]	[illegible]	CL*	
During		1431	1	20.1	8.17	.206	137	"	"
During		1432	2	20.1	8.08	.223	462	"	"
During		1435	3	20.2	8.03	.226	466	"	"
During		1437	4	20.1	8.01	.219	462	"	"
During		1440	5	20.2	8.01	.253	358	"	"
During									
After	Sample	Time		= 14	45				

*CL = clear CO = cloudy TU = turbid ∞ = noq #(-10)

Well Sampling

Sample #: 108-S05-012	Lab: RFCRA LAB NFT
Field ID #: M05-10-0-010	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) collected by: [illegible]

Project No: 200-42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: MOS-11
Date(s): 11/3/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.7

Depth to water measured from TOC (ft): Before Purging: 3.18

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 6.54 ft. x 0.163 gal/ft = 3.42 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1352	0	19.9	7.16	18.6	*	Color	CL
During		1354	1	19.9	7.53	7.50	*	"	"
During		1355	2	19.9	7.34	15.8	*	"	"
During		1356	3	19.9	7.34	11.9	746	"	"
During		1357	4	19.9	7.36	10.6	999>	"	"
During		1359	5	19.9	7.36	16.6	999>	"	"
During									
After	SAMPLE TIME = 1410								

*CL = clear CO = cloudy TU = turbid * = mag number (-10)

Well Sampling

Sample #: 108-S05-001	Lab: RFCRA LAB NET
Field ID #: MOS-11-010	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) collected by: JP, SC

Project No.: 200-42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: M05-12
Date(s): 11/3/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.30

Depth to water measured from TOC (ft): Before Purging: 5.17

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 7.83 ft. X 0.163 gal/ft = 3.83 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft.² ____ gallons
Total purged 4.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1315	0	20.4	7.71	14.96	*	no odor	CL
During		1316	1	20.3	7.52	4.10	*	"	"
During		1317	1.5	20.1	7.33	5.56	*	"	"
During		1318	2	20.2	7.34	5.12	*	"	"
During		1321	3.5	20.2	7.33	6.52	*	"	"
During		1324	4.5	20.1	7.28	6.58	527		
During									
After		Sample Time = 1335							

*CL = clear CO = cloudy TU = turbid * = neg number (-10)

Well Sampling

Sample #: 108-S05-002	Lab: RECRA LAB NET
Field ID #: M05-12-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, TD

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Site Location: NAS Alameda

Well Number: MCBS-C1

Date(s): 11 / 4 / 97

Well Type (Monitoring, Extraction, etc.): Monitoring

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.[illegible]

Depth to water measured from TOC (ft): Before Purging: 7.75

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 3.00 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1107	0	21.7	7.43	3.93	2	N [illegible]	[illegible]
During		1108	.75	21.5	7.43	1.31	841	"	[illegible]
During		1109	1.50	21.7	7.15	2.44	999+	"	"
During		1111	2.25	21.6	7.04	5.06	999+	"	"
During		1113	2.50	21.8	7.00	5.20	999+	"	"
During			~~2.75~~					"	
During		1115	3.00	21.7	7.00	6.37	999+	"	"
After		Sample time			1120				

*CL = clear CO = cloudy TU = turbid * = -neg # (-10)

Well Sampling

Sample #: 108-S05-016	Lab: RECRA LAB
Field ID #: MCSSB-01-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: [illegible], JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M-05HW-01
DATE(S): 11/4/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.26

Depth to water measured from TOC (ft): Before Purging: 5.22

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
- Four inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 5.00 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1145	0	22.5	7.[illegible]	.243	*	No color	CL
During		1146	1	23.4	7.58	.716	*	"	"
During		1147	2	23.4	7.55	.735	243	"	"
During		1148	3	23.5	7.54	.800	280	"	"
During		1150	4	23.2	7.37	.773	300	"	"
During		1152	5	23.2	7.62	.839	280	"	"
During									
After		Sample	Time	=	1200				

*CL = clear CO = cloudy TU = turbid * = neg # (-10)

Well Sampling

Sample #: 108-S05-0145	Lab: RECRA LAB
Field ID #: M05HW-01-010	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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Well Purging & Sampling Log

Project No. 200-42-202
CTO: 108

Sample(s) collected by: DWC/TA

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Site Location: NAS Alameda

Well Number: M06-06 // Sample Time 1255

Date(s): 11/04/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

LOCK/CAP ADDED

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.65

Depth to water measured from TOC (ft): Before Purging: 4.54

Minimum Purge Volume:

Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 8.11 ft. X 0.163 gal/ft = 4.0 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO	
Initial		1241	0	22.3	8.03	0.821	(-10)	0.04	2.58	START
During		1245	1	22.5	8.14	0.625	(-10)	0.02	2.81	
During		1247	2	22.5	8.06	0.986	(-10)	0.04	2.76	
During		1249	3	22.5	8.04	1.27	9	0.05	3.28	
During		1251	4	22.5	7.98	1.66	28	0.07	3.00	
During		1253	5	22.5	7.99	1.52	32	0.07	2.73	
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S06-011

Lab: RECRA LAB NET

Field ID #: M06-06-Q10

Filtered? ON: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCB~~, ~~TPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER IN CRISTY BOX; SUBSTANTIAL SHEEN IN IT.
WATER IN WELL: SLGT GRAY, WITH DARK FLAKES SUSPENDED; NO ODOR OR SHEEN

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

CAP NEEDS BOLTS

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 102396 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by: TA/DC

Project No: 200-42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: MO7A-03 / Sample Time 1425
Date(s): 11/04/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.5

Depth to water measured from TOC (ft): Before Purging: 5.40

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 10.1 ft. X 0.163 gal/ft = 4.7 ≈ 5 gal gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO
Initial		1408	0	22.8	7.92	36.2		2.38	
During		1411	1	22.9	7.57	37.0	(-10)	2.30	1.37
During		1414	2	22.6	7.51	37.9	(-10)	2.42	2.30
During		1417	3	22.3	7.81	38.5	(-10)	2.46	1.63
During		1420	4	21.8	7.77	39.5	—	2.54	1.92
During		1424	5	21.3	7.76	42.2	—	2.72	—
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-001	Lab: RECRA LAB NET
Field ID #: ~~MO7A-03-Q10~~	Filtered? ~~Y~~/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and also	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen
~~MW7A-03-Q10~~	
MO7A-03-Q10	

WATER: OLIVE GREEN, DARK, VERY STRONG INTERMITTENT ODOR. (PETROLEUM). DRAWDOWN WITH SLOW RECOVERY

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DUC/TA

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Site Location: NAS Alameda

Well Number: MO7A-04 // Sample time 1115

Date(s): 11/06/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 6.75

Depth to water measured from TOC (ft): Before Purging: 2.93

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 2.93 ft. X 0.163 gal/ft = 1.4 ≈ 2.0 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 2 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: GAL	DO		
Initial		1103	0.5	21.5	7.06	11.3	(-10)	0.63	2.82		
During		1106	~~0.5~~ 1.0	21.7	6.85	10.4	"	0.58	2.82		
During		1107	1.5	21.7	6.79	10.8	"	0.61	2.95		
During		1110	2.0	21.8	6.77	10.9	"	0.61	2.71		
During			~~2.0 Stop~~								
During											
During											
After											

*CL = clear CO = cloudy TU = turbid GOOD RECOVERY; MINOR DRAWDOWN

Well Sampling

Sample #: 108-S07-006	Lab: RECRA LAB NET
Field ID #: MO2A-04-Q10 *	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

WATER: LIGHT GREENISH BROWN, FOAMY, MILD ODOR, NO SHEEN

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

NOTE: WELL TAG SAYS MW07A-04, (PROBABLY ERROR ON THE TAG)

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/98 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC / TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M07A-09 // SAMPLE TIME 1020

DATE(S): 11/06/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 11.0

Depth to water measured from TOC (ft): Before Purging: 2.59

Minimum Purge Volume:
- Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
- Two-inch well 3 X 8.41 ft. X 0.163 gal/ft = 4.123 gallons
- Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		0932	0	20.9	6.46	28.0	—		2.63		
During		934	1	21.4	6.51	31.6					
During		936	2	21.6	6.54	31.6					
During		937	3	21.7	6.60	35.9					
During		939	4	21.7	6.64	38.9					
During			~~5~~								
During		0940	BAILS	DRY	@	4.5 gal					
After											

*CL = clear CO = cloudy TU = turbid

0950 - WATER LVL = 10.7
0955 = 10.5

Well Sampling

Sample #: 108-S07-001	Lab: RECRA LAB NET
Field ID #: M07A-09-QID	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Test HCB~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

WATER: DARK GREENISH GRAY, TURBID WITH FINES, MODERATE HYDROCARBON (?) ODOR. BAILS DRY, RECOVERS SLOWLY (AN OBNOXIOUS WEEPER)

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, JP

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Site Location: NAS Alameda	Well Number: ~~M07A~~ M07B-01
Date(s): 11/5/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 11.21
Depth to water measured from TOC (ft): Before Purging: 6.00

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 5.21 ft. X 0.163 gal/ft = 2.55 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 2.75 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp ~~(°C)~~ °F	pH	Conductivity (~~µmhos/cm~~) mS/cm	Turbidity (NTUs)	Other	
Initial		1310	0	69.0	5.78	2250	NA	Black	CL
During		1311	0.5	68.7	5.85	1960	NA	Clear	CL
During		1312	1.0	68.8	5.93	2010	NA	Clear	CL
During		1314	1.5	68.4	5.96	2050	NA	Clear	CL
During		1316	2.0	68.4	6.00	2050	NA	Clear	CL
During		1317	2.75	68.3	5.91	2090	NA	"	"
During		1325	Sample time						
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S21-001	Lab: Recra LabNet
Field ID #: M07B-01-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCB, TPH~~,
2 ml zinc acetate plus NaOH	~~TPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

~~Duplicated Sample Info:~~ → MS/MSD taken
~~Blank Sample Info:~~
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by: DWC/TJ

Project No.: 200 42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: M07C-07 // Sample Time 1050
Date(s): 11/07/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 13.5
Depth to water measured from TOC (ft): Before Purging: 4.28

Minimum Purge Volume:
Three-inch well 3 x ft x 0.367 gal/ft = gallons
Two-inch well 3 x ft. x 0.163 gal/ft = 4.5 ≈ 5 gallons
Four-inch well 3 x ft. x 0.653 gal/ft. = gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO		
Initial		1029	0	19.2	6.60	1.22	(-10)	0.05	3.67		
During		1031	1	19.6	6.56	1.23	(-10)	0.05	3.55		
During		1033	2	19.6	6.58	1.23	21	0.05	3.73		
During		1036	3	19.6	6.61	1.22	129	0.05	3.55		
During		1039	4	20.0	6.61	1.21	109	0.05	3.54		
During		1041	5	20.1	6.64	1.19	321	0.05	3.43		
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SZZ-001	Lab: RECRA LAB NET
Field ID #: M07C-~~07~~07-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

LT BROWN, CLOUDY, NO ODOR/SHEEN; FAIRLY GOOD RECOVERY

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DUC/TA

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: MO7C-08 // SAMPLE TIME 0955

DATE(S): 11/07/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): MONITORING

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.5

Depth to water measured from TOC (ft): Before Purging: 4.36

Minimum Purge Volume:

Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons

Two-inch well 3 X 9.14 ft. X 0.163 gal/ft = 4.5 ≈ 5 gallons

Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons

Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		0935	0	20.8	5.82	0.675	(-10)	0.02	4.21	START	
During		0937	1	21.3	6.17	0.371	94	0.01	3.36		
During		0939	2	21.5	6.25	0.362	20	"	3.36		
During		0942	3	21.7	6.28	0.402	54	"	2.98		
During		0944	4	21.7	6.37	0.416	49	"	3.15		
During		0946	5	21.7	6.42	0.429	35	"	3.01		
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S22-002

Lab: RECRA LAB NET

Field ID #: MO7C-08-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

LIGHT BROWN, CLOUDY NO ODOR OR SHEEN, ~~NO~~ MINOR DRAWDOWN, FULL OF PLANT DEBRIS; RECOVERS FAIRLY WELL

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TA / DC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M09-06 | SAMPLE TIME 1530

DATE(S): 11/05/97

WELL TYPE (MONITORING, EXTRACTION, ETC.): (SHATTERED COVER PLATE)

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.0

Depth to water measured from TOC (ft): Before Purging: 6.67

Minimum Purge Volume:
- Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
- Two-inch well 3 x 7.33 ft. x 0.163 gal/ft = 3.6 x 4 gallons
- Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
- Total purged 4 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO	
Initial		1517	0	22.1	7.49	0.352	(-10)	0.04	4.15	START
During		1519	1	22.0	7.45	0.354	"	"	4.16	
During		1521	2	22.3	7.45	0.348	33	"	4.09	
During		1523	3	22.4	7.43	0.351	99	"	4.22	
During		1526	4	22.4	7.43	0.350	89	"	4.17	
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S09-001

Lab: RECRA LAB NET

Field ID #: M09-06-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

CLEAR AT FIRST, CLOUDS UP (LIGHT BROWN) AFTER ~ 1.5 VOLS. NO ODOR, SHEEN, DRAWDOWN. SOME FINE SAND IN WATER

Quality Control Samples:

Duplicated Sample Info: FIELD DUP: 108-S09-002 (M09-06-Q10D)

Blank Sample Info: (M09-06-Q10 D) TIME 1545

Other Sample Info: FIELD DUP = VOC'S + METALS ONLY

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JC JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: 1IC-C1
DATE(S): 11/4/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.16

Depth to water measured from TOC (ft): Before Purging: 4.75

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 4.57 ft. x 0.163 gal/ft = 4.57 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5.00 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1340	0	19.5	7.59	.750	*	NO COLOR	CL
During		1343	1	19.6	7.72	1.40	*	"	CL
During		1345	2	19.4	7.58	.744	*	"	CL
During		1347	3	19.2	7.55	.552	*	"	"
During		1349	4	19.0	7.80	.865	*	"	"
During		1351	5	19.1	7.64	.973	*	"	"
During									
After			Sample Time			1400			

*CL = clear CO = cloudy TU = turbid * = neg # (-10)

Well Sampling

Sample #: 108-S10-001	Lab: RECRA
Field ID #: M10-01-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, Metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 102396 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TQ/JP

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Site Location: NAS Alameda

Well Number: M101-A

Date(s): 11/7/97

Well Type (Monitoring, Extraction, etc.): Monitoring

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) ~~7.2~~ 12.55

Depth to water measured from TOC (ft): Before Purging: 7.24

Minimum Purge Volume:

Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 5.31 ft. x 0.163 gal/ft = 2.60 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		0942	0	20.2	7.02	2.53	*	floating organic black matter	Cl
During		0949	0.5	20.6	6.96	2.11	*	"	Cl
During		0950	1.5	20.5	6.97	2.04	*	"	Cl
During		0952	2.0	20.5	6.98	2.07	*	"	Cl
During		0953	2.5	20.7	7.04	2.42	*	"	Cl
During		0954	3.0	20.8	7.01	2.29	*	"	
During									
After			Sample time 1000						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S14-001

Lab:

Field ID #: M101-A-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

PID battery low - would not take reading so respirators worn

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

* turbidity measured as negative number

U&A | Urbe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC | JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: ~~MW1~~ M11-01
Date(s): 11/5/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9.22

Depth to water measured from TOC (ft): Before Purging: 7.22

NOT getting bailers full of water

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 2 ft. x 0.163 gal/ft = .98 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 1.25 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH *	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1400	0	64.8	5.74	1910	NA	Turbid	TU
During		1401	.25	65.3	5.87	1690	NA	"	TU
During		1402	.50	65.4	5.82	1620	NA	"	TU
During		1403	.75	65.5	5.75	1640	NA	"	TU
During		1404	1.00	65.5	5.71	1680	↓	"	TU
During		1406	1.25	65.4	5.72	1760	✓	"	TU
During									
After		Sample Time = 1410							

*CL = clear CO = cloudy TU = turbid

* Calibration ~~issues~~ may be off

Well Sampling

Sample #: 108-S11-003	Lab: RECRA LAB NET
Field ID #: M11-01-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | URIBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC / JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M11-02
DATE(S): 11 / 5 / 97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9.29

Depth to water measured from TOC (ft): Before Purging: 6.72

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 2.57 ft. X 0.163 gal/ft = 1.26 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 1.50 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (~~°C~~) °F	pH	Conductivity (~~umhos/cm~~) mS/cm	Turbidity (NTUs)	Other	
Initial		1440	0	68.5	*	1910	NA	No odor	CL
During		1441	.25	71.0	*	1730	↓	↓	↓
During		1442	.50	71.5	7.12	1700			
During		1443	.75	70.9	7.13	1640			
During		1444	1.00	71.8	7.13	1680			
During		1445	1.50	71.8	7.12	1680	✓	✓	✓
During		Sample time = 1450							
After	Dp	Sample time = 1500							

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S11-004	Lab: RECRA LAB UET
Field ID #: M11-02-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

~~Duplicated Sample Info:~~	108-S11-005
~~Blank Sample~~ Info:	field ID = M11-02-Q10D
Other Sample Info:	

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC / JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: M11-05
Date(s): 11 / 5 / 97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.34

Depth to water measured from TOC (ft): Before Purging: 5.83

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 3.51 ft. X 0.163 gal/ft = 4.16 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp ~~(°C)~~ °F	pH	Conductivity ~~(umhos/cm)~~ µS/cm	Turbidity (NTUs)	Other	
Initial	1	1135	0	70.9	7.43	7070	NA	No odor	CL
During		1152	1	69.2	7.39	5860	NA	"	"
During		1154	2	69.6	6.44	6550	NA	"	"
During		1155	3	69.9	6.34	7270	NA	"	"
During		1158	4	69.3	6.22	7510	NA	"	"
During		1200	5	69.2	6.22	7500	NA	"	"
During									
After		Sample		time		1210			

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S11-001	Lab: ~~M11-05-Q~~ RECRA LAB NET
Field ID #: M11-05-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 102396 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC / JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: M11-06
Date(s): 11 / 5 / 97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.15

Depth to water measured from TOC (ft): Before Purging: 3.99

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 8.16 ft. X 0.163 gal/ft = 3.99 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ ~~mS/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial			0					Brown	TU
During			1						
During			2						
During			3						
During			4						
* During	1105		5	71°	7.47	1,790			
During	1115	Sample time							
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S11-002	Lab: RECRA LAB NET
Field ID #: M11-06-010	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPH,
2 ml zinc acetate plus NaOH	~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/30/96 QX KH

* Brendan arrived at 1105 with Hydac conductivity/pH/temperature meter

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JC, JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M12-01

DATE(S): 11/6/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.78

Depth to water measured from TOC (ft): Before Purging: 5.71

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 9.07 ft. X 0.163 gal/ft = 4.43 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		817	0	22.3	6.71	.811	2	Black particles	CL
During		819	1	22.7	6.87	.826	25	"	CL
During		820	2	22.7	6.92	.835	45	Clear, cloudy	CL
During		822	3	22.6	6.92	.846	71	" "	CL
During		827	4	22.7	6.90	.853	98	"	CL
During		828	5	21.8	6.90	.853	117	"	"
During									
After		Sample Time = 829							

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S12-001

Lab: Recra Lab not

Field ID #: M12-01-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Arsenic~~, ~~TPH~~, ~~TPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: DWC/TA

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SITE LOCATION: NAS Alameda

WELL NUMBER: M13-06 | SAMPLE TIME = 1230

DATE(S): 11/06/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 9.75
Depth to water measured from TOC (ft): Before Purging: 5.80

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 3.95 ft. X 0.163 gal/ft = 1.93 ≈ 2 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 2 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		1212	0	—	—	—	—	~~0.03~~			
During		1217	0.5	21.2	7.47	0.808	111	0.03	2.33		
During		1220	1.0	21.4	7.34	0.588	221	0.02	2.53		
During		1223	1.5	21.3	7.31	0.574	202	"	2.73		
During		1225	2.0	21.4	7.29	0.565	93	"	2.62		
During											
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S13-001
Field ID #: M13-06-Q10
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Lab: RECRA LAB NET
Filtered? Y/N: For metals analysis only
Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER YELLOWISH BROWN WITH WADS OF ORGANIC DEBRIS THAT CLOG BAILER; CLOUDY. ONLY MINOR DRAWDOWN; GOOD RECOVERY.

Quality Control Samples:

Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WP: Well P&S 102396 QX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: DWC / -A

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: M13-09 // SAMPLE TIME 1530

DATE(S): 11/06/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.50

Depth to water measured from TOC (ft): Before Purging: 3.90

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 8.6 ft. X 0.163 gal/ft = 4.2 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAC	DO	
Initial		1314	0	23.0	6.55	0.564	(40)	0.02	2.61	START
During		1317	1	23.3	6.35	0.559	"	"	2.60	
During		1319	2	23.4	6.32	0.545	"	"	2.64	
During		1322	3	23.6	6.36	0.544	"	"	3.02	
During		1324	4	23.6	6.36	0.554	"	"	3.03	
During		1326	5	23.6	6.35	0.544		"	3.19	
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S13-002

Lab: RECRA LAB NEF

Field ID #: M13-09-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER: TAN, TRANSPARENT, NO FOAM, NO ODOR, NO SHEEN, GOOD RECOVERY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JP

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Site Location: NAS Alameda

Well Number: M16-04

Date(s): 11/11/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.04

Depth to water measured from TOC (ft): Before Purging: 5.31

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 7.73 ft. X 0.163 gal/ft = 3.78 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 4.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		0950	0	22.5	5.85	.247	*	suspended matter no odor	CL
During		0953	0.75	22.8	6.39	.218	81	"	CO
During		0954	1.50	23.2	6.64	.215	191	"	CO
During		0956	2.25	23.2	6.83	.208	192	"	CO
During		0958	3.00	23.3	6.98	.208	187	"	CO
During		1000	4.00	23.0	7.04	.207	79	"	CO
During									
After			Sample time 1020						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S16-001

Lab: Recra LabNet

Field ID #: M16-04-Q10

Filtered? ~~Y~~N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH>9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

extra sample taken for MS/MSD

Quality Control Samples:

Duplicated Sample Info: 108-S16-002 (M16-04-Q10D)

~~Blank Sample Info:~~ duplicate analysis:

~~Other Sample Info:~~ VOC & metals

Field ID = M16-04-Q10D

Sample time 1040

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX XH

* turbidity measured as negative number

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TA / DC

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SITE LOCATION: NAS Alameda

WELL NUMBER: MBE-1 // SAMPLE TIME 1145

DATE(S): 11/05/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 3.61

Depth to water measured from TOC (ft): Before Purging: 15.00

Minimum Purge Volume:

Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons

Two-inch well 3 X 1.39 ft. x 0.163 gal/ft = 5.7 ≈ 6 gallons

Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO	
Initial		1125	0	19.9	6.82	9.9	1	0.54	3.30	START
During		1127	1	20.1	6.83	11.9	22	0.67	3.15	
During		1129	2	20.1	6.85	17.0	1	1.00	2.99	
During		1131	3	20.1	6.85	17.7	(-10)	1.05	2.72	
During		1134	4	20.1	6.89	17.8	(-10)	1.05	3.19	
During		1137	5	20.1	6.88	17.7	(-10)	1.04	3.23	
During		1139	6	20.1	6.88	18.0	"	1.07	2.90	FINISH
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBG-001

Lab: RECRA LAB NET

Field ID #: MBG-1-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen (FULL ANALYTICAL SUITE)

LIGHT BROWN SLIGHTLY CLOUDY/FOAMY, NO SHEEN OR ODOR, CLEARS WITH PURGE; NO DRAWDOWN

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = $\pi r^2 h$

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TA / DC

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Site Location: NAS Alameda

Well Number: MBG-2 // SAMPLE TIME 1240

Date(s): 11/05/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 5.35

Depth to water measured from TOC (ft): Before Purging: 15.0

Minimum Purge Volume:

Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons

Two-inch well 3 x 1.85 ft. x 0.163 gal/ft = 4.825 gallons

Four-inch well 3 x ___ ft. x 0.653 gal/ft.³ = ___ gallons

Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO	
Initial		12.22	0	19.9	6.67	12.1	(-10)	0.69	3.28	START
During		1223	1	20.0	6.57	18.0	"	1.07	4.88	
During		1226	2	20.2	6.68	10.1	"	0.56	3.13	
During		1228	3	20.2	6.66	9.5	"	0.52	3.22	
During		1233	4	20.2	6.66	9.9	"	0.53	3.32	
During		1235	5	20.3	6.60	12.0	"	0.69	3.12	
During		1238	6	20.2	6.63	9.8		0.54	2.97	FINISH
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBG-002

Lab: RECRA LAB NET

Field ID #: MBG-2-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen (FULL ANALYTICAL SUITE)

NEARLY CLEAR, SLIGHT GREENISH TINT, FOAMY, NO SHEEN OR ODOR, NO DRAWDOWN

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2* casing = 0.163 gal./ft.
V_3* casing = 0.367 gal./ft.
V_4* casing = 0.653 gal./ft.
$V_{4.5}$* casing = 0.826 gal./ft.
V_6* casing = 1.47 gal./ft.
V_8* casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TA/DC

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Site Location: NAS Alameda

Well Number: MBG-3 | Sample Time 1030

Date(s): 11/05/97

Well Type: (Monitoring) Extraction, etc.:

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.73

Depth to water measured from TOC (ft): Before Purging: 3.98

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.75 ft. x 0.163 gal/ft = 5.25 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	DO	
Initial		1010	0	18.6	6.43	1.04	(-10)	0.04	3.02	START
During		1012	1	18.7	6.66	0.97	(-10)	"	2.79	
During		1014	2	18.7	6.81	1.02	117	0.04	2.55	
During		1016	3	18.8	6.85	1.02	125	"	2.35	
During		1019	4	18.9	6.89	1.04	75	"	2.27	
During		1022	5	18.9	6.92	1.02	34	"	3.24	
During		1024	6	18.9	6.87	0.99	65	"	3.12	
After						(FAILS DOWN SUBSTANTIALLY BUT NOT DRY; WATER COMING IN)				

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBG-003

Lab: RECRA LAB NET

Field ID #: MBG-3-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen (FULL ANALYTICAL SUITE)

CLOUDY, BROWN, NO ODOR OR SHEEN

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Urbe & Associates Environmental Consulting Services

Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TA / DC

Page 1 of 1

Site Location: NAS Alameda

Well Number: MBG-4 ||| Sample Time 1415

Date(s): 11/05/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 4.16 ft

Depth to water measured from TOC (ft): Before Purging: 15.0 ft

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.54 ft. X 0.163 gal/ft = 5.3 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft.³ = ____ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	Pc	
Initial		1352	0	20.5	7.90	0.570	(-10)	0.02	2.86	START
During		1354	1	20.6	6.81	0.695	102	"	2.90	
During		1358	2	20.7	6.95	0.657	(50)	"	2.55	
During		1400	3	20.7	6.89	0.719	—	0.03	2.94	
During		1403	4	20.8	6.86	0.760	(-10)	0.03	2.87	
During		1406	5	20.8	6.88	0.783	—	"	2.71	
During		1409	6	20.8	6.83	0.773	—	"	—	FINISH
After										

*CL = clear CO = cloudy TU = turbid

(NO DRAWDOWN)

Well Sampling

Sample #: 108-SBG-004

Lab: RECRA LAB NET

Field ID #: MBG-4-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen (FULL ANALYTICAL SUITE)

MOSTLY CLEAR WATER BUT WITH LARGE AMOUNTS OF FLOATING ORGANIC MATERIAL, GIVING APPEARANCE OF HIGH TURBIDITY. CLEARS SUBSTANTIALLY AFTER ~1.5 WELL VOLUME. NO ODOR/SHEEN

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Urbe & Associates Environmental Consulting Services

PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TQ & JP

PAGE 1 OF 1

SITE LOCATION: NAS Alameda

WELL NUMBER: MW 360-1

DATE(S): 11/7/97

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.98

Depth to water measured from TOC (ft): Before Purging: 4.70

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.28 ft. X 0.163 gal/ft = 5.03 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5.25 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		0835	0	20.4	6.67	3.80	*		CL
During		0838	1.0	20.4	6.78	3.80	6		CL
During		0841	2.0	20.9	6.78	3.80	28		CL
During		0846	3.0	21.0	6.80	3.79	44		CL
During		0848	4.0	20.6	6.85	3.82	16		CL
During		0849	5.25	21.1	6.85	3.81	18		CL
During									
After		Sample time			855				

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-005

Lab: Recra LabNet

Field ID #: MW360-1-Q10

Filtered? ~~Y~~/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

high PID reading of 28 ppm directly from well
breathing zone 0.0 ppm, but respirators worn

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

* turbidity measured at sample II

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, JP

Page 1 of 1

Site Location: NAS Alameda	Well Number: MW360-2
Date(s): 11/6/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.02

Depth to water measured from TOC (ft): Before Purging: 5.28

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 9.74 ft. X 0.163 gal/ft = 4.76 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	
Initial		1137	0	20.6	6.60	4.63	24	Slight odor	CL
During		1138	1	20.8	6.60	4.52	261	"	CO
During		1140	2	20.5	6.64	4.64	611	"	CO
During		1142	3	20.8	6.65	4.52	617	"	CO
During		1144	4	20.8	6.62	4.52	815	"	CO
During		1145	5	20.8	6.69	4.52	7999		
During									
After			Sample Time			1150			

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-006	Lab: RECRA LAB NET
Field ID #: MW360-2-QID	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPH~~,
2 ml zinc acetate plus NaOH	~~TPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

PID = 0.2 ppm down well

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) collected by: TA / DC

Project No 200-42-202
CTO: 108

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Site Location: NAS Alameda

Well Number: MW360-3

Sample Time 0935

Date(s): 11/03/97

Well Type (Monitoring, Extraction, etc.): Monitoring

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15 ft

Depth to water measured from TOC (ft): Before Purging: 4.84

Minimum Purge Volume:

Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons

Two-inch well 3 X 10.16 ft. x 0.163 gal/ft = 4.962 5.0 gallons

Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 5.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: SAL	D.O.		
Initial		0915	0	22.8	6.70	1.25	~~(10)~~	~~2.05~~	~~2.96~~	START	
During		0920	1	21.1	6.77	1.26	~~(40)~~	~~0.63~~	~~3.~~		
During		0922	2	22.8	6.69	1.48	~~(40)~~		~~3.0~~		
During		0924	3	22.8	6.64	1.60					
During		0926	4	22.9	6.62	1.78					
During		0928	5	22.9	6.59	1.85					
During											
After											

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-007

Lab: RECRA LAB NET

Field ID #: MW360-3-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~ ~~TPPH~~, ~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

WATER: CLEAR, BUT STRONG YELLOWISH COLOR, NO ODOR OR SHEEN; SOME COLOR PERSISTS AFTER FILTERING

(REACTION WITH WATER FORCES DUMPING/RINSING OF PRESERVED VOA'S)

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC, JP

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Site Location: NAS Alameda	Well Number: MW360-4
Date(s): 11/6/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.60

Depth to water measured from TOC (ft): Before Purging: 4.61

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 9.99 ft. x 0.163 gal/ft = 4.89 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1502	0	22.3	7.51	1.08	13	odor	CL
During		1505	1	22.3	7.41	1.04	119	slight odor	CO
During		1508	2	22.3	7.38	.871	758	"	TU
During		1509	3	22.4	7.40	.890	999+	"	TU
During		1512	4	22.2	7.45	.885	999+	"	TU
During		1513	5	21.8	7.52	.879	999+	"	"
During									
After		Sample Time		1520					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-008	Lab: RECRA LAB WEST
Field ID #: MW360-4-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	ID = 108-S04-009
~~Blank Sample Info:~~	Field ID = MW360-4-Q10D
Other Sample Info:	Sampled for VOAs & Metals
	Sample time 1525

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Project No. 200-42-202
CTO: 108

Sample(s) Collected by: SC, JP

Page 1 of 1

Site Location: NAS Alameda

Well Number: MW 530-2 (IO on well) M530-2

Date(s): 11/6/97

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.04

Depth to water measured from TOC (ft): Before Purging: 5.60

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 8.44 ft. X 0.163 gal/ft = 4.12 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1029	0	20.6	8.25	1.78	*	~~Clear~~ odor NO ^	CO
During		1030	1	22.2	8.14	1.59	28	"	CO
During		1032	2	22.5	8.03	1.30	224	slight odor	CO
During		1035	3	22.7	8.06	1.33	250	"	CO
During		1037	4	22.2	8.03	1.38	313	"	"
During		1039	5	22.7	8.02	1.54	289	"	
During									
After		Sample Time				1045			

*CL = clear CO = cloudy TU = turbid ^ = no ¢ # (-2)

Well Sampling

CS23

Sample #: 108-S23-002

Lab:

Field ID #: M530-2-Q10

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JP

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Site Location: NAS Alameda	Well Number: MW547-4
Date(s): 11/10/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.10

Depth to water measured from TOC (ft): Before Purging: 4.71

Minimum Purge Volume:
Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 10.39 ft. x 0.163 gal/ft = 5.08 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 5.25 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1120	0	20.7	6.88	1.00	*	odor, black matter present	Clear
During		1125	1.0	21.2	6.87	.895	192	"	CO
During		1127	2.0	21.1	6.90	.871	749	"	TU
During		1130	3.0	21.2	6.97	.866	999	"	TU
During		1132	4.0	21.2	6.98	.846	496	"	CO
During		1135	5.25	20.8	7.02	.839	*	odor	TU
During									
After			Sample time 1150						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S22-004	Lab: Recra Lab Nef
Field ID #: MW547-4-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCB~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^{2}h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

* turbidity measured as negative number

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JP

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Site Location: NAS Alameda	Well Number: MWD 13-3
Date(s): 11/10/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 14.56
Depth to water measured from TOC (ft): Before Purging: 5.62

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 4.46 ft. x 0.163 gal/ft = 4.34 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		920	0	18.6	6.61	0.457	*	black matter present, odor	CL
During		924	1.0	18.4	7.38	0.403	*	"	"
During		925	2.0	19.2	7.69	0.399	7	"	"
During		927	3.0	18.4	8.07	.349	31	"	"
During		930	4.0	19.2	8.19	.391	22	"	"
During		932	5.0	18.9	8.25	.386	70	black matter present odor	CO
During									
After			Sample time	950					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S19-001	Lab: Retra Laboratory
Field ID #: MWD #13-3-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

* extra sample taken for MS/MSD purposes

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

* turbidity measured as negative number

Frank WIP: Well P&S 10/3/99 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TQ/JP

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Site Location: NAS Alameda	Well Number: MW0R-5
Date(s): 11/7/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 14.52
Depth to water measured from TOC (ft): Before Purging: 4.50

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 10.02 ft. x 0.163 gal/ft = 4.899 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other
Initial		1150	0	21.3	7.03	0.444	*	no odor clear
During		1153	1.0	21.7	6.89	0.424	*	with brown particles
During		1154	2.0	21.7	6.94	0.427	36	particles gone but cloudy now
During		1155	3.0	21.6	6.98	0.431	59	" CO
During		1157	4.0	21.7	6.98	0.422	63	" CO
During		1200	5.0	21.7	6.95	0.424	158	" CO
During								
After		Sample time 1210						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S13-003	Lab: Recra LabNet
Field ID #: MW0R-5-Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-S13-004
~~Blank Sample Info:~~	Field ID = MW0R-5-Q10D
~~Other Sample Info:~~	VOC, metals, TPPH, TEPH
	analysis for duplicate
	Sample time 1220

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/2/96 OX KH

*turbidity measured as negative number

CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: TA / DC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: W1 // SAMPLE TIME ~~1105~~ 0845 AWC
DATE(S): 11/04/97 - purged 11/5/97 - sampled	WELL TYPE (MONITORING, EXTRACTION, ETC.): 11/05/97 @ 0845
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 10.0

Depth to water measured from TOC (ft): Before Purging: 2.35

Minimum Purge Volume:

Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons

Two-inch well 3 X 7.65 ft. x 0.163 gal/ft = 4 gallons

Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 4 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other SAL	DO		
Initial		1553	0	23.3	7.61	15.6	(-10)	2.91	2.32		
During		1555	1	23.4	7.55	22.1	1	1.35	2.24		
During		1558	2	23.4	7.52	28.2	—	1.73	—		
During			3				BAILS DRY				
During			4				BEFORE 3-gal REMOV				
During											
During											
After											

*CL = clear CO = cloudy TU = turbid SLOW RECOVERY

Well Sampling

Sample #: 108-S07-004	Lab: RECRA LAB NET
Field ID #: W1-~~07A~~ Q10	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info: 108-S07-005 FIELD DUP (W1-Q10D) TIME 0900 on 11/5/97

Blank Sample Info:

Other Sample Info: FIELD DUP INCLUDES ONLY: VOC, METALS, TPPH, TEPH

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = $\pi r^2 h$

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

Quarter 2 – 90 Sheets

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D04-02 Date: 2/4/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 96.5 ft

Depth to Water: 5.87 ft

Water Column: 90.63 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
x 3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 33.3 gal

Total purge volume = 100 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1054	0		7.11	47.2	17.8	Ø	4.11	3.07
1101	≈ 25 gal.		7.08	47.2	18.3	Ø	3.83	3.07
1109	≈ 50 gal.		7.09	47.2	18.5	1	2.04	3.07
1116	≈ 75		7.08	47.2	18.6	1	1.92	3.07
1124	≈ 100		7.09	47.2	18.4	Ø	1.87	3.07

Begin Purge: 1054 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1124 Purged Dry? No

Total Volume Purged: 100 gallons How Measured? Timed discharge

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1130 Sample Number (s): 108-S04-010

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D04-03 Date: 2/4/98

Personnel: MSS/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 94 ft

Depth to Water: 6.09 ft

Water Column: ~~94~~ 87.91 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
x 3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 32.26 gal

Total purge # ≈ 92 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0938	0		6.99	65.0	18.3	6	4.73	4.00
0946	≈ 25		6.95	67.8	19.0	7	1.87	4.00
0955	≈ 50		6.96	67.8	19.2	25	1.85	4.00
1003	≈ 75		6.97	67.7	19.3	19	1.81	4.00
1011	≈ 100		6.97	67.6	19.3	9	1.78	4.00

Begin Purge: 0938 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1011 Purged Dry? No

Total Volume Purged: ≈ 99 gallons How Measured? Timed discharge

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1015 Sample Number (s): 108-504-011
2/4 1020 → 108-504-012 (Duplicate)

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D05-02 Date: 2/4/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 67 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
*3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.48 ft

Water Column: 60.52 ft Well Volume: 22.2 gal

Total purge # = 67 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1201	0		7.09	43.0	19.0	28	2.09	2.76
1232	17		7.01	43.0	19.2	2	3.98	2.77
1237	34		7.00	42.9	19.3	0	4.01	2.77
1242	51		7.00	42.9	19.4	1	4.06	2.77
1248	68		7.03	42.8	19.3	1	4.34	2.77

Begin Purge: 1232 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1248 Purged Dry? No

Total Volume Purged: 68 gallons How Measured? Timed discharge

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1253 Sample Number (s): 108-S05-017
2/4/98 1300 108-S05-018

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D07A-02 Date: 2/4/98

Personnel: Matt St John / Brendan Mulholland

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 60 ft

Depth to Water: 1.92 ft

Water Column: 58.08 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
x 3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 21.32 gal

Total purge volume = 64 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0833	0		6.40	28.2	14.8	5	7.18	1.73
0840	≈ 23		6.56	28.1	17.7	0	4.53	1.74
0845	≈ 40		6.63	28.1	18.3	1	1.71	1.73
0849	≈ 53		6.72	28.0	18.1	1	4.18	1.73
0853	≈ 66		6.69	28.0	18.4	1	3.68	1.73

Begin Purge: 0833 Method of Purging ☒ Pump ☐ Bailer

End Purge: 0853 Purged Dry? No

Total Volume Purged: ≈ 66 gallons How Measured? Timed discharge

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 0905 Sample Number (s): 108-507-007 (Lab)
D07A-02-Q20

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D07C-01 Date: 2/4/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 59 ft

Depth to Water: 2.72 ft

Water Column: 56.28 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
X 3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 20.65 gal

Total purge # = 62 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1342	0		7.88	2.61	16.4	0	5.78	0.13
1348	≈16		7.26	2.11	16.9	0	4.05	0.10
1353	≈30		7.20	2.12	18.0	1	4.11	0.10
1402	≈45		7.14	2.10	18.3	0	2.75	0.10
1409	≈62		7.24	2.07	17.9	1	3.10	

Begin Purge: 1342 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1409 Purged Dry? No

Total Volume Purged: 62 gallons How Measured? Volume in drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4 1410 Sample Number (s): 108-522-005

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D09-01 Date: 2/4/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 60 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
☒ 3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.35 ft

Water Column: 53.65 ft Well Volume: 19.9 gal

Total purge # = 60 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1446	0		6.81	36.6	17.4	1	3.82	2.31
1451	15		6.79	37.7	18.7	4	3.19	2.40
1456	30		6.80	38.0	18.9	4	3.28	2.42
1500	45		6.82	38.1	18.9	5	3.39	2.43
1505	60		6.84	38.1	18.8	1	2.96	2.43

Begin Purge: 1446 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1505 Purged Dry? No

Total Volume Purged: 60 gallons How Measured? Timed discharge

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1507 Sample Number (s): 108-S09-004

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D10B - 02 Date: 2/12/98

Personnel: JM / BM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 60.0 ft

Depth to Water: 3.95 ft

Water Column: 56.05 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 20.5 gal

x3 = 61.5

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1305	0	3.95	9.36	12.4	17	42	5.31
* 1340	15		8.89	8.26	20.3	3	1.72
1345	30		8.29	6.88	19.7	5	2.27
1350	45		8.00	8.49	20.8	3	5.07
1355	60		8.00	8.37	20.8	1	7.18

Begin Purge: 1305 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1355 Purged Dry? no

Total Volume Purged: 61 gals How Measured? flow rate of pump

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/12/98 Sample Number (s): 108-523-003

Comments: water is cloudy, ~~gray~~ light gray, with no odor or sheen.

* Pump stopped after initial reading due to wet circuitry. Delay in getting pump up and running again.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M001 E Date: 2/4/98

Personnel: JM / JW 108 - S01 - 016

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 19.5 ft

Depth to Water: 3.21 ft

Water Column: 16.29 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.7 x 3 = 8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1020	0	0	10.14	3.60	17.1	40	1.11
1024	2		10.8	3.40	17.1	70	2.32
1026	4		10.29	3.30	17.8	59	4.74
1028	6		10.32	3.37	18.0	51	2.59
1031	8		10.35	3.29	17.9	51	2.78
1040							

Begin Purge: 1020 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1031 Purged Dry? No

Total Volume Purged: 8 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 1040 2/4/98 Sample Number (s): 108-S01-016

Comments: Water: Clear, no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M002E Date: 2/4/98

Personnel: JM / KW 108-501-017

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 20 ft

Depth to Water: 8.11 ft

Water Column: 11.89 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.94 x 3 = 5.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1120	0	0	8.29	14.4	16.1	90	2.45
1130	1.5		8.31	8.01	15.6	455	2.28
1132	3		8.17	8.05	15.9	375	1.90
1135	4.5		8.16	8.27	15.5	301	1.77
1138	6		8.16	8.97	16.1	265	3.11
1145							

Begin Purge: 1120 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1138 Purged Dry? No

Total Volume Purged: (~~2.8~~) 6 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1145 Sample Number (s): 108-501-017

Comments: Water: Cloudy brown Slightly sulfur odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M003E Date: 2/4/98

Personnel: JM/KW 108-501-018

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 21.25 ft

Depth to Water: 2.42 ft

Water Column: 18.83 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 3.07 x 3 = 10.21 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1328	0	0	8.84	5.44	17.4	5	10.4
1333	2.5		9.42	0.81	17.8	8	0.94
1337	5		9.27	0.64	17.3	5	2.87
1341	7.5		9.19	0.66	18.2	2	2.10
1345	10.0		9.24	0.65	18.2	1	3.17
1350							

Begin Purge: 1328 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1345 Purged Dry? (~~Yes~~) No

Total Volume Purged: 10.5 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1350 Sample Number (s): 108-501-018

Comments: Water: Clear with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M013-A Date: 2/10/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 0.4 ft

Water Column: 13.1 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.14 gal

Total purge ~ = 7 gal.

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1442	0		7.94	0.440	13.6	3	7.65	0.01
1445	2		7.70	0.372	14.2	23	7.19	0.01
1448	4		7.57	0.355	14.3	15	5.33	0.01
1450	6		7.40	0.353	14.2	9	5.05	0.01
1452	7		7.34	0.350	14.1	7	5.93	0.01

Begin Purge: 1442 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1452 Purged Dry? No

Total Volume Purged: 7 gal. How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98 1457 Sample Number (s): 108-502-024

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M017-A Date: 2/11/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 14 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 7.21 ft

Water Column: 6.79 ft Well Volume: 1.1 gal

Total purge # = 3.5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1238	0		7.63	19.6	16.0	61	6.49	1.16
1240	1		7.41	23.1	15.9	125	7.33	1.39
1242	2		7.36	23.1	15.7	49	7.47	1.39
1244	3		7.33	23.2	15.8	23	6.89	1.40
1245	3.5		7.31	23.9	15.8	19	8.34	1.45

Begin Purge: 1238 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1245 Purged Dry? No

Total Volume Purged: 3.5 gallons ~~1249~~ How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1249 Sample Number (s): 108-502-025

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M019-E Date: 2/11/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 40.5 ft

Depth to Water: 4.41 ft

Water Column: 36.09 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.9 gal

Total purge # = 18 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1140	0		7.46	39.6	15.1	0	5.30	2.51
1146	5		6.82	42.1	16.3	1	6.32	2.70
1153	10		6.77	42.6	16.3	0	4.67	2.73
1200	15		6.76	42.7	16.3	1	4.62	2.74
1203	18		6.74	42.8	16.4	1	5.62	2.75

Begin Purge: 1140 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1203 Purged Dry? No

Total Volume Purged: 18 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1206 Sample Number (s): 108-502-026

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M021-E Date: 2/11/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 37.~~[illegible]~~ ft

Depth to Water: 2.59 ft

Water Column: 34.41 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.6 gal

Total purge # = 17 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
~~1022~~	~~0~~		~~9.53~~	~~1.99~~	~~13.6~~	~~1~~	~~6.97~~	~~0.06~~
1044	0		9.88	0.579	13.9	1	7.72	0.02
1052	+5		7.03	36.7	16.0	21	6.04	2.30
1100	+5		6.85	38.0	16.1	1	4.22	2.41
1108	+5		6.84	38.2	16.2	1	4.46	2.42
1111	17		6.82	38.4	16.1	0	6.32	2.44

Begin Purge: ~~1029~~ 1044 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1111 Purged Dry? No

Total Volume Purged: 17 gallons How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1113 Sample Number (s): 108-502-027
1117 108-502-028

Comments: ~~Note: Spec sheet has incorrect~~

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M023-E Date: 2/11/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 35 ft

Depth to Water: 2.15 ft

Water Column: 32.85 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.4 gal

Total purge ~ = 16 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0943	0		8.12	0.675	14.1	19	2.18	0.02
0948	4		7.59	1.18	15.3	81	5.52	0.05
0953	8		7.10	2.36	15.1	43	5.31	0.11
0957	12		6.89	3.98	15.1	12	4.25	0.20
1002	16		6.90	4.92	15.1	9	3.81	0.25

Begin Purge: 0943 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1002 Purged Dry? No

Total Volume Purged: 16 gal. How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1005 Sample Number (s): 108-302-029

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M024-A Date: 2/11/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: No PID available ppm Breathing Zone: ____ ppm

Depth to Well Bottom: 14 ft

Depth to Water: 5.02 ft

Water Column: 8.98 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.46 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0834	0		5.84	3.56	15.2	1	2.40	0.18
0836	1		6.01	3.97	15.6	17	2.60	0.20
0839	2		6.11	4.06	15.8	22	2.81	0.20
0840	3		6.11	4.06	16.0	28	2.34	0.20
0842	4		6.14	3.95	15.9	20	5.27	0.20
0844	5		6.15	3.83	15.9	20	5.27	0.20

Begin Purge: 0834 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0844 Purged Dry? No

Total Volume Purged: 5 gal. How Measured? ~~108-502-030~~ Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 0850 Sample Number (s): 108-302-030

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M024-E Date: 2/11/98

Personnel: MSI / BM

Organic Vapor Concentration TOC: No PID available ppm Breathing Zone: ppm

Depth to Well Bottom: 32 ft

Depth to Water: 4.98 ft

Water Column: 27.02 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 4.4 gal

Total purge # = 14 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0905	0		6.80	2.77	16.7	6	5.43	0.13
0910	4		6.64	3.19	17.7	0	4.73	0.15
0915	8		6.67	3.19	17.8	0	5.10	0.15
0920	12		6.73	3.25	17.6	0	4.75	0.16
0922	14		6.66	3.43	18.0	0	4.34	0.17

Begin Purge: 0905 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0922 Purged Dry? No

Total Volume Purged: 14 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 0927 Sample Number (s): 108-502-031

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M027E Date: 2/3/98

Personnel: Jerry Manwell, Kris Wood

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 22.0 ft

Depth to Water: 2.31 ft

Water Column: 19.69 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 3.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1000	0		8.34	5.57	17.3	20	1.04
1012	2.5		8.69	4.45	17.5	26	2.70
1016	5.0		8.88	5.91	17.6	4	2.91
1021	7.5		8.96	6.80	17.8	4	2.10
1026	10.0		8.79	8.64	17.8	4	3.06
1033	12.5		8.56	9.06	17.7	6	1.80

Begin Purge: 1000 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1033 Purged Dry? no

Total Volume Purged: ~~9.75~~ 12.5 How Measured? Calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/03/98/ 1095 Sample Number (s): 108-801-019
Field ID: M027-E-Q20

Comments: Water is yellowish brown with no odor or sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M028-A Date: 2/03/98

Personnel: KW/JM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.0 ft

Depth to Water: 3.08 ft

Water Column: 10.92 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.7 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1345	0	3.06	8.31	1.15	15.0	247	0.79
1350	1		8.24	1.06	14.2	69	1.36
1358	2		8.25	1.03	14.1	29	0.69
1403	3		8.33	1.03	14.1	16	1.16
1406	4		8.28	1.04	14.2	12	2.43
1409	5.5		8.26	1.04	14.2	12	2.25

Begin Purge: 1345 Method of Purging ☐ Pump ☒ Bailer

End Purge: Purged Dry? no

Total Volume Purged: 2/03/98/1425 How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ~~☒ No QA/QC Sample~~ JM 2/5/98

Date and Time of Sample Collection: 2/03/98/1425 Sample Number (s): 108-S01-020
field ID: M028-A-Q20

Comments: Water is cloudy, brown, with 10% black particulate matter, organic in nature

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M028-C Date: 2/3/98

Personnel: Matt St John / Brendan Mulholland

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 83.45 ft

Depth to Water: 5.45 ft

Water Column: 78 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
✓3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 28.63 gal

Purge volume = 86 gal. Discharge rate = 3 gpm

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1030	0		7.39	27.7	15.7	11	6.83	
1038	22		7.34	29.0	16.9	93	6.59	1.79
1045	44		7.39	29.2	17.0	235	5.56	1.80
1053	66		7.39	29.1	17.2	79	6.23	1.80
1100	88		7.40	29.2	17.3	14	6.64	1.81

Begin Purge: 1030 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1100 Purged Dry? No

Total Volume Purged: 88 gallons How Measured? Timed discharge and calibrated drum volume.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/3/98 1110 Sample Number (s): 108-301-021 (lab)
M028-C-920

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M028-E Date: 2/03/98

Personnel: KW / JM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 21 ft

Depth to Water: 2.84 ft

Water Column: 18.16 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.9 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1457	0	2.84	8.09	0.98	16.4	355	2.82
1509	2		8.10	0.97	16.4	157	2.75
1514	4		7.98	1.01	16.5	106	2.02
1520	6		7.97	1.04	16.7	27	1.90
1520	9		7.96	1.05	16.7	20	1.82

Begin Purge: 1457 Method of Purging ☐ Pump ☒ Bailer

End Purge: _____ Purged Dry? no

Total Volume Purged: 9 gals How Measured? Calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/03/98/1540 Sample Number (s): 108-901-022
Field ID M028-E-020

Comments: Water is cloudy, brown with an H_2S odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M029E Date: 2/4/98

Personnel: JM/KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 20 ft

Depth to Water: 0.91 ft

Water Column: 19.09 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 3.11 x 3 = 9.33 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1425	0	0	9.46	1.14	14.7	4	4.22
1431	2.5		9.57	1.13	15.7	2	1.95
1437	5		9.57	1.15	15.9	2	6.82
1441	7.5		9.67	1.20	15.9	1	1.21
1445	10		9.70	1.21	15.8	0	7.10
1450							

Begin Purge: 1425 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1445 Purged Dry? No

Total Volume Purged: 10 gals How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1450 Sample Number (s): 108-501-023.

Comments: Water - Yellowish - clear w/ strong odor + some large floating matter

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW03-04 Date: 2/10/98

Personnel: JM / KW

Organic Vapor Concentration TOC: 1500.0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 11.0 ft

Depth to Water: 5.70 ft

Water Column: 5.30 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 0.86 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1152	0	5.70	8.24	11.8	17.1	16	2.06
1154	0.5		8.38	10.9	16.4	44	4.40
1156	1.0		8.26	8.60	17.1	78	4.01
1159	1.75		8.25	9.42	17.4	87	2.92
1202	2.5		8.26	9.14	17.3	163	3.38

Begin Purge: 1142 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1202 Purged Dry? no

Total Volume Purged: 2.5 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98/1210 Sample Number(s): 108-S03-004
field ID MW03-04-G20

Comments: Water is clear, amber, with a strong solvent odor.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M03-05 Date: 2/6/98

Personnel: JM / KW

Organic Vapor Concentration TOC: PID not functioning ppm Breathing Zone: / ppm

Depth to Well Bottom: 10.0 ft

Depth to Water: 4.45 ft

Water Column: 5.5 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 0.90 x 3 = 2.7 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0926	0	0	8.79	0.66	16.9	37	3.64
0927	0.75		8.35	0.66	16.6	108	4.85
0928	1.5		8.40	0.71	16.8	111	5.23
0929	2.25		8.54	0.87	17.1	62	5.20
0931	3.0		8.62	0.97	17.3	66	4.30
0935							

Begin Purge: 0926 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0931 Purged Dry? NO

Total Volume Purged: 3 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 0935 Sample Number (s): 108-503-005

field ID: M03-05-G20

Comments: Water - Clear with black particulates + ✓ strong solvent odor

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2/6
S 3 -2
S11 - 3
S16 -1
S23 -1

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M03-07 Date: 2/6/98

Personnel: JM / KW

Organic Vapor Concentration TOC: PID not functioning No PID ppm Breathing Zone: ppm

Depth to Well Bottom: 13 ft

Depth to Water: 2.40 ft

Water Column: 10.6 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.73 = 5.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0838	0	0	7.11	1.02	17.1	38	2.62
0841	1.25		8.00	0.90	16.9	163	1.31
0843	2.50		8.10	1.09	17.6	371	3.15
0845	3.75		8.19	1.09	18.1	331	2.66
0849	5.2		8.37	1.08	18.1	960	5.67
0855							

Begin Purge: 0838 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0849 Purged Dry? Almost

Total Volume Purged: 5.2 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 0855 Sample Number (s): 108-S03-006
field ID: M03-07-Q20

Comments: Water - Light yellow, clear, with no odor or sheen
Well bailing almost dry; slow recovery

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M030E Date: 2/4/98

Personnel: JM / KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 16.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 0.91 ft

Water Column: 15.09 ft Well Volume: 2.46 x 3 = 7.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
15:26	0	0	9.11	0.25	15.4	30	1.87
15:28	2		8.77	0.30	15.5	52	4.44
15:31	4		8.76	0.33	15.6	44	4.28
15:32	6		8.94	0.33	15.8	36	5.02
15:34	7.5		8.97	0.33	15.7	38	4.41
1550							

Begin Purge: 1526 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1534 Purged Dry? No

Total Volume Purged: 7.5 gal How Measured? Calibrated drum

QA\QC Sample Collected Here? ☒ Duplicate (408-501-025) ☐ Matrix Spike ☐ Equip. ~~Blank~~ (1615) ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/4/98 1550 Sample Number (s): 408-501 024

Comments: Water - Clear, no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M031-E Date: 2/10/98

Personnel: KW / JM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 18.0 ft

Depth to Water: 0.10 ft

Water Column: 17.9 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.9 gal

Time	Vol. Purged	Water Level	pH	Conductivity (umhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0842	0	0.10	7.83	0.68	15.8	6	1.85
0850	2.5		8.73	0.64	15.8	18	6.23
0855	5.0		8.76	0.82	16.0	5	2.99
0901	7.5		8.73	1.16	15.8	4	4.73
0905	9.0		8.73	1.31	15.8	0	4.99

Begin Purge: 0842 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0905 Purged Dry? NO

Total Volume Purged: ~~8.75~~ 9 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98 / 0910 Sample Number (s): 108-501026 (field ID M031-E-0226)

Comments: Water is cloudy, brown with no odor or sheen. Due to excessive rainfall, recharge is extreme re water level in well kept flowing up and over top of casing.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M034-A Date: 2/4/94

Personnel: JM, KW 108-S01-~~028~~ 027

Organic Vapor Concentration TOC: 510 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.0 ft

Depth to Water: 1.0 ft

Water Column: 13.0 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.119 gal

MP = 6.5 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0910	0	0	6.74	0.66	15.5	>1000	-0.60
0913	1.5		7.82	0.62	15.3	246	2.83
0916	3		7.86	0.65	16.1	109	2.41
0918	4.5		7.86	0.63	16.4	61	0.90
0920	6.5		7.94	0.63	16.5	50	1.45
0924							

Begin Purge: 0910 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0920 Purged Dry? No

Total Volume Purged: 6.5 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 0924 2/4/98 Sample Number (s): 108-S01-~~028~~ 027

Comments: Water: Solvent odor, dark grey with lots of organic matter

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M035A Date: 2/03/98

Personnel: KW/JM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 2.58 ft

Water Column: 11.42 ft Well Volume: 1.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1130		2.58	8.68	0.94	16.2	>1000	-0.50
1135	1		8.46	0.71	15.6	311	3.05
1139	2		8.40	0.68	15.8	250	2.71
1143	3		8.43	0.65	15.7	239	3.25
1146	4		8.41	0.65	15.8	155	3.55
1150	5		8.31	0.63	15.6	204	2.53

Begin Purge: 1130 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1150 Purged Dry? no

Total Volume Purged: 5.5 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/03/98/1150 Sample Number (s): 108-S01-028
Field ID: M035-A-Q20

Comments: water is cloudy, brown, with no odor; ~~and~~ a slight sheen present.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M036-A Date: 2/10/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 0.60 ft

Water Column: 14.4 ft Well Volume: 2.35 gal

7 gal.

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	
1122	0		6.48	5.17	14.7	0	3.72	0.26
1125	2		6.33	5.06	16.9	28	3.59	0.26
1128	4		6.28	5.05	17.2	24	3.21	0.26
1130	6		6.29	5.06	17.1	16	3.61	0.26
1132	7		6.27	5.07	17.4	8	3.91	0.26

Begin Purge: 1122 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1132 Purged Dry? No

Total Volume Purged: 7 gal. How Measured? Cal. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98 1140 Sample Number (s): 108-S02-032

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M036-B Date: 2/10/98

Personnel: MSS/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 100 ft Well Volume: 2-inch well = water column x 0.163 gal/ft

✓3-inch well = water column x 0.367 gal/ft

Depth to Water: 2.56 ft 4-inch well = water column x 0.652 gal/ft

Water Column: 97.44 ft Well Volume: 35.8 gal

Total purge # = 110 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0845	0		6.50	13.1	14.9	1	3.27	0.75
0851	≈ 28		6.54	14.0	16.7	0	3.92	0.81
0857	≈ 55		6.57	14.2	17.3	0	2.83	0.82
0903	≈ 83		6.66	14.3	17.4	0	1.78	0.82
0910	= 110		6.76	14.2	17.1	0	2.85	0.82

Begin Purge: 0845 Method of Purging ☒ Pump ☐ Bailer

End Purge: 0910 Purged Dry? No

Total Volume Purged: 110 gallons How Measured? Timed discharge and calibrated drums.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98 0932 Sample Number (s): 108-502-033

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M036-E Date: 2/10/98

Personnel: MJS / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 30 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 1.01 ft

Water Column: 28.99 ft Well Volume: 4.7 gal

Total purge # = 15

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0944	0		7.20	1.00	12.6	[illegible]	5.21	0.04
0948	3		6.99	0.93	16.5	1	5.35	0.04
0952	6		6.65	5.03	16.8	1	3.91	0.26
0957	9		6.68	7.70	17.2	1	3.78	0.41
0~~1~~1002	12		6.78	9.43	17.2	0	3.87	0.52
1005	15		6.80	11.4	17.2	0	4.78	0.64

Begin Purge: 0944 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1005 Purged Dry? No

Total Volume Purged: 15 gallons 1007 How Measured? ~~[illegible]~~ Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: _____ Sample Number (s): 108-502-034

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M037-A Date: 2/12/98

Personnel: MJT/BM

Organic Vapor Concentration TOC: No PID available ppm Breathing Zone: ppm

Depth to Well Bottom: 18 ft

Depth to Water: 3.38 ft

Water Column: 14.62 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.38 gal

Total purge # = 7.5 gal.

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1048	0		6.72	16.6	14.1	38	4.35	0.96
1056	2		6.57	18.8	15.6	178	3.67	1.10
1055	4		6.54	24.3	17.0	90	3.04	1.48
1100	6		6.65	25.5	17.2	176	4.14	1.55
	8							

Begin Purge: 1048 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1100 Purged Dry? No

Total Volume Purged: 7 gallons How Measured?

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/12/98 1110 Sample Number (s): 108-502 ~~-035~~ -035

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M037-B Date: 2/12/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 87.2 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
✓3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.7 ft

Water Column: 83.5 ft Well Volume: 30.6 gal

Total purge # = 92 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0928	0		6.58	7.77	15.8	0	1.74	0.42
0940	≈ 23		6.60	7.65	16.6	1	2.57	0.41
0952	≈ 46		6.59	7.68	16.4	1	2.40	0.41
1010	≈ 69		6.57	7.66	16.8	1	2.60	0.45
1021	≈ 92		6.66	7.65	16.9	1	2.63	0.41

Begin Purge: 0928 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1021 Purged Dry? No

Total Volume Purged: 95 gallons How Measured? Calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/12/98 1027 Sample Number (s): 108-502-036

Comments: Discharge rate = 2 gpm

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M037-E Date: 2/12/98

Personnel: MSS/BM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 25 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.11 ft

Water Column: 20.89 ft Well Volume: 3.4 gal

Total purge v = 10 gallons.

Time	Vol. Purged	Water Level	pH	Conductivity (umhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	
1124	0		7.76	0.737	15.2	7	5.67	0.03
1130	3		6.34	37.4	17.0	22	4.32	2.36
1136	6		6.51	40.9	17.2	31	3.20	2.61
1148	9		6.55	40.7	16.7	34	2.72	
1153	10		6.59	41.9	17.1	9	3.96	

Begin Purge: 1124 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1153 Purged Dry? no

Total Volume Purged: 10 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/12/98 / 1200 Sample Number (s): 108-502-037

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M038-A Date: 2/13/98

Personnel: Jm/Bm

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15.0 ft

Depth to Water: 5.15 ft

Water Column: 9.85 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: ~~1.6~~ 1.60 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1000	~~1000~~ 0	5.15	7.77	7.84	19.0	36	4.03
1005	1.0		7.75	6.84	19.7	227	5.69
1008	2		7.63	8.42	19.9	409	5.97
1010	3		7.20	16.6	20.6	773	5.32
1012	4		7.21	27.4	21.1	>1000	6.00
1015	4.75						

Begin Purge: 1000 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1015 Purged Dry? no

Total Volume Purged: 5 gals How Measured? Calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/13/98/1020 Sample Number (s): 108-S02-038
Field ID: M038-A-QZC

Comments: water is clear, amber, with a slight solvent odor and a sheen present. well bailed down to almost dry. Recharge was slow, collected abbreviated set of sample bottles (ie minimum required by Lab.

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TETRA TECH-EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M038 - B Date: 2/13/98

Personnel: JM/BM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 80.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 8.91 ft

Water Column: 71.09 ft Well Volume: ~~46.3~~ 26.0 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0915	0	8.91	7.66	31.4	17.0	0	3.74
0921	19		7.81	37.3	17.6	0	4.29
0927	38		8.18	36.8	18.0	0	3.65
0933	57		8.20	37.0	18.0	0	7.73
0940	78		8.21	37.0	18.2	0	8.56

Begin Purge: 0915 Method of Purging ☒ Pump ☐ Bailer

End Purge: 0940 Purged Dry? No

Total Volume Purged: 78 gals How Measured? flow rate

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/13/98/0945 (dup) 2/13/98/0950 Sample Number (s): 108-S02-039 (field ID's: M038-B-Q20 M038-B-Q20D) 108 S02 - 040 (duplicate)

Comments: Purge rate = 3 gals/minute, water is ~~cloudy~~ clear, with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M038-E Date: 2/13/98

Personnel: JM/BM

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 25.0 ft

Depth to Water: 7.54 ft

Water Column: 17.46 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1040	0		7.87	40.7	20.4	138	4.32
1049	2		7.79	41.4	20.5	196	4.26
1055	4		7.83	41.4	20.1	409	4.07
1103	6		7.83	41.7	20.1	664	4.10
1107	8.5		7.99	41.6	19.7	71000	4.26

Begin Purge: 1040 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1105 Purged Dry? no

Total Volume Purged: 8.5 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/13/98 Sample Number (s): 108-SOZ-041
field ID: M038-E-020

Comments: water is cloudy, amber, with no odor or sheen. well bailed down to almost dry.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M039-A Date: 2/10/98

Personnel: MJJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15 ft Well Volume: ✓ 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.99 ft

Water Column: 9.01 ft Well Volume: 1.5 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1326	0		6.35	5.42	16.3	12	3.42	0.28
1330	2		6.34	5.42	16.7	12	3.79	0.28
1333	3		6.27	5.40	17.0	9	3.17	0.28
1335	4		6.28	5.41	16.9	9	3.23	0.28
1337	5		6.25	5.36	16.9	10	3.32	0.28

Begin Purge: 1326 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1337 Purged Dry? No

Total Volume Purged: ~~2/10/98 1342~~ 5 gal. How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98 1342 Sample Number (s): 108-502-042

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MO39 - B Date: 2/13/98

Personnel: Jon/Bm

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 62.5 ft

Depth to Water: 10.07 ft

Water Column: 52.43 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 19.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1150	0		8.35	39.9	18.1	186	6.84
1155	14		8.37	39.0	18.4	53	6.23
1200	28		8.48	38.9	18.4	7	6.27
1205	42		8.42	38.7	18.6	1	4.90
1210	58		8.36	39.7	18.2	1	6.60

Begin Purge: 1140 Method of Purging ☒ Pump ☐ Bailer

End Purge: 1210 Purged Dry? No

Total Volume Purged: 58 gal How Measured? flow rate

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/13/98/1210 Sample Number (s):

Comments: flow rate = 3 gpm; water is clear w/no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M039-E Date: 2/10/98

Personnel: MSJ / BM

Organic Vapor Concentration — TOC: well head 10.3 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 21.5 ft Well Volume: ✓ 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.11 ft

Water Column: 15.39 ft Well Volume: 2.5 gal

~~2.5~~ 8 gal (purge ✓.

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1401	0		6.43	6.57	17.9	13	2.86	0.35
1404	2		6.38	7.11	18.6	36	3.05	0.38
1408	4		6.51	7.61	18.6	29	2.06	0.41
1411	6		6.45	7.79	18.8	27	2.70	0.42
1414	8		6.43	7.89	19.1	21	3.20	0.43

Begin Purge: 1401 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1414 Purged Dry? No

Total Volume Purged: 8 gal. How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98 1418 Sample Number (s): 108-502-044

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M04-05 Date: 2/9/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: Well head 1.9 ppm Breathing Zone: 2.4 ppm

Depth to Well Bottom: 13.5 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.96 ft

Water Column: 9.54 ft Well Volume: 1.55 gal

Total purge # = 5 gallons.

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1109	0		7.16	0.95	15.6	0	4.57	0.04
1111	1		7.02	0.765	15.7	6	4.16	0.03
1113	2		7.03	0.757	15.9	15	4.66	0.03
1115	3		7.01	0.757	16.2	36	4.92	0.03
1117	4		7.05	0.760	16.4	38	4.24	0.03
1119	5		6.99	0.771	16.7	64	3.82	0.03

Begin Purge: 1109 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1119 Purged Dry? No

Total Volume Purged: 5 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1124 Sample Number (s): 108-504-013

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M04-06 Date: 2/9/98

Personnel: MJJ / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 13.5 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.00 ft

Water Column: 10.5 ft Well Volume: 1.71 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	
1213	0		9.17	0.669	14.6	2	2.61	0.03
1215	1		9.23	0.666	16.2	749	4.40	0.02

Begin Purge: 1213 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1215 Purged Dry? Yes @ 2 gallons

Total Volume Purged: 2 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1352 Sample Number (s): 108-504-014

Comments: Well purged dry. Sample collection 1 1/2 hours after purging.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M04-07 Date: 2/9/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 3.63 ft

Water Column: 9.87 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.61 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1138	0		7.44	0.428	16.1	0	6.26	0.02
1142	1		7.26	0.497	16.9	6	5.46	0.02
1144	2		7.31	0.541	17.4	16	5.56	0.02
1145	3		7.35	0.532	17.8	13	4.41	0.02
1147	4		7.43	0.728	18.2	46	2.38	0.03
1150	5		7.64	1.27	18.6	152	2.80	0.05

Begin Purge: 1140 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1150 Purged Dry? No

Total Volume Purged: 5 gal. How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1155 Sample Number (s): 108-S04-015

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-01 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 14 ft

Depth to Water: 5.91 ft

Water Column: 8.09 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.32 gal

Total purge # = 4 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0920	0		6.17	7.34	14.2	0	9.97	0.39
0923	1		6.49	7.35	14.3	426	10.02	0.39
0925	2		6.64	8.76	14.6	326	8.25	0.47
0927	3		6.75	11.2	14.8	208	8.49	0.62
0929	4		6.82	12.7	14.9	106	8.35	0.72

Begin Purge: 0920 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0929 Purged Dry? No

Total Volume Purged: 4 gallons How Measured? Calibrated 5 gallon bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 0935 Sample Number (s): 108-505-019

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-02 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 26.4 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.39 ft

Water Column: 8.61 ft Well Volume: 1.4 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0956	0		7.04	8.22	17.4	1	6.36	0.45
0959	1		7.39	2.93	17.7	15	5.88	0.15
1002	2.4		7.14	4.78	17.9	18	6.59	0.24
1005	4		7.02	6.77	18.2	23	6.44	0.36
1007	5		6.99	7.99	18.1	35	5.43	0.43

Begin Purge: 0956 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1007 Purged Dry? No

Total Volume Purged: 2/5/98 1010 How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1010 Sample Number (s): 108-S05-020

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-03 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 347 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 12 ft

Depth to Water: 3.09 ft

Water Column: 8.91 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.45 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1032	0		6.64	1.39	16.6	4	6.93	0.06
1036	1		6.57	1.15	16.1	26	5.96	0.05
1038	2		6.60	1.19	16.1	21	6.41	0.05
1040	3		6.61	1.20	16.3	19	5.97	0.05
1042	4		6.64	1.21	16.2	17	6.74	0.05
1044	5		6.62	1.21	16.2	23	6.08	0.05

Begin Purge: 1032 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1044 Purged Dry? No

Total Volume Purged: 5 gal. How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1050 Sample Number (s): 108-S05-021

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-08 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration well head TOC: 67.7 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.18 ft

Water Column: 9.82 ft Well Volume: 1.6 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1113	0		6.75	11.9	17.8	1	5.98	0.68
1115	1		6.85	7.20	17.4	0	6.51	0.38
1117	2		6.82	8.49	17.7	0	6.28	0.46
1118	3		6.84	9.55	18.1	0	6.58	0.53
1120	4		6.88	9.07	18.1	0	6.55	0.50
1122	5		6.81	9.23	18.1	0	6.61	0.51

Begin Purge: 1113 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1122 Purged Dry? No

Total Volume Purged: 5 gallons How Measured?

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1125 Sample Number (s): 108-505-022

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-05 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 62.4 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14 ft

Depth to Water: 5.40 ft

Water Column: 8.60 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.4 gal

Total purge # = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1220	0		8.4	0.39	14.7	15	10.3	
1223	1		7.77	0.348	18.6	20	9.50	0.01
1225	2		7.62	0.311	15.0	32	9.18	0.01
1227	3		7.57	0.298	15.0	109	8.52	0.01
1228	4		7.55	0.287	15.0	147	8.85	0.01
1230	5		7.55	0.283	14.9	106	9.54	0.01

Begin Purge: 1220 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1230 Purged Dry? No

Total Volume Purged: 2/5/98 1240 How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1240 Sample Number (s): 108-S05-023

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-06 Date: 2/5/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 13 ft

Depth to Water: 3.77 ft

Water Column: 9.23 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.5 gal

Total purge Volume = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1253	0		7.16	5.27	17.1	504	6.58	0.27
1255	1		7.76	1.25	16.5	71	6.69	0.06
1257	2		7.53	1.94	16.9	97	6.40	0.09
1258	3		7.48	2.20	16.9	98	6.74	0.10
1300	4		7.46	2.28	17.0	105	6.57	0.11
1302	5		7.52	2.19	17.0	110	6.69	0.11

Begin Purge: 1253 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1302 Purged Dry? No

Total Volume Purged: ~~2/5/98~~ ~~1310~~ 5 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1310 Sample Number (s): 108-505-029

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-07 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration Well Head TOC: 154 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 17 ft

Depth to Water: 5.6 ft

Water Column: 11.4 ft

Well Volume: ✓ 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.86 gal

Total purge volume = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1327	0		6.90	0.423	16.9	0	6.74	0.01
1332	2		6.83	0.407	16.7	38	7.04	0.01
1334	3		6.78	0.400	17.0	37	6.20	0.01
1335	4		6.79	0.390	17.1	28	6.59	0.01
1337	5		6.90	0.384	17.0	23	6.65	0.01
1338	6		6.81	0.379	17.0	31	7.45	0.01

Begin Purge: 1327 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1338 Purged Dry? No

Total Volume Purged: 6 gal. How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1343 Sample Number (s): 108-505-025

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-08 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.23 ft

Water Column: 8.77 ft Well Volume: 1.43 gal

Total purge = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1359	0		7.18	0.725	18.3	8	6.22	0.03
1400	1		7.12	0.823	18.9	84	4.89	0.03
1402	2		7.10	1.25	19.2	83	5.47	0.05
1404	3		7.09	1.35	19.5	73	4.23	0.06
1406	4		7.09	1.37	19.5	57	4.53	0.06
1407	5		7.09	1.38	19.5	61	4.68	0.06

Begin Purge: 1359 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1407 Purged Dry? No

Total Volume Purged: 5 gallons How Measured? calibrated bucket 108-505-026

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1413 Sample Number (s): _____

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MO5-09 Date: 2/5/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15 ft

Depth to Water: 5.19 ft

Water Column: 9.81 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.6 gal

Total purge Volume = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1427	0		7.41	0.534	14.9	Ø	10.21	0.02
1428	1		7.21	0.539	14.8	88	9.72	0.02
1430	2		7.16	0.551	14.7	79	9.67	0.02
1432	3		7.15	0.561	14.7	132	9.66	0.02
1433	4		7.15	0.559	14.7	191	9.28	0.02
1435	5		7.15	0.563	14.7	182	9.93	0.02

Begin Purge: 1427 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1435 Purged Dry? No

Total Volume Purged: 5 gal. How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/5/98 1440 Sample Number (s): 108-505-027

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-10 Date: 2/6/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: Well head 121 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 6.98 ft

Water Column: 8.02 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.3 gal

Total purge Volume = 4 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1007	0		~~8.26~~ ~~7.95~~	~~0.637~~ ~~0.04~~	~~14.7~~ 17.3	~~15~~ 2	6.15	0.02
1010	1		8.05	0.248	17.5	12	5.14	0.0
1012	2		7.89	0.254	17.6	16	6.02	0.0
1014	3		7.84	0.245	17.6	21	5.33	0.0
1016	4		7.82	0.249	17.6	22	5.34	0.0

Begin Purge: 1007 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1016 Purged Dry? No

Total Volume Purged: 4 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 1022 Sample Number (s): 108-S05-028

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-11 Date: 2/6/98

Personnel: MSI / BM

Organic Vapor Concentration TOC: well head 47 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.5 ft

Depth to Water: 7.01 ft

Water Column: 8.49 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.38 gal

Total purge volume = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	
0851	0		6.87	18.8	16.8	Ø	6.05	1.12
0853	1		7.17	10.5	16.9	33	5.34	0.57
0855	2		7.06	14.9	17.0	28	4.73	0.85
0857	3		7.11	15.4	17.2	50	5.13	0.89
0859	4		7.12	15.1	17.1	49	5.52	0.88
0901	5		7.11	16.2	17.3	43	5.47	0.94

Begin Purge: 0857 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0901 Purged Dry? No

Total Volume Purged: 5 gallons How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 0907 Sample Number (s): 108-S05-029

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-12 Date: 2/6/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15.5 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 7.06 ft

Water Column: 8.44 ft Well Volume: 1.38 gal

Total purge volume = 5 gallons.

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0927	0		7.42	4.84	16.7	1	5.60	0.24
0929	1		7.16	8.46	17.3	7	5.72	0.46
0931	2		7.16	9.69	17.4	17	5.65	0.53
0933	3		7.17	10.90	17.5	23	5.54	0.61
0935	4		7.20	10.3	17.4	30	5.40	0.57
0937	5		7.19	10.1	17.5	27	5.57	0.57

Begin Purge: 0927 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0937 Purged Dry? No

Total Volume Purged: 5 gallons How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 0942 Sample Number (s): 108-505-030

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOSBS-01 Date: 2/6/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 5.9 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.5 ft

Depth to Water: 5.46 ft

Water Column: 10.04 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.64 gal

Total purge volume = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1044	0		7.72	0.164	15.8	1	8.03	0.0
1046	1		7.46	0.168	16.2	112	8.67	0.0
1048	2		7.34	0.167	16.8	119	8.36	0.0
1050	3		7.26	0.169	17.1	100	8.21	0.0
1052	4		7.22	0.172	17.1	119	8.18	0.0
1054	5		7.16	0.173	17.1	119	8.68	0.0

Begin Purge: 1044 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1054 Purged Dry? No

Total Volume Purged: 5 gallons How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 1057 Sample Number (s): 108-SOS-031

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MD5HW-01 Date: 2/6/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: 55.9 ppm (well head) Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 5.79 ft

Water Column: 9.21 ft

Well Volume: ✓ 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.5 gal

Total purge volume = 5 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1115	0		7.38	0.554	17.3	2	5.67	0.02
1117	1		7.47	0.605	17.7	24	5.95	0.02
1119	2		7.48	0.767	17.9	26	5.53	0.03
1120	3		7.53	0.771	18.0	19	5.46	0.03
1122	4		7.54	0.800	18.0	22	5.62	0.03
1124	5		7.58	0.786	18.1	21	6.13	0.03

Begin Purge: 1115 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1124 Purged Dry? No

Total Volume Purged: ~~2/6/98 1129~~ 5 gal. How Measured? ~~108-505-032~~ Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 1129 Sample Number (s): 108-505-032

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MO6-06 Date: 2/6/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: 131 ppm (wall head) Breathing Zone: 46.0 ppm

Depth to Well Bottom: 10 ft

Depth to Water: 5.62 ft

Water Column: 4.38 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 0.7 gal

Total purged = 2 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	
1150	0		7.94	0.307	15.4	0	8.27	0.01
1153	1		7.79	0.358	15.3	32	7.47	0.01
1155	2		8.17	0.093	12.4	51	10.49	0.0
1157	3		8.23	0.068	12.7	56	10.61	0.0

Begin Purge: 1150 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1157 Purged Dry? _____

Total Volume Purged: 3 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 1205 Sample Number (s): 108-S06-002

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-03 Date: 2/05/98

Personnel: JM/KW

Organic Vapor Concentration TOC: 8.0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.5 ft

Depth to Water: 5.98 ft

Water Column: 9.62 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.5 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1120	0	5.98	7.87	42.9	18.5	47	1.17
1123	1.0		7.84	43.1	18.9	89	3.41
1127	2.0		7.89	43.5	19.1	94	3.62
1133	3.0		7.96	44.5	19.4	91	1.37
1140	4.5		8.00	47.1	19.4	30	2.50

Begin Purge: 1120 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1140 Purged Dry? no

Total Volume Purged: 4.5 gals How Measured? Calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/05/98/ Sample Number (s): 108-507-008
Field ID: M07A-03-G20

Comments: Water is yellowish brown, with a strong petroleum odor and sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-04 Date: 2/05/98

Personnel: JM / KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 6.80 ft

Depth to Water: 1.22 ft

Water Column: 5.58 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 0.9 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1000	0	1.22	8.06	23.5	14.7	19	1.79
1004	0.75		8.17	16.5	14.4	88	6.68
1007	1.5		8.19	14.4	14.4	79	4.74
1010	2.25		8.25	12.8	14.4	84	6.42
1013	3.0		8.21	~~12.5~~ 12.8	14.5	58	4.43

Begin Purge: 1000 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1013 Purged Dry? no

Total Volume Purged: 3 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/05/98/1020 2/05/98/1030 (dup) Sample Number (s): 108-507-009 & 108-507-010
fie/2105 M07A-04-Q20d M07A-04-Q3c

Comments: water is yellowish-brown, with a slight petroleum odor and sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-09 Date: 2/05/98

Personnel: Jm / KW

Organic Vapor Concentration TOC: 0.2 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 11.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 0.90 ft

Water Column: 10.1 ft Well Volume: 1.6 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1333	0	0.90	8.05	36.5	16.2	35	3.81
1442	1.25		8.09	20.0	14.4	111	7.63
1445	2.5		8.44	10.3	13.5	272	5.96
1448	3.75		8.01	11.1	13.4	170	4.91
1450	5.0		8.16	7.95	13.2	182	4.78

Begin Purge: 1333 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1450 Purged Dry? no

Total Volume Purged: 5 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/05/98/1400 Sample Number (s): 108-S07-011
field ID: M07A-09-Q20

Comments: yellowish brown, cloudy, with stray petroleum odor, no sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07B-01 Date: 2/13/98

Personnel: Jm / Bm

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 11.0 ft

Depth to Water: 3.50 ft

Water Column: 7.50 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1300	0	3.50	10.00	0.66	15.1	338	10.01
1305	1		9.55	0.78	14.6	899	8.99
1308	2		9.19	0.20	14.7	708	8.99
1310	3		7.02	0.24	14.5	600	6.88
1312	3.75		8.91	0.26	14.5	547	6.83

Begin Purge: 1300 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1312 Purged Dry? No

Total Volume Purged: 3.75 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/13/98/1320 Sample Number (s): 108-521-002
field ID: M07B-01-Q20

Comments: water is cloudy, gr brown, with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: ~~D067-01, D07C-01~~ M07C-07 Date: 2/11/98

Personnel: JM, KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 2.36 ft

Water Column: 11.14 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.82 x 3 = 5.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1336	0	2.36	9.02	1.26	15.2	37	5.80
1339	1.5		7.76	1.25	14.2	425	3.36
1341	3		7.96	1.30	14.6	509	6.58
1344	4.5		7.99	1.33	15.1	>1000	4.85
1346	5.5		7.97	1.35	15.4	>1000	6.74

Begin Purge: 1336 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1346 Purged Dry? No

Total Volume Purged: 5.5 How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1350 Sample Number (s): 108-522-006

Comments: Water - Cloudy, brown, with a slight solvent odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07C-08 Date: 2/11/98

Personnel: JM, KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 1.30 ft

Water Column: 12.2 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.99 x 3 = 5.97 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1421	0	1.30	8.05	0.290	15.3	140	4.97
1423	1.5		7.41	0.25	14.5	833	5.66
1426	3		7.48	0.25	14.7	>1000	5.33
1428	4.5		7.39	0.25	14.9	>1000	5.02
1430	6.0		7.39	0.25	15.1	>1000	5.33
1435							

Begin Purge: 1421 Method of Purging ☐ Pump ☑ Bailer

End Purge: 1430 Purged Dry? No

Total Volume Purged: 6.0 How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1435 Sample Number (s): 108-522-007

Comments: Water: Clear, amber with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M09-06 Date: 2/05/98

Personnel: JM/KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.3 ft

Depth to Water: 4.96 ft

Water Column: 9.34 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.52 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1435	0	4.96	9.10	0.54	17.2	21000	5.09
1440	1		9.02	0.49	17.2	782	7.40
1442	2		8.94	0.49	17.1	757	5.95
1445	3		9.03	0.48	17.1	542	5.96
1449	4.5		8.99	0.48	17.1	500	2.73

Begin Purge: 1435 Method of Purging ☐ Pump ☒ Bailer

End Purge: Purged Dry? no

Total Volume Purged: 4.5 How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/05/98/1500 dup @ 1510 Sample Number (s): 108-509-005/108-509-006

Field IDs: M09-06-Q20
M09-06-Q20D

Comments: water is cloudy, brown, with no odor or sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M10-01 Date: 2/05/98

Personnel: JM/KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 19.0 ft

Depth to Water: 3.17 ft

Water Column: 10.83 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.73 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1538	0	3.17	9.22	2.30	16.0	>1000	2.37
1545	1.25		9.39	0.75	14.5	235	1.50
1548	2.50		9.11	0.70	14.1	220	3.02
1550	3.75		9.12	0.67	13.9	269	2.20
1554	5.25		9.22	0.73	14.0	236	3.50

Begin Purge: 1538 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1554 Purged Dry? no

Total Volume Purged: ~~2/05/98/1610~~ 5.25 How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/05/98/1610 Sample Number (s): 108-S10-002
Field ID: M10-01-Q20

Comments: Water is cloudy, gray, with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M101-A Date: 2/11/98

Personnel: MST / BM

Organic Vapor Concentration TOC: No PID available ppm Breathing Zone: ppm

Depth to Well Bottom: 12.5 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 0.9 ft

Water Column: 11.6 ft Well Volume: 1.9 gal

Total purge vol = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1407	0		7.08	2.51	14.7	2	5.63	0.12
1410	2		7.01	2.18	15.0	6	5.49	0.10
1413	4		7.01	2.07	15.1	7	6.09	0.09
1414	5		6.95	2.02	15.1	5	5.59	0.09
1416	6		6.98	2.01	15.1	8	5.59	0.09

Begin Purge: 1407 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1416 Purged Dry? No

Total Volume Purged: 6 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1423 Sample Number (s): 108-514-002

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-01 Date: 2/6/98

Personnel: JM/KW

Organic Vapor Concentration TOC: (PID not functioning) ppm Breathing Zone: — ppm

Depth to Well Bottom: 9.5 ft

Depth to Water: 5.27 ft

Water Column: 4.23 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 0.69 x 3 = 2.1 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1133	0	0	8.86	2.41	14.6	71000	5.66
1134	0.5		8.65	1.91	14.4	423	5.56
1135	1.0		8.64	1.76	14.4	840	8.06
1135	1.5		8.60	1.68	14.5	967	7.17
1136	2.5		8.54	1.68	14.5	71000	7.06

Begin Purge: 1133 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1136 Purged Dry? NO

Total Volume Purged: 2.5 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 (1140) Sample Number (s): 108-511-006
Field ID: ~~M11~~ M11-01-Q20

Comments: Water: Cloudy brown, no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-02 Date: 2/9/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 8.9 ppm Breathing Zone: 4.2 ppm

Depth to Well Bottom: 9.5 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.65 ft

Water Column: 4.85 ft Well Volume: 0.79 gal

Total purge # = 3 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1232	0		7.48	0.528	14.9	3	1.23	0.02
1234	0.5		7.11	0.627	14.8	21	6.39	0.02
1235	1		7.02	0.632	14.9	20	2.66	0.02
1237	2		7.03	0.646	15.0	15	4.37	0.02
1239	2.5		7.00	0.636	15.0	19	4.35	0.02
1240	3		7.01	0.638	15.0	20	4.02	0.02

Begin Purge: 1232 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1240 Purged Dry? No

Total Volume Purged: 3 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1245 Sample Number (s): 108-511-007

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-05 Date: 2/6/98

Personnel: JM / IAW

Organic Vapor Concentration TOC: PID not functioning ppm Breathing Zone: — ppm

Depth to Well Bottom: 14 ft

Depth to Water: 3.72 ft

Water Column: 10.28 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.68 x 3 = 5.02 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1010	0	0	8.50	2.04	17.1	368	6.65
1011	1.25		8.52	1.82	16.2	752	8.31
1013	2.5		8.41	2.39	16.5	626	5.83
1015	3.75		8.54	2.69	16.5	661	6.15
1016	5		8.64	2.90	16.6	655	4.86

Begin Purge: 1010 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1016 Purged Dry? No

Total Volume Purged: 5 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☒ Duplicate (108-S11-009) (1050) ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: (1020) 2/6/98 Sample Number (s): 108-S11-008
Field ID: ~~M11~~ M11-05-Q20

Comments: Water: Cloudy, brown with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-06 Date: 2/6/98

Personnel: JM / KW

Organic Vapor Concentration TOC: pid not functioning ppm Breathing Zone: — ppm

Depth to Well Bottom: 14. ft

Depth to Water: 4.00 ft

Water Column: 10 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.63 x 3 = 4.89 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1059	0	0	9.14	0.79	16.7	300	4.66
1101	1.25		8.95	0.65	15.8	950	7.55
1103	2.5		8.94	0.66	15.8	>1000	7.94
1105	3.75		9.03	0.69	15.8	>1000	6.87
1107	5.0		9.07	0.68	15.8	>1000	7.65

Begin Purge: 1059 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1107 Purged Dry? no

Total Volume Purged: 5 gal How Measured? Calibrated 5 gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 1110 Sample Number (s): 108-511-010
Field ID: M11-06-Q20

Comments: Water. Cloudy, brown with no odor or sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M12-01 Date: 2/9/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 2.9 ppm Breathing Zone: 0.9 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 4.0 ft

Water Column: 11.0 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.79 gal

Total purge # = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1306	0		7.37	1.24	14.4	0	4.71	0.05
1308	1		7.22	1.26	14.3	18	4.36	0.05
1310	2		7.18	1.26	14.3	39	4.96	0.05
1311	3		7.18	1.26	14.3	44	5.03	0.05
1313	5		7.18	1.25	14.2	50	5.32	0.05
1315	6		7.16	1.25	14.3	42	4.59	0.05

Begin Purge: 1306 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1315 Purged Dry? No

Total Volume Purged: 6 gal. How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1321 Sample Number (s): 108-S12-002

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M13-06 Date: 2/10/98

Personnel: JM / KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 9.5 ft

Depth to Water: 1.56 ft

Water Column: 7.94 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.29 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1340	0	1.56	10.0	0.29	13.0	137	9.21
1345	1.0		9.86	0.23	12.9	455	6.91
1348	2.0		9.34	0.29	12.9	482	9.06
1350	3.0		9.40	0.24	12.5	428	11.54
1352	4.0		9.30	0.26	13.0	463	8.09

Begin Purge: 1340 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1352 Purged Dry? no

Total Volume Purged: 4 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☒ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98/1410 Sample Number (s): 108-SB-005
field ID: M13-06-020

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M13-09 Date: 2/10/98

Personnel: JM / KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.5 ft

Depth to Water: 1.18 ft

Water Column: 11.32 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (umhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1548	0	1.18	7.42	0.66	16.1	56	1.81
1552	1.5		7.29	0.69	15.2	154	3.37
1600	3.0		7.46	0.65	15.9	220	3.45
1603	4.5		7.56	0.62	16.4	142	4.53
1605	5.5		7.60	0.66	15.4	65	10.75

Begin Purge: 1550 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1605 Purged Dry? NO

Total Volume Purged: 5.5 How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98/1620 Sample Number (s): 108-813-006
field ID: M13-09-Q20

Comments: water is cloudy, brown, with no odor or sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M16-04 Date: 2/6/98

Personnel: JM / KW

Organic Vapor Concentration TOC: PID not functioning ppm Breathing Zone: — ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 2.02 ft

Water Column: 11.48 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.87 x 3 = 5.6 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1333	0	0	10.17	0.26	17.0	155	2.52
1336	1.5		9.38	0.22	16.9	227	3.50
1337	3.0		9.59	0.23	16.8	546	5.99
1339	4.5		9.58	0.22	16.9	594	4.00
1341	6.0		9.60	0.23	16.8	641	6.11
1345							

Begin Purge: 1333 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1341 Purged Dry? No

Total Volume Purged: 6gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

108-S16-004 @ 1410 field ID M16-04-Q201

Date and Time of Sample Collection: 2/6/98 1345 Sample Number (s): 108-S16-003

field ID: M16-04-Q20

Comments: Water: Cloudy brown with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: ~~MGB-1~~ MBG-1 Date: 2/11/98

Personnel: JM, KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.8 ft

Depth to Water: 0.90 ft

Water Column: 13.9 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.27 x 3 = 6.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0934	0	0.90	7.80	7.35	15.2	360	2.82
0936	1.5		7.92	9.50	16.1	201	2.95
0939	3		7.92	15.0	16.7	152	1.59
0943	4.5		8.00	15.9	16.9	129	1.53
0946	6.8		8.11	16.0	16.8	120	2.93
0950							

Begin Purge: 0934 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0946 Purged Dry? No

Total Volume Purged: 6.7 gal How Measured? Calibrated Bucket

MSDS Collected Here

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 0950 Sample Number (s): 108-SBG-005

Comments: Water - Cloudy brown with slight odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MBG-2 Date: 2/11/98

Personnel: JM, KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.0 ft

Depth to Water: 2.18 ft

Water Column: 12.82 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.1 x 3 = 6.3 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1044	0	2.18	8.54	13.4	15.4	16	2.83
1046	1.5		8.11	5.28	15.4	5	2.63
1048	3.0		7.77	7.43	15.5	32	3.06
1050	4.5		7.79	8.01	15.6	44	2.90
1053	6.5		7.79	8.37	15.6	89	3.19
1055							

Begin Purge: 1044 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1053 Purged Dry? No

Total Volume Purged: 6.3 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1055 Sample Number (s): 108-586-006

Comments: Water - Clear, light yellow, no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MBG-3 Date: 2/11/98

Personnel: JM, KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.8 ft

Depth to Water: 3.15 ft

Water Column: 11.65 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.9 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1120	0	3.15	8.66	1.17	15.3	502	1.60
1123	1.75		8.12	1.15	15.2	585	2.50
1126	3.50		8.11	1.11	15.0	843	4.30
1129	4.25		8.11	1.09	15.2	785	2.98
1132	5.75		8.11	1.10	15.2	700	2.32

Begin Purge: 1120 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1132 Purged Dry? NO

Total Volume Purged: 5.75 How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98/1135 Sample Number (s): 108-SBG-007

Comments: Water - cloudy, brown, with no odor or sheen.
Well bailed down to almost dry.

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MBG-4 Date: 2/11/98

Personnel: JM, VW

Organic Vapor Concentration TOC: 9.4 → 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: ~~(7.5)~~ 14.4 ft

Depth to Water: 1.20 ft

Water Column: 13.2 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.15 x 3 = 6.5 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0830	0	1.20	6.30	0.95	13.1	9	3.82
0834	1.5		7.50	0.91	13.4	52	2.70
0837	3		7.60	0.93	13.7	79	2.58
0841	4.5		7.71	0.91	13.8	58	2.96
0844	6.5		7.74	0.94	14.0	40	3.56
0850							

Begin Purge: 0830 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0844 Purged Dry? No

Total Volume Purged: 6.5 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ ~~Matrix Spike~~ ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 ~~[illegible]~~ 0850 Sample Number (s): 108-SBG-008

Comments: Water: Clear with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360 - 1 Date: 2/9/98

Personnel: MJS / BM

Organic Vapor Concentration TOC: 52.4 ppm Breathing Zone: 0.7 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 3.05 ft

Water Column: 11.95 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.95 gal

Total purge # = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
1032	0		7.03	4.13	15.8	0	4.26	0.21
1035	2		6.99	4.10	17.4	34	5.38	0.20
1037	3		6.98	4.12	17.8	65	5.34	0.21
1039	4		6.98	4.11	18.0	36	4.14	0.20
1041	5		6.96	4.11	18.2	24	3.34	0.21
1044	6		6.97	4.12	18.2	68	4.80	0.21

Begin Purge: 1032 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1044 Purged Dry? No

Total Volume Purged: 6 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1048 Sample Number (s): 108-504-016

Comments: This is the correctly marked MW360-1.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-1 Date: 2/9/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: 29.6 ppm (well head) Breathing Zone: 0.0 ppm

Depth to Well Bottom: ~~[illegible]~~ 20.2 ft

Depth to Water: 4.21 ft

Water Column: 10.79 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.76 gal

Total purge volume = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (umhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0816	0		6.83	4.98	15.6	0	4.51	0.25
0819	1		7.10	4.99	17.2	22	1.43	0.26

Begin Purge: 0816 Method of Purging ☐ Pump ☒ Bailer

End Purge: _____ Purged Dry? Yes @ 2.5 gallons

Total Volume Purged: 2.5 gallons How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: _____ Sample Number (s): _____

Comments: This well marked MW360-1, is actually not MW360-1. This well is right next to D04-03.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-2 Date: 2/9/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: well head 19.5 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.98 ft

Water Column: 11.02 ft Well Volume: 1.79 gal

Total purge # = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0955	0		6.56	4.76	16.2	0	4.60	0.24
0928	2		6.43	4.78	17.4	201	3.28	0.24
1000	3		6.39	4.81	17.8	174	3.78	0.24
1002	4		6.38	4.82	17.9	126	3.47	0.25
1004	5		6.37	4.80	18.0	125	3.35	0.24
1006	6		6.38	4.80	18.0	118	3.84	0.24

Begin Purge: 0955 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1006 Purged Dry? No.

Total Volume Purged: 6 gallons How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 1012 Sample Number (s): 108-304-017

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-3 Date: 2/9/98

Personnel: MSJ / BM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15 ft Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.01 ft

Water Column: 11.99 ft Well Volume: 1.95 gal

Total purge volume = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0912	0		6.66	2.91	16.7	1	3.99	0.14
0915	2		6.63	2.98	18.6	25	2.68	0.14
0917	3		6.63	3.01	19.2	48	3.05	0.14
0919	4		6.63	3.00	19.4	36	4.46	0.14
0922	6		6.67	2.92	19.5	71	3.95	0.14

Begin Purge: 0912 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0922 Purged Dry? No

Total Volume Purged: 6 gallons How Measured? Calibrated bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 0928 Sample Number (s): 108-S04-018

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-4 Date: 2/9/98

Personnel: MSJ/BM

Organic Vapor Concentration TOC: well head 18.3 ppm Breathing Zone: 1.1 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 3.72 ft

Water Column: 11.28 ft

Well Volume: ✓2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.84 gal

Total purge volume = 6 gallons

Time	Vol. Purged	Water Level	pH	Conductivity (umhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity
0839	0		7.45	1.05	16.2	7	1.43	0.04
0841	2		7.27	1.02	17.7	248	1.63	0.04
0843	3		7.26	1.01	18.1	409	1.51	0.04
0846	4		7.25	0.99	18.4	673	1.59	0.04
0848	5		7.25	0.99	18.7	884	1.58	0.04
0850	6		7.25	0.99	18.9	881	1.63	0.04

Begin Purge: 0839 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0850 Purged Dry? No

Total Volume Purged: 6 gallons How Measured? calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/9/98 0855 Sample Number (s): 108-504-019

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW 530-2 Date: 2/6/98

Personnel: JM KW

Organic Vapor Concentration TOC: PID not functioning ppm Breathing Zone: — ppm

Depth to Well Bottom: 15.0 ft

Depth to Water: 4.20 ft

Water Column: 10.8 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.76 x 3 = 5.28 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1252	0	0	9.20	4.20	17.3	43	4.43
1254	1.25		9.32	1.29	17.0	590	4.93
1256	2.5		9.20	1.32	17.0	971	5.10
58 ~~1258~~	3.75		9.17	1.66	17.2	71000	5.20
~~30~~ ~~14~~	5.5		9.22	1.70	17.1	>1000	6.70
~~0100~~							

*Begin Purge: 1252 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0100 Purged Dry? No

Total Volume Purged: 5.5 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ ~~Matrix Spike~~ ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/6/98 1305 ~~1305~~ Sample Number (s): 108-523-004
Field ID: m530-2-Q20

Comments: Water - Clear with no odor or sheen

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P-3/E-A

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW547-4 Date: 2/11/98

Personnel: JM KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 1.0 ft

Water Column: 14 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.28 x 3 = 6.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
1512	0	1.0	8.21	1.07	15.7	474	4.99
1515	2		8.12	1.17	15.7	>1000	6.90
1517	4		8.14	1.18	16.6	>1000	5.24
1520	6		8.17	1.19	16.7	>1000	7.19
1522	7		8.12	1.16	17.1	>1000	4.43
1530							

Begin Purge: 1512 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1522 Purged Dry? ~~No~~ Almost

Total Volume Purged: 7 gal How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/11/98 1530 Sample Number (s): 108-522-008

Comments: Water: Cloudy, gray, ~~[illegible]~~ solvent odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MWD13-3 Date: 2/12/98

Personnel: JM KW

Organic Vapor Concentration TOC: 160 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15' ft

Depth to Water: 2.65 ft

Water Column: 12.35 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 2.01 x 3 = 6.03 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0955	0	0	6.53	0.39	14.8	298	3.50
0957	1.5		8.15	0.41	15.0	78	4.27
1000	3		8.85	0.40	15.3	70	2.37
1004	4.5		9.34	0.39	15.3	61	1.73
1006	6		9.48	0.40	15.3	95	4.27
1009	7.5		9.42	0.40	15.5	52	2.77

Begin Purge: 0955 Method of Purging ☐ Pump ☒ Bailer

End Purge: _____ Purged Dry? _____

Total Volume Purged: 7.5 gal to stability How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/12/98 1010 Sample Number (s): 108-S19-002

Comments: Water: light gray, clear with no odor or sheen

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MWOR-5 Date: 2/10/98

Personnel: JM/KW

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 1.86 ft

Water Column: 13.14 ft Well Volume: 2.15 gal

Time	Vol. Purged	Water Level	pH	Conductivity mS/cm ~~(µmhos/cm)~~	Temperature (°C/~~°F~~)	Turbidity NTU	DO mg/L
1440	0		8.42	0.48	16.3	2	2.64
1446	1.5		8.33	0.48	16.9	363	4.93
1450	3.0		8.35	0.48	17.1	269	5.03
1453	4.5		8.33	0.48	17.3	245	3.61
1458	6.5		8.34	0.47	17.1	237	3.72

Begin Purge: 1440 Method of Purging ☐ Pump ☒ Bailer

End Purge: 1458 Purged Dry? no

Total Volume Purged: 6.5 gals How Measured? calibrated 5-gal bucket

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 2/10/98/1510 2/10/98/1520 (dup) Sample Number (s): 108-513-007 (MWOR-5-Q20) 108-513-008 (MWOR-5-Q20D)

Comments: water is cloudy, amber, with suspended sediment; no odor or sheen.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: W1 Date: 2/05/98

Personnel: KW/JM

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 10.0 ft

Depth to Water: 0.50 ft

Water Column: 9.50 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.5 gal

Time	Vol. Purged	Water Level	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L
0850	0	0.50	7.72	30.9	15.6	27	0.65
0900	1		7.91	9.7	14.5	77	5.65
0908	2		7.90	21.2	15.5	67	5.02
0913	3		7.82	3.01	13.6	120	5.28
0917	4.0		7.89	3.05	13.6	161	5.35
0921	4.5		7.79	4.29	14.1	119	5.34

Begin Purge: 0850 Method of Purging ☐ Pump ☒ Bailer

End Purge: 0917 Purged Dry? no

Total Volume Purged: 4.5 gal How Measured? calibrated 5 gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 2/05/98/0930 Sample Number (s): 108-507-012
field ID: W1-Q20

Comments: Water has a strong petroleum odor. Color is grayish black and water is clear. Initial PID reading = 7.0 ppm in well.

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Quarter 3 – ~~90~~ 105 Sheets

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM/MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: D07A-01
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: ~~Disposable bailer~~ Submersible pump	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 68

Depth to water measured from TOC (ft): Before Purging: 0.5

Minimum Purge Volume:

Three-inch well 3 x 67.5 ft x 0.367 gal/ft = 75 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 75 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal	
Initial		1233	0	17.8	6.39	21.5	0	8.34	1.29	
During		1236	12	17.0	5.95	20.9	1	7.97	1.25	
During		1239	25	17.9	6.14	21.1	68	7.99	1.26	
During		1255	~~36~~ 37	18.2	5.91	[illegible]	26	8.63	1.26	
During		1300	50	17.6	5.77	22.2	59	7.53	1.34	
During			63	18.0	5.90	23.4	10	7.60	1.41	
During			75	18.6	5.93	23.0	36	7.46	1.39	
After										

*CL = clear ~~C~~O = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-019 @ 1450	Lab: Recra
Field ID #: D07A-01-030	Filtered? ~~Y~~N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

well pumped dry quickly after one volume
Recharge halfway after 7-10 minutes

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: DC9-01
Date(s): 5/13/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Submersible Pump ~~Disposable bailer~~	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 96

Depth to water measured from TOC (ft): Before Purging: 3.54

Minimum Purge Volume:
- Three-inch well 3 x 92.46 ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x ____ ft. x 0.163 gal/ft = 102 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 102 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO
Initial		0945	0	16.7	9.67	10.96	6	0.05	7.51
During		0948	17	19.1	8.01	43.8	6	2.81	6.91
During		0951	34	19.9	7.23	52.3	0	3.43	6.91
During		0954	51	19.8	7.08	53.0	0	3.49	6.83
During		0957	68	20.1	7.04	53.4	0	3.48	6.53
During		1000	85	20.0	7.02	53.1	0	3.50	6.58
During		1003	102	20.1	7.02	53.3	0	3.52	6.62
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SC4-043 @ 1010	Lab: Recra
Field ID #: DC4-01-0.3C	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-SC4-044 for
Blank Sample Info:	VOCs, metals, TPPH, TEPH
Other Sample Info:	Only (collected @ 1020)

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | URIBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / MV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: DC4-02
DATE(S): 5/08/98	WELL TYPE: (MONITORING) EXTRACTION, ETC.):
PURGING EQUIPMENT: ~~Disposable bailer~~ Submersible pump	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 96.5

Depth to water measured from TOC (ft): Before Purging: 5.14

Minimum Purge Volume:
Three-inch well 3 x 91.36 ft x 0.367 gal/ft = 100.5 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 101 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other DO	Other Sal	
Initial		0826	0	15.7	6.17	38.5	3	9.00	2.44	
During		0832	17	17.8	6.07	46.4	2	8.78	3.02	
During		0836	33	18.4	6.05	~~3.04~~ 46.7	2	8.52	3.04	
During		0840	50	18.6	6.09	47.2	0	6.83	3.04	
During		0844	67	18.6	6.11	47.1	3	8.71	3.03	
During		0848	84	18.6	6.13	46.8	3	6.80	3.02	
During		0852	101	18.7	6.15	46.5	3	6.81	3.02	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-0820 0847:00	Lab: Recra
Field ID #: DC4-02-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, ~~TPPH~~, ~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | URIBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / HV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: DC4-03
DATE(S): 5/06/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 94

Depth to water measured from TOC (ft): Before Purging: 5.72

Minimum Purge Volume:
Three-inch well 3 x 88.25 ft x 0.367 gal/ft = 97.2 gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged 96 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	Other DO
Initial		0850	0	17.6	6.07	66.6	13	4.00	8.32
During		0855	16	19.2	6.05	70.0	3	4.00	7.54
During	1128	0903	32	19.2	6.17	68.4	10	4.00	7.92
During	1133	0911	48	19.0	6.40	69.9	2	4.00	7.90
During	1142	0919	64	19.0	6.52	69.9	8	4.00	7.93
During	1148	0927	80	19.2	6.45	69.5	1	4.00	7.77
During	1154	0935	96	19.2	6.43	69.3	0	4.00	7.81
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SG4-021 @ 1200	Lab: Recra
Field ID #: DC4-03-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: KV/JM

Page 1 of 1

Site Location: NAS Alameda	Well Number: D05-02
Date(s): 5/08/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: ~~Disposable bailer~~ Submersible Pump	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 67.

Depth to water measured from TOC (ft): Before Purging: 6.77

Minimum Purge Volume:
Three-inch well 3 x 60.23 ft x 0.367 gal/ft = 66.3 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 70 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	°Sal
Initial		1339	0	19.3	6.31	37.5	3	7.69	2.39
During		1340	20	19.8	6.21	41.3	10	7.90	2.65
During		1342	30	19.9	6.20	41.5	2	7.59	2.69
During		1345	~~40~~ 50	19.9	6.20	41.7	0	7.55	2.68
During		1348	70	19.9	6.20	41.8	1	6.54	2.69
During									
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-033 @ 1400	Lab: Recra
Field ID #: D05 02-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-S05-034 @ 1410
Blank Sample Info:	for VOCs and metals only
Other Sample Info:	

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: D07A-02
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: ~~Disposable bailer~~ Submersible pump	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 60

Depth to water measured from TOC (ft): Before Purging: 2.63

Minimum Purge Volume:
Three-inch well 3 x 57.37 ft x 0.367 gal/ft = 63 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 63 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal	
Initial		1001	0	17.0	6.00	30.9	62	7.88	1.92	
During		1003	11	18.3	5.22	31.8	12	6.87	1.97	
During		1005	21	17.5	5.25	30.5	1	7.07	1.90	
During		1007	32	17.9	5.45	30.9	3	6.96	1.94	
During		1009	43	17.5	5.58	30.6	3	6.99	1.92	
During		1011	53	17.6	5.62	30.4	3	6.99	1.91	
During		1013	63	17.4	5.52	30.5	4	6.89	1.90	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-013@1020	Lab: Accu
Field ID #: D07A-02-30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-S07-014 @ 1030
Blank Sample Info:	for VOAs & metals only
Other Sample Info:	

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KV

URS & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM/MV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: D07c-01
DATE(S): 5/14/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 54

Depth to water measured from TOC (ft): Before Purging: 3.70

Minimum Purge Volume:
Three-inch well 3 X 55.30 ft X 0.367 gal/ft = 60.6 gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other DO (mg/l)	Other Sal (%)
Initial		0840	0	15.5	6.20	2.27	2	4.79	0.10
During		0844	10	17.0	6.32	1.81	7	5.84	0.08
During		0847	20	17.4	6.56	1.85	8	4.25	0.08
During		0849	30	18.3	6.72	1.96	19	6.56	0.09
During		0856	40	18.3	7.07	1.90	47	6.73	0.08
During		0902	50	18.3	7.24	1.86	5	6.73	0.09
During		0907	60	18.4	7.20	1.86	10	6.23	0.08
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S22-00900910	Lab: Berra
Field ID #: D07c-01-G30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOC~~, metals, ~~Pest/PCB, TPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Water is clear with no odor or sheen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP 10/3/96 OX KH

U&A | URIBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: Jim Ivey

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: D09-01
DATE(S): 5/13/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Submersible pump ~~Disposable bailer~~	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 60

Depth to water measured from TOC (ft): Before Purging: 7.05

Minimum Purge Volume:
Three-inch well 3 X 52.95 ft X 0.367 gal/ft = 57 gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	DO	
Initial		0827	0	16.0	4.82	33.3	63	2.4	8.92	
During		0831	10	18.1	5.89	39.7	19	2.15	7.45	
During		0833	20	18.4	6.25	37.7	1	2.44	7.54	
During		0835	30	18.6	6.49	36.6	0	2.42	7.48	
During		0837	40	18.7	6.64	38.0	0	2.52	7.58	
During		0839	50	18.7	6.7[illegible]	38.5	0	2.52	7.44	
During		0841	60	18.7	6.75	39.0	0	2.59	7.50	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S09-0[illegible]0850	Lab: [illegible]
Field ID #: [illegible]	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-S09-008 VOAs, Metals
Blank Sample Info:	
Other Sample Info:	

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX 104

URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM/MV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: ~~D10-B-02~~ D10B-02
DATE(S): 5/13/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: ~~Disposable bailer~~ submersible pump	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT: 60
Total depth of well (ft) 60
Depth to water measured from TOC (ft): Before Purging: 4.16

Minimum Purge Volume:
~~Three-inch well~~ 3 X 55.8 ft x 0.367 gal/ft = 61.5 gallons
Two-inch well 3 X ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	Other DO	
Initial		1532	0	20.7	8.16	7.73	93	0.42	5.91	
During		1534	10	19.5	8.54	5.89	84	0.31	6.09	
During		1536	20	19.1	8.59	7.41	55	0.40	7.00	
During		1538	30	21.1	8.33	7.74	0	0.42	7.98	
During		1540	40	21.1	7.95	8.06	0	0.42	6.94	
During		1543	50	21.2	7.85	7.83	0	0.42	6.65	
During		1546	60	21.3	7.83	7.86	3	0.45	6.70	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S23-005 @1550	Lab: Kiva
Field ID #: D10B-02-G 3C	Filtered? ~~OFF~~ ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Water is clear with no odor or sheen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/98 OK KV

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM/MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: D19-C1
Date(s): 5/06/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Submersible Pump ~~Disposable bailer~~	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 60

Depth to water measured from TOC (ft): Before Purging: 4.4

Minimum Purge Volume:
- Three-inch well 3 x 55.6 ft x 0.367 gal/ft = 61.2 gallons
- Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: sal	DO	
Initial		1330	0	~~18.6~~	~~7.99~~	~~77.5~~	~~2~~	~~1.06~~	~~9.12~~	
During		1510	10	17.4	6.64	3.73	17	2.37	9.0	
During		1512	20	19.4	6.70	18.2	5	1.06	7.99	
During		1519	30	19.5	6.56	17.8	0	1.05	7.81	
During		1516	40	19.3	6.50	17.1	0	1.05	8.17	
During		1519	50	19.4	6.45	18.6	0	1.07	7.64	
During		1521	60	19.5	6.44	17.0	2	1.06	7.53	
After		~~1530~~		19.5	6.45	17.1	0	1.06	7.41	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-045 @1530	Lab: Cerca
Field ID #: D19-C1-S30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Water level only

Sample(s) Collected by:

Project No.: 200-42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: M001 - E
Date(s): 5/12/98/0925	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 5.12

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 QX 104

UBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

Well Purging & Sampling Log

Sample(s) Collected by:

Water level only

PROJECT NO 200-42-202
CTO: 108

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M002-F
DATE(S): 5/14/98/1505	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 2.98

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WMP: Well P&S 100396 OX KH

Urbek & Associates Environmental Consulting Services

Well Purging & Sampling Log

Water level Only

Project No.: 200-42-202
CTO: 108

Sample(s) Collected by:

Page 1 of 1

Site Location: NAS Alameda

Well Number: MW03-E

Date(s): 5/12/98/0930

Well Type (Monitoring, Extraction, etc.):

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

Only sampled - measured w/oil-water interface probe

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 4.51

Minimum Purge Volume:
Three-inch well 3 x _____ ft x 0.367 gal/ft = _____ gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: M003-E
Date(s): 5/04/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 21.2

Depth to water measured from TOC (ft): Before Purging: 5.13

Minimum Purge Volume:
- Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
- Two-inch well 3 x 16.07 ft. x 0.163 gal/ft = 7.86 gallons
- Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
- Total purged 8.75 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal	
Initial		13:30	0	18.1	7.67	6.12	38	10.70	0.31	
During		13:32	2.50	17.6	8.24	0.65	1	10.99	0.02	
During		13:35	3.75	17.6	7.91	0.57	1	10.66	0.02	
During		13:38	5.00	17.6	7.71	0.57	1	10.60	0.02	
During		13:41	6.25	17.5	7.64	0.55	1	10.73	0.02	
During		13:43	7.50	17.4	7.58	0.55	1	10.75	0.02	
During		13:45	8.75	17.4	7.54	0.55	1	10.83	0.02	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-031@1400	Lab: Recra
Field ID #: M003-E-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info: Water is clear with no odor or sheen

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

UrA | Urbe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MSB

Page 1 of 1

Site Location: NAS Alameda	Well Number: MO10-A
Date(s): 5/8/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.10 Ft

Depth to water measured from TOC (ft): Before Purging: 1.60 Ft

Minimum Purge Volume:

Three-inch well	3 X	ft	x 0.367 gal/ft =	gallons
Two-inch well	3 X	11.5 ft.	x 0.163 gal/ft =	5.62 gallons
Four-inch well	3 X	ft.	x 0.653 gal/ft. =	gallons

Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		911	0	15.5	6.30	1.18	96		0.05
During		913	1	15.6	6.83	1.16	486	GREYISH /	0.05
During		916	2	15.5	7.22	1.23	589	TURBID	0.05
During		918	3	15.7	7.33	1.24	578	NO ODOR	0.05
During		922	4	15.6	7.46	1.26	993	NO SHEEN	0.05
During		923	5	15.7	7.51	1.31	100		0.05
During		926	6	15.7	7.52	1.34	999		0.06
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-045 @ 930	Lab: RECRA
Field ID #: MO10-A @ 930	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP Well P&S 10/3/98 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSB

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Site Location: NAS Alameda	Well Number: MOB-A
Date(s): 5/8/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.46 ft

Depth to water measured from TOC (ft): Before Purging: 2.20 ft

Minimum Purge Volume:

Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons

Two-inch well 3 x 11.26 ft. x 0.163 gal/ft = 5.56 gallons

Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SK-2
Initial		1008	0	16.3	6.85	.650	866		0.02
During		1012	1	16.8	6.98	.664	146	YELLOWISH	0.02
During		1015	2	16.4	6.97	.668	241	BROWN	0.02
During		1017	3	16.8	6.88	.695	994	SEMI-TURBID	0.02
During		1018	4	16.7	7.01	.669	232	NO ODOR	0.02
During		1021	5½	16.7	7.03	.697	261	NO SHEEN	0.03
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0466@1020	Lab: RECRA
Field ID #: MOB-A-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 QN KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MJB

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Site Location: NAS Alameda	Well Number: M021-E
Date(s): 5/8/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 37.00

Depth to water measured from TOC (ft): Before Purging: 6.10

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 30.90 ft. x 0.163 gal/ft = 15.11 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 15.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial	0	1110	0	15.6	6.89	34.8	94		2.18
During		1115	3	15.3	6.99	35.1	101	BROWNISH	2.22
During		1124	6	15.9	6.92	35.5	58	TURBID	2.24
During		1131	9	16.0	6.89	36.5	107	NO ODOR	2.25
During		1139	12	16.2	6.93	35.8	16	NO SHEEN	2.26
During		1146	15.5	15.3	6.94	35.9	76		2.26
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-050@1150	Lab: RECRA
Field ID #: M021-E-G30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity,
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Wpd P&S 10/3/96 OX KN

URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MJB

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SITE LOCATION: NAS Alameda

WELL NUMBER: MW23-E

DATE(S): 5/8/98

WELL TYPE (MONITORING, EXTRACTION, ETC.):

PURGING EQUIPMENT: Disposable bailer

MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 34.90 PE
Depth to water measured from TOC (ft): Before Purging: 4.20 PE

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 30.70 ft. X 0.163 gal/ft = 14.76 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 15 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	SAL %
Initial		1329	0	15.8	5.54	2.58	200		0.11
During		1333	3	16.4	7.65	6.55	971		0.34
During		1338	6	16.6	6.87	33.0	172	YELLOW	2.13
During		1345	9	16.1	6.91	33.7	106	BROWN	2.3
During		1350	12	16.5	6.93	33.7	110	NO ODOR	2.12
During		1355	15	16.1	6.95	34.8	74	NO SHEEN	2.13
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0510 1400

Lab: RECRA

Field ID #: 1[redacted] -MW23-E

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KW

U&A | Uribe & Associates Environmental Consulting Services

Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSB

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Site Location: NAS Alameda	Well Number: MO24-A
Date(s): 5/8/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.05

Depth to water measured from TOC (ft): Before Purging: 5.40

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 8.65 ft. x 0.163 gal/ft = 4.22 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		1440	0	16.3	6.68	4.85	103	GREY/GRN	0.24
During		1441	1	16.4	6.69	4.38	263	TURBID	0.22
During		1443	2	16.4	6.82	4.41	507	HEAVY PETRO	0.23
During		1446	3	16.4	6.75	4.35	807	CRUDE SMELL	0.22
During		1447	4	16.4	6.77	4.27	410	NO SHEEN	0.22
During		1450	5	16.4	6.76	4.13	110	SEE NOTES	0.21
During								BELOW	
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SC2-052@1500	Lab: Recra
Field ID #: MO24-A-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / ONLY WATER
BREATHING ZONE => 10.5 ppm
WATER AT END OF PURGE DARK GREEN / SHEEN

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 DX KH

UA | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: Jim / MV

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Site Location: NAS Alameda	Well Number: M024-E
Date(s): 5/11/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 32

Depth to water measured from TOC (ft): Before Purging: 4.99

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 27.06 ft. x 0.163 gal/ft = 13.23 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 13.25 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal	
Initial		1217	0	16.2	6.97	2.05	261	1.33	0.09	
During		1223	2.25	17.2	6.77	2.13	~~10~~	2.43	0.10	
During		1228	4.5	17.6	6.85	2.57	~~10~~	1.71	0.12	
During		1232	6.75	17.9	6.80	2.61	~~10~~	2.04	0.12	
During		1236	9.0	17.6	6.81	2.65	~~10~~	1.79	0.12	
During		1241	11.25	17.5	6.84	2.82	—	1.76	0.13	
During		1246	13.25	17.7	6.81	3.11		1.96	0.15	
After										

*CL = clear CO = cloudy TU = turbid (note Turbidity meter inoperative

Well Sampling

Sample #: 108-S02-053	Lab:
Field ID #: M024-E	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

- water is slightly cloudy with no odor or sheen.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) collected by: JM/MV

Project No.: 200-42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: M027-E
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 22.0

Depth to water measured from TOC (ft): Before Purging: 4.32

Minimum Purge Volume:
Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 17.68 ft. x 0.163 gal/ft = 8.6 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft.³ = ___ gallons
Total purged 8.75 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	Other: DO (mg/l)	Sal (%)
Initial		1354	0	17.5	7.26	1.66	57	3.92	0.07
During		1356	1.5	17.3	7.36	2.92	30	3.75	0.14
During		1359	3.0	17.4	7.44	4.07	3	2.44	0.20
During		1402	4.5	17.5	7.50	4.25	~~0~~ 1	2.42	0.22
During		1405	6.0	17.1	7.47	4.34	12	2.43	0.22
During		1408	7.25	17.1	7.48	4.55	1	2.47	0.23
During		1412	8.75	17.0	7.46	4.97	6	2.79	0.25
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-032 @ 1430	Lab: Recra
Field ID #: M027-E-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~PCBs, TPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TX~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Water is clear with no odor or sheen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2* casing = 0.163 gal./ft.
V_3* casing = 0.367 gal./ft.
V_4* casing = 0.653 gal./ft.
$V_{4.5}$* casing = 0.826 gal./ft.
V_6* casing = 1.47 gal./ft.
V_8* casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: J. | MV

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Site Location: NAS Alameda

Well Number: M028-A

Date(s): 5/04/98

Well Type (Monitoring, Extraction, etc.): Monitoring

Purging Equipment: Disposable bailer

Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.00

Depth to water measured from TOC (ft): Before Purging: 5.70

Minimum Purge Volume:
Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 8.30 ft. x 0.163 gal/ft = 4.01 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 4.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal
Initial		14:34	0	16.1	7.10	1.15	39	9.50	0.05
During		14:36	0.75	16.0	7.30	1.15	10	9.45	0.05
During		14:38	1.50	15.9	7.22	1.14	10	9.72	0.05
During		14:39	2.25	16.0	7.17	1.12	6	9.97	0.05
During		14:41	3.00	15.9	7.16	1.13	2	9.95	0.05
During		14:43	3.75	16.0	7.13	1.14	2	9.87	0.05
During		14:44	4.50	16.0	7.15	1.14	5	10.10	0.05
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-0330/S00

Lab: Rocky

Field ID #: M028-A Q30

Filtered? Y/N: For metals analysis only

Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9

Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Water is cloudy, black with organic materials

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

~~Sampl~~ water level only

Sample(s) collected by:

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previously sampled - re-measured with oil/water interface probe

Site Location: NAS Alameda	Well Number: M028-A
Date(s): 5/12/98/09:14	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 5.75

Minimum Purge Volume:
Three-inch well 3 x _____ ft x 0.367 gal/ft = _____ gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	Other: DO (mg/l)	Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

°CL = clear ~~°C~~O = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank Wirt: Well P&S 10/0/98 OX KW

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

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Site Location: NAS Alameda	Well Number: MW28-C
Date(s): 5/05/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 98

Depth to water measured from TOC (ft): Before Purging: 6.46

Minimum Purge Volume:
Three-inch well 3 x 83.54 ft x 0.367 gal/ft = 91.98 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 90 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal	
Initial		0935	0	16.5	7.15	29.4	42	DO	Sal	
During		0943	15	16.1	7.92	31.3	13	10.5 / 10.13	1.97 / 1.8L	
During		0948	30	16.9	7.77	31.1	19	10.15	1.94	
During		0953	45	17.0	7.09	31.0	8	10.06	1.94	
During		0958	60	17.2	7.14	31.1	4	10.00	1.94	
During		1003	75	16.8	7.15	31.0	16	9.94	1.93	
During		1008	90	17.3	7.05	30.9	3	9.98	1.93	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-034 @ 1030	Lab: Kiff
Field ID #: MW28-C-0330	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

viously sampled - re-measured with oil/water interface probe

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Well Purging & Sampling Log

Sample(s) collected by:

Water level only

Project No 200-42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: MO28-C
Date(s): 5/12/98/09:10	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 7.21

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO (mg/l)	Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WMP Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
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Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

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Site Location: NAS Alameda	Well Number: M028-E
Date(s): 5/04/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 21.0

Depth to water measured from TOC (ft): Before Purging: 5.52

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 15.48 ft. x 0.163 gal/ft = 7.5 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 7.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO	
Initial		1520	0	16.7	7.26	1.32	44	0.06	9.12	
During		1525	1.25	17.6	7.01	1.35	40	0.06	9.09	
During		1529	2.50	17.6	6.85	1.41	11	0.06	9.08	
During		1533	3.75	18.6	6.77	1.44	15	0.06	8.85	
During		1536	5.00	18.4	6.72	1.54	10	0.07	8.94	
During		1541	6.25	18.7	6.74	1.58	12	0.07	9.13	
During		1545	7.50	18.2	6.77	1.64	7	0.07	9.50	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-0359.600	Lab: Berca
Field ID #: M028-E-G30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, ~~[illegible]~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info: Water is cloudy, amber, with no odor or sheen

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
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Well Purging & Sampling Log Water level only

Sample(s) Collected by:

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~~Previously~~ Previously Sampled - re-measured with oil/water interface probe

Site Location: NAS Alameda	Well Number: M028-E
Date(s): 5/12/98/09:12	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 5.93

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

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Site Location: NAS Alameda	Well Number: M029-E
Date(s): 5/06/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 20.
Depth to water measured from TOC (ft): Before Purging: 3.62

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 16.38 ft. X 0.163 gal/ft = 8.0 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 8 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal.
Initial		1455	0	15.9	8.0	1.54	6	10.18	0.07
During		1500	1.25	15.3	8.02	1.26	6	9.78	0.05
During		1503	2.5	15.4	7.96	1.23	6	10.04	0.05
During		1506	3.75	14.8	7.96	1.23	5	10.28	0.05
During		1509	5.0	14.7	7.93	1.22	6	10.27	0.05
During		1512	6.5	14.9	7.91	1.23	6	10.11	0.05
During		1514	8.0	14.4	7.90	1.26	6	10.13	0.05
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-0[illegible]36 @ 1520	Lab: Reeva
Field ID #: M029-E-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pest/PCBs, TPH,~~
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info: # 108-S01-037 @ 1570
Blank Sample Info: EM029-E-030D
Other Sample Info:

Water is clear with black organic matter.

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MB, SC

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Site Location: NAS Alameda	Well Number: MO3-04
Date(s): 5/11/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 11.01

Depth to water measured from TOC (ft): Before Purging: 5.21

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 5.8 ft. X 0.163 gal/ft = 2.8 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 3 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sec
Initial		1335	0	17.0	6.50	5.85	10	Brn color	.3
During		1336	.5	17.9	6.40	6.10	14	"	.3
During		1337	1	18.2	6.52	6.80	14	sheen	.3
During		1338	1.5	18.7	6.42	6.83	10		.3
During		1350	2.5	18.5	6.53	6.73	80	"	.3
During		1351	3	18.5	6.50	6.74	80	"	.3
During									
After			Sampled time = 1400						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S03-007[illegible]	Lab: Dorra Lab Net
Field ID #: MO3-C4-Q3[illegible]	Filtered?-Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

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SITE LOCATION: NAS Alameda	WELL NUMBER: M03-05
DATE(S): 5/11/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 6.74
Depth to water measured from TOC (ft): Before Purging: 5.65

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 4.24 ft. x 0.163 gal/ft = 2.0 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 2.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1305	0	18.1	6.58	5.19	10	Petr. odor	.27
During		1306	.5	18.6	6.75	5.12	10	"	.27
During		1307	1	18.5	6.74	5.18	10	"	.27
During		1308	1.5	18.6	6.92	5.23	10		.28
During		1309	2	18.4	7.04	5.21	9	"	.28
During		1310	2.5	18.5	7.00	5.64	273	"	.30
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S03-0008	Lab: Rocky Lab Net
Field ID #: M03-05-030	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 100/98 QX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MB, SC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MW3-07
DATE(S): 5/11/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.95

Depth to water measured from TOC (ft): Before Purging: 2.70

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 10.25 ft. x 0.163 gal/ft = 5.01 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sed %
Initial		1240	0	18.8	6.86	1.17	1	CL, grey-br	0.05
During		1242	1	19.1	6.70	1.22	5	"	0.05
During		1243	2	18.9	6.60	1.24	83	"	0.05
During		1244	3	18.7	6.56	1.21	11	"	0.05
During		1245	4	18.7	6.57	1.23	115	"	0.05
During		1246	5.5	18.4	6.57	1.21	10	"	0.05
During									
After				Sample Time = 1300					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S03-0098130	Lab: Rocky Mtn Net
Field ID #: MW3-07-0330	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Wsf P&S 10/3/96 OX KH

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Project No.: 200-42-202 CTO: 100

Well Purging & Sampling Log

(Water level Only)

Sample(s) Collected by:

Page 1 of 1

Site Location: NAS Alameda	Well Number: M030-E
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 3.47 @ 1500

Depth to water measured from TOC (ft): Before Purging: _____

Minimum Purge Volume:

Three-inch well 3 X _____ ft x 0.367 gal/ft = _____ gallons

Two-inch well 3 X _____ ft. x 0.163 gal/ft = _____ gallons

Four-inch well 3 X _____ ft. x 0.653 gal/ft. = _____ gallons

Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	DO (mg/l)	Other: Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

N/A

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = $\pi r^2 h$

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OK KH

Water level only

UA | Uribe & Associates Environmental Consulting Services

Well Purging & Sampling Log

water level only

Project No.: 200-42-202
CTO: 108

Sample(s) collected by:

Page 1 of 1

Site Location: NAS Alameda	Well Number: ~~M030~~ M031-E
Date(s): 5/14/98/1415	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 1.40

Minimum Purge Volume:
Three-inch well 3 x _____ ft x 0.367 gal/ft = _____ gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

°CL = clear °CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MG/SC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M034-A
DATE(S): 5/7/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 12.20 9.06
Depth to water measured from TOC (ft): Before Purging: 3.14

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = 4.43 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial	0	928	0	16.9	5.81	.540	16	No Pet/odor	
During		934	1 gal	16.7	6.03	.556	44	gray Pet odor	
During		937	2 gal	16.7	6.16	.593	30	"	
During		940	3 gal	16.7	6.17	.593	65	"	
During		942	4 gal	16.7	6.23	.621	76	"	
During		945	5 gallons	16.7	6.23	.630	45	"	
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-040	Lab: RCAA
Field ID #: M034-A-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOC, SVOC, metals, Pesticides, TPPH
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 100596 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

Page 1 of 1

Site Location: NAS Alameda	Well Number: M035-A
Date(s): 5/7/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.05

Depth to water measured from TOC (ft): Before Purging: 5.30

Minimum Purge Volume:
~~Three-inch well~~ 3 x ft x 0.367 gal/ft = gallons
Two-inch well 3 x 8.75 ft. x 0.163 gal/ft = 4.23 gallons
Four-inch well 3 x ft. x 0.653 gal/ft. = gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	
Initial		1012	0	16.2	6.46	.401	263	orange	
During		1015	1	16.3	6.46	.425	170	orange	
During		1025	2	16.3	6.52	.421	16	"	
During		1030	3	16.3	6.52	.457	177	clear	
During		1031	4	16.1	6.59	.454	16	"	
During		1032	5	16.3	6.61	.467	16	"	
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-041 @1040	Lab: RCRA
Field ID #: M035-A-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WMP: Well P&S 10/30/96 OX KH

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Project No.: 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JN/MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: ~~M036A~~ M036A
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15

Depth to water measured from TOC (ft): Before Purging: 1.72

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 13.3 ft. X 0.163 gal/ft = 6.5 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other: Sal (%)	
Initial		1055	0	17.0	6.47	6.8	318	1.12	0.38	
During		1058	1	15.5	6.59	4.4	502	1.69	0.22	
During		1101	2	16.6	6.42	4.2	649	1.87	0.21	
During		1103	3	16.2	6.40	4.3	667	2.03	0.21	
During		1105	4	16.0	6.43	4.3	685	2.41	0.22	
During		1106	5	16.1	6.40	4.3	573	2.11	0.22	
During		1108	6	16.1	6.47	4.4	483	2.45	0.22	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-054 @ 1120	Lab: Recra
Field ID #: M036 A-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TAC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: The water is dark gray and has a slight petroleum odor.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 100396 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: M036 B
Date(s): 5/07/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Submersible Pump ~~Disposable bailer~~	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 100.

Depth to water measured from TOC (ft): Before Purging: 2.58

Minimum Purge Volume:

~~Three-inch well~~ 3 x 9.42 ft x 0.367 gal/ft = 107 gallons

~~Two-inch well~~ 3 x ~~9.42~~ ft. x 0.163 gal/ft = ~~47.6~~ gallons

~~Four-inch well~~ 3 x _____ ft. x 0.653 gal/ft. = _____ gallons

Total purged 108 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal
Initial		1410	0	16.8	6.92	13.6	10	1.33	0.74
During		1415	18	17.4	6.91	13.3	10	1.57	0.76
During		1420	36	17.4	6.70	13.2	10	3.45	0.76
During		1426	54	17.4	6.76	13.4	10	0.36	0.76
During		1432	72	17.4	6.79	13.4	10	2.70	0.77
During		1438	90	17.4	6.80	13.4	10	2.66	0.77
During		1444	108	17.5	6.77	13.4	10	1.37	0.77
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-055001950	Lab: Recro
Field ID #: M036B-030	Filtered? ~~Y~~ N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH,~~
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KN

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC, MB

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Site Location: NAS Alameda	Well Number: M036-E
Date(s): 5/11/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 29.50

Depth to water measured from TOC (ft): Before Purging: 3.10

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 26.4 ft. X 0.163 gal/ft = 12.9 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		904	0	16.7	5.77	11.7	-10		0.66
During		911	4	17.2	6.10	32.7	40		2.05
During		916	8	17.2	6.50	34.0	-10		2.1
During		925	12	17.1	6.47	33.5	-10		2.13
During		926	13	17.1	6.43	33.5	-10		2.10
During									
During									
After					Sample time = 930				

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-056[illegible]	Lab: RECRA
Field ID #: M036-E-Q30[illegible]	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KN

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM/MV

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2.15

SITE LOCATION: NAS Alameda	WELL NUMBER: M037-A
DATE(S): 5/14/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 18.0

Depth to water measured from TOC (ft): Before Purging: 4.78

Minimum Purge Volume:

Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 13.22 ft. x 0.163 gal/ft = 6.5 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 6.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	Other DO (mg/l)	Sal (%)	
Initial		1133	0	16.2	6.85	19.0	144	2.16	1.12	
During		1136	1.25	15.1	6.93	20.8	796	2.22	1.26	
During		1142	2.5	14.5	7.04	20.6	>1000	2.46	1.25	
During		1146	3.75	15.5	6.92	25.3	906	2.83	1.56	
During		1150	4.0	15.8	7.03	27.1	822	2.60	1.68	
During		1154	5.25	15.0	7.07	26.4	>1000	3.09	1.65	
During		1158	6.5	15.7	7.05	26.0	>1000	3.10	1.68	
After										

CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-057@1200	Lab: Ricra
Field ID #: M037-A-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH>9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, ~~TPPH~~, ~~TEPH, TAC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

- water is ~~cloudy~~ cloudy, ~~with no~~ dark gray with no odor or sheen. Well bailed down to almost dry after 3 volumes

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Wpr P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

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Site Location: NAS Alameda	Well Number: ~~MW37-B~~ MW37-B
Date(s): 5/07/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Submersible Pump ~~Disposable bailer~~	Measurement Reference Datum: Top of Casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 80

Depth to water measured from TOC (ft): Before Purging: 9.65

Minimum Purge Volume:
~~Three-inch well~~ 3 x 25.35 ft x 0.367 gal/ft = 83 gallons
Two-inch well 3 x ____ ft. x 0.163 gal/ft = ____ gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 84 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO
Initial		1254	0	17.2	7.11	7.31	10	0.39	1.12
During		1259	14	17.4	6.95	7.17	10	0.39	0.66
During		1305	28	17.4	6.89	7.14	10	0.38	0.74
During		1311	42	17.3	6.85	7.13	10	0.38	0.72
During		1317	56	17.3	6.86	7.14	10	0.38	1.06
During		1323	70	17.2	6.85	7.15	10	0.38	0.89
During		1329	84	17.2	6.83	7.15	10	0.38	0.83
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-058G33G	Lab: Recra
Field ID #: MW37-B-G30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 100396 OX KH

U&A | URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC, WB

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MO37-E
DATE(S): 5/11/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 25.21

Depth to water measured from TOC (ft): Before Purging: 5.80

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 10 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal
Initial		1000	0	15.7	6.71	37.2	217	TU, gry	2.3
During		1005	2.5	16.7	6.28	38.6	289	"	2.4
During		1010	5.0	17.2	6.27	38.7	999	"	2.4
During		1018	7.5	17.0	6.34	38.5	-10	"	2.4
During		1020	10.0	17.0	6.34	38.4	-10	"	2.4
During									
During			Sample	Time	=	1030			
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0594	Lab: REIRA
Field ID #: MO37-E-0630	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP- Wpf P&S 100398 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM/MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: M058-A
Date(s): 5/11/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15

Depth to water measured from TOC (ft): Before Purging: 5.92

Minimum Purge Volume:
- ~~Three-inch well~~ 3 X ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 9.08 ft. x 0.163 gal/ft = 4.4 gallons
- Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 4.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal
Initial		1:00	0	18.3	6.76	27.9	119	4.48	1.73
During		10:15	0.75	18.5	6.69	12.5	71000	1.97	0.97
During	1:29 →	1:	1.5	18.4	6.68	10.7	71000	0.64	0.60
During		1:23	2.25	18.7	6.75	22.5	71000	0.51	1.37
During		1:26	3.0	18.7	6.70	17.1	71000	0.39	1.00
During		10:31	3.75	19.0	6.70	20.4	288	0.36	1.22
During		10:33	4.5	18.8	6.79	25.0	209	0.46	1.53
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SO2-060 @1050	Lab: Recra
Field ID #: M058-A-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, ~~TPPH~~
2 ml zinc acetate plus NaOH	~~TEPH~~, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Water is cloudy amber with ~~no odor or sheen~~ ~~WL = 5.5~~ petroleum odor and sheen.

Managed to bail 3 volumes but well went close to dry

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info: Due to slow recharge, collected 108-SO2-106 on 5/12/98/0900 for metals, sulfide, and anions/Nitr-N

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM/MV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MW39 B
DATE(S): 5/07/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Submersible Pump ~~Disposable bailer~~	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 80

Depth to water measured from TOC (ft): Before Purging: 10.02

Minimum Purge Volume:
~~Three-inch well~~ 3 X 69.98 ft X 0.367 gal/ft = 77. gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 78 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	DO	
Initial		1033	0	17.7	7.05	35.2	10	2.21	2.45	
During		1036	13	18.0	6.95	35.4	10	2.24	3.44	
During		1039	26	18.1	7.07	35.4	10	2.27	3.01	
During		1042	39	18.0	7.01	35.4	10	2.25	2.97	
During		1044	52	18.1	6.93	35.2	10	2.23	2.40	
During		1046	65	18.0	6.93	35.2	10	2.22	1.93	
During	1049	~~1048~~	75	18.1	6.91	35.1	10	2.22	1.68	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SG2-061@1100	Lab: Rura
Field ID #: MW39 B 0300	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-SG2-062@1110 (MW39-B-0300)
Blank Sample Info:	
Other Sample Info:	~~TEPH~~ 108-SG2-067 for VOCs and metals only

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/98 OX KH

U&A | URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JMLV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M038-E
DATE(S): 5/11/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 25

Depth to water measured from TOC (ft): Before Purging: 8.57

Minimum Purge Volume:
Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
Two-inch well 3 X 16.43 ft. X 0.163 gal/ft = 8.00 gallons
Four-inch well 3 X ___ ft. X 0.653 gal/ft.² ___ gallons
Total purged 8 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal
Initial		0935	0	18.6	6.92	40.1	10	2.09	2.57
During		0939	1.3	19.3	6.63	40.9	209	1.97	2.62
During		0945	2.5	18.9	6.74	40.7	7000	1.39	2.59
During		0953	3.75	18.7	6.80	40.4	7000	1.40	2.59
During		0956	5.25	18.2	6.80	40.8	7000	1.25	2.62
During		1003	6.5	18.00	6.80	40.4	>9000	1.36	2.58
During		1015	8	18.3	6.90	40.4	7000	3.37	2.58
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0630 @ 1030	Lab: Fisher
Field ID #: M038-E-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, ~~Pesticides~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Water is cloudy, gray with a slight petroleum odor; no sheen or product observed. Well bailed down and is slow to recharge but still managed to bail 3 well volumes

1020: WL = 23.5. 1033: WL = 21.9

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WRP Well P&S 102398 OX KM

UWA | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MK

Page 1 of 1

Site Location: NAS Alameda	Well Number: M039-A
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15

Depth to water measured from TOC (ft): Before Purging: 9.85

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 5.15 ft. x 0.163 gal/ft = 2.5 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 2.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	Other: DO (mg/l)	Sal (%)
Initial		1250	0	17.0	7.19	7.51	97	3.46	0.44
During		1252	0.4	17.0	6.75	7.20	75	6.37	0.38
During		1253	0.8	17.1	6.66	7.11	156	6.95	0.38
During		1255	1.2	17.3	6.62	7.04	143	5.53	0.37
During		1256	1.6	17.3	6.61	6.99	178	5.78	0.37
During		1258	2.0	17.5	6.65	6.93	232	3.89	0.36
During		1259	2.5	17.6	6.65	6.90	272	2.25	0.36
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-064 @ 1300	Lab: Ricra
Field ID #: M039-A-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by:

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SITE LOCATION: NAS Alameda	WELL NUMBER: M039-B
DATE(S): 5/07/99	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Submersible Pump ~~Disposable bailer~~	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 62.5

Depth to water measured from TOC (ft): Before Purging: 11.48

Minimum Purge Volume:
~~Three-inch well~~ 3 X 51.03 ft X 0.367 gal/ft = 56 gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 60 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	Other DO	
Initial		0913	0	17.8	6.29	36.6	5	2.33	2.25	
During		0916	10	18.4	6.69	37.5	141	2.38	2.43	
During		0919	20	18.3	6.79	37.7	5	2.37	2.00	
During		0923	30	18.4	6.79	37.3	10	2.37	2.20	
During		0926	40	17.8	6.98	37.3	10	2.36	2.55	
During		0927	50	18.4	6.83	37.3	9	2.37	2.02	
During		0932	60	17.5	7.05	37.5	10	2.37	2.88	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-065@940	Lab: Recra
Field ID #: M039-B-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TPPH~~, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Wsf P&S 10/3/98 OX KN

U&A | Uribe & Associates Environmental Consulting Services

Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

Page 1 of 1

Site Location: NAS Alameda	Well Number: MC 39-E
Date(s): 5/11/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 21.68

Depth to water measured from TOC (ft): Before Purging: 9.90

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 11.72 ft. x 0.163 gal/ft = 5.7 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 7 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Strap color	Petroleum Sel %
Initial		1045	0	17.7	6.69	7.88	-10	Sheen TU	0.4
During		1050	2	18.1	6.26	8.01	65	" TU	0.4
During		1053	4	17.9	6.25	8.10	60	" "	0.44
During		1057	6	17.9	6.25	7.99	49	"	0.43
During		1105	7	18.1	6.22	8.21	48	"	0.44
During									
During									
After			Sample Time =				1115		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S02-0[illegible]	Lab: QUANTA Lab Net
Field ID #: MC39-E-G30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 QX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by:

Page 1 of 1

Site Location: NAS Alameda	Well Number: M04-05
Date(s): 5/5/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.61

Depth to water measured from TOC (ft): Before Purging: 4.36 (9.25)

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 9.25 ft. x 0.163 gal/ft = 4.52 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 4.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Salt (%)
Initial		1240*	0	17.7	[illegible]	0.602	70	Water is pale	0.02
During		1501	3/4	18.3	6.86	~~0.6~~ 0.592	10	Yellowish	0.02
During		1503	1 1/2	18.3	6.83	0.601	80	w/m odor	0.02
During		1504	2 1/2	18.1	6.81	0.607	581	or sheen	0.02
During		1505	3 1/2	17.9	6.80	0.603	377	Water cloudy	0.02
During		1506	4	17.9	6.84	0.604	985	at 2 1/2 gal	0.02
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-022 @ 1510	Lab: Berry
Field ID #: M04-05-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TAC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

* left site for a while due to lightning 1240 = WL, 1455 = Parameters

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

UBA | Uribe & Associates Environmental Consulting Services

Water level Only

Well Purging & Sampling Log

Sample(s) collected by:

Project No 200-42-202
CTO: 108

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Previously sampled re-measured with oil-water interface probe

Site Location: NAS Alameda	Well Number: MW9-05
Date(s): 5/12/98/15:50	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 9.15

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft.* _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MSB/CLG

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Site Location: NAS Alameda	Well Number: M04-06
Date(s): 5/6/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.88 ft

Depth to water measured from TOC (ft): Before Purging: 2.96 ft

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.02 ft. x 0.163 gal/ft = 5.38 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ~~5.5~~ 2 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal %
Initial		905	0	17.7	8.41	0.728	190	Water is	0.03
During		910	1	17.4	8.57	0.737	999	brown w/	0.03
During		912	2	17.2	10.34	0.753	74	suspended	0.03
During			3					solids	
During			4						
During			5.5					Purged dry	
During								at 2 gallons	
After								very muddy	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-023@1205	Lab: Recra
Field ID #: M04-06-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

No product measured w/ interface probe, only water

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX 10

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / MV

Page 1 of 1

Site Location: NAS Alameda	Well Number: M04-07
Date(s): 5/05/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.5

Depth to water measured from TOC (ft): Before Purging: 4.26

Minimum Purge Volume:

Three-inch well 3 x 13.5 ft x 0.367 gal/ft = _____ gallons

Two-inch well 3 x 9.24 ft. x 0.163 gal/ft = 4.5 gallons

Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons

Total purged 4.25 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO	Sal	
Initial		1505	0	18.9	8.95	0.37	7	8.11	0.01	
During		1508	0.75	19.0	8.16	0.38	28	8.66	0.01	
During		1510	1.50	19.2	7.77	0.39	44	8.30	0.01	
During		1511	2.25	19.1	7.64	0.41	51	8.45	0.01	
During		15	3.00	18.9	7.61	0.41	71	8.56	0.01	
During		15	3.75	18.9	7.58	0.44	321	8.61	0.01	
During		15	4.25	18.9	7.59	0.46	772	8.84	0.01	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-0[redacted]24	Lab: Kiura
Field ID #: M04-07-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Comments: Water is cloudy and brown. No odor or sheen is ~~noticed~~ noticeable. The well was almost purged dry.

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/98 OX KW

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, JL

Page 1 of 1

Site Location: NAS Alameda	Well Number: MO5-01
Date(s): 5/7/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 13.70
Depth to water measured from TOC (ft): Before Purging: 6.91

Minimum Purge Volume:
~~Three-inch well~~ 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 6.79 ft. x 0.163 gal/ft = 3.32 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Strong grey Petroleum odor	
Initial		1307	0	17.0	6.37	20.4	52		1.2
During		1310	1	16.8	6.71	21.2	25	"	1.2
During		1312	2	16.8	6.72	21.4	17	"	1.2
During		1314	3	16.7	6.76	21.6	14	"	1.3
During		1316	4	16.7	6.89	20.6	154	"	1.2
During		1318	5	16.7	6.97	20.0	112	"	1.2
During									
After				1320 = STime					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-035 @ 1320	Lab: AFCRA
Field ID #: MO5-01-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank Wilf: Well P&S 102398 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB JC

Page 1 of 1

Site Location: NAS Alameda	Well Number: M05-02
Date(s): 5/7/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.52

Depth to water measured from TOC (ft): Before Purging: 6.81

Minimum Purge Volume:
Three-inch well 3 x ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 x 6.71 ft. x 0.163 gal/ft = 3.28 gallons
Four-inch well 3 x ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 4 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1440	0	19	6.8	18.3	18	Yellow/Sh	1.0 gal
During		1442	1	19.2	7.02	10.7	19	"	.5
During		1444	2	19.2	7.13	7.63	51	"	.41
During		1446	3	19.2	7.16	6.43	55	"	.34
During		1448	4	19.2	7.13	6.43	107	"	.46
During									
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-036	Lab: Accra Lab Net
Field ID #: M05-02-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: NB/SC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M05-03
DATE(S): 5/14/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT: PID = 2000

Total depth of well (ft) 11.75

Depth to water measured from TOC (ft): Before Purging: 4.15

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 2.6 ft. X 0.163 gal/ft = 3.71 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 4 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other DO (mg/l)	Sal (%)	
Initial		1251	0	18.2	6.93	.93	23	8.88	.04	0
During		1253	1	18.2	6.93	.794	172	5.85	.04	"
During		1254	1.5	18.1	6.90	.837	5	5.85	.03	"
During		1255	2	18.1	6.90	.878	6	5.84	.03	
During		1256	3	18.1	6.92	.857	12	5.80	.03	
During		1257	4	18.1	6.91	.859	8	5.82	.03	
During										
After						Sample	Time =	1315		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-037	Lab: Berca Lab Net
Field ID #: M05-03-03	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, ~~Pesticides~~, TPH, ~~TPH, TOC~~, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

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Site Location: NAS Alameda	Well Number: M05-05
Date(s): 5/7/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.58

Depth to water measured from TOC (ft): Before Purging: 5.85

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 1.73 ft. x 0.163 gal/ft = 3.78 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1155	0	16.8	7.25	.92	19	clear, no od,	.04
During		1157	1	16.6	7.38	.366	80	" " "	.01
During		1200	2	16.8	7.34	.599	101	"	.02
During		1205	3	16.8	7.42	.438	156	"	.01
During		1206	4	16.6	7.32	.477	115	"	.01
During		1211	5	16.6	7.33	.500	170	"	.02
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-039 @1215	Lab: RCRA
Field ID #: M05-05-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCB, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / MV

PAGE 1 of 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M05-06
DATE(S): 5/13/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.00

Depth to water measured from TOC (ft): Before Purging: 4.28

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 8.72 ft. x 0.163 gal/ft = 4.3 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 4.3 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	Other DO
Initial		1447	0	18.6	7.12	2.41	571	0.05	7.38
During		1448	0.72	19.2	7.96	1.55	109	0.06	6.75
During		1450	1.4	19.2	7.82	1.26	119	0.05	6.79
During		1451	2.2	19.2	7.76	1.50	229	0.06	6.61
During		1453	2.9	19.2	7.68	1.80	377	0.08	6.63
During		1454	3.6	19.2	7.67	1.81	481	0.08	6.56
During		1456	4.3	19.2	7.63	2.86	438	0.09	6.76
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-040 @ 1500	Lab: Recra
Field ID #: M05-06-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/29/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JR / MV

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SITE LOCATION: NAS Alameda	WELL NUMBER: MO5-07
DATE(S): 5/08/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 17

Depth to water measured from TOC (ft): Before Purging: 5.44

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.56 ft. X 0.163 gal/ft = 5.6 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other DO	Sal	
Initial		1052	0	18.2	7.46	0.71	7	9.63	0.03	
During		1054	1	18.2	7.30	0.39	27	7.28	0.01	
During		1057	2	18.3	7.03	0.35	39	7.15	0.01	
During		1059	3	18.2	6.95	0.34	49	7.27	0.01	
During		1101	4	17.9	6.92	0.34	68	7.41	0.01	
During		1105	5	17.6	6.96	0.33	69	11.22	0.01	
During		1108	6	18.3	6.88	0.39	72	9.01	0.01	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-091	Lab: Recra
Field ID #: MO5-07-Q3C	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / MV

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Site Location: NAS Alameda	Well Number: MOS-04
Date(s): 5/08/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.

Depth to water measured from TOC (ft): Before Purging: 5.08

Minimum Purge Volume:
- ~~Three-inch well~~ 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 9.92 ft. x 0.163 gal/ft = 4.8 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Do	Sal	
Initial		1142	0	19.4	6.63	2.29	1	8.76	0.11	
During		1144	0.75	19.6	6.64	2.18	72	8.48	0.10	
During		1146	1.5	19.3	6.71	1.73	63	8.06	0.09	
During		1148	2.25	19.2	6.70	1.82	22	8.08	0.08	
During		1151	3.0	19.2	6.68	1.84	12	8.87	0.08	
During		1154	4.00	19.2	6.68	1.94	7	8.87	0.08	
During			5.0	19.2	6.68	1.91	9	8.53	0.09	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-03E @1200	Lab: Ecra
Field ID #: MOS-04-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OK KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, JC

Page 1 of 1

Site Location: NAS Alameda	Well Number: M05-08
Date(s): 5/7/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 14.89
Depth to water measured from TOC (ft): Before Purging: 6.92

Minimum Purge Volume:
Three-inch well 3 X ___ ft x 0.367 gal/ft = ___ gallons
Two-inch well 3 X 7.97 ft. x 0.163 gal/ft = 3.89 gallons
Four-inch well 3 X ___ ft. x 0.653 gal/ft. = ___ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal
Initial		1340	0	19.2	7.63	1.85	301	a.ny. odor, no sheen	.0
During		1342	1	19.5	7.30	.687	162	"	.0
During		1344	2	19.2	7.19	.865	233	"	.0
During		1346	3	19.5	7.12	1.31	306	"	.0
During		1348	4	19.2	7.14	.869	351	"	.0
During		1350	5	19.4	7.09	.947	365	"	.0
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-042 (6 liters)	Lab: RECRA Lab Nev
Field ID #: M05 08 Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WMP Wkd P&S 10/30/96 OX RH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MB, SC

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MO5-09
DATE(S): 5/7/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 14.89
Depth to water measured from TOC (ft): Before Purging: 6.21

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 8.68 ft. x 0.163 gal/ft = 4.24 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ~~5~~ 4.24 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1235	0	18	7.11	.391	80	Grey, No odor, sheen	.4
During		1237	1	17.5	7.10	.385	217	"	.01
During		1238	2	17.5	7.10	.396	409	"	.01
During		1239	3	17.8	7.11	.401	650	"	.01
During		1240	4	17.7	7.14	.405	19	"	.01
During		1242	5	17.7	7.13	.405			.01
During									
After					Sample time			1255	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-043 @1255	Lab: RECRA Lab West
Field ID #: MO5-09-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 100298 OX XV

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by:

Page 1 of 1

Site Location: NAS Alameda	Well Number: M05-10
Date(s): 5/13/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.5

Depth to water measured from TOC (ft): Before Purging: 6.94

Minimum Purge Volume:

~~Three-inch well~~ 3 X ft x 0.367 gal/ft = gallons

Two-inch well 3 X 4.06 ft. x 0.163 gal/ft = 1.9 gallons

Four-inch well 3 X ft. x 0.653 gal/ft. = gallons

Total purged gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO	
Initial		1322	0	17.4	8.73	1.08	4	0.05	7.50	
During		1325	0.75	17.4	8.30	0.70	6	0.03	7.85	
During		1328	1.5	17.3	8.01	0.70	28	0.03	7.55	
During		1331	2.25	17.5	7.85	0.71	97	0.03	7.91	
During		1334	3.0	17.4	7.76	0.70	62	0.02	7.65	
During		1337	3.75	17.5	7.69	0.71	43	0.03	7.45	
During		1340	4.5	17.4	7.66	0.70	92	0.03	7.66	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-044-@1345	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, ~~TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = $\pi r^2 h$

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KW

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by:

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Site Location: NAS Alameda	Well Number: M05-11
Date(s): 5/13/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 15.5
Depth to water measured from TOC (ft): Before Purging: 7.03

Minimum Purge Volume:
~~Three-inch well~~ 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 8.47 ft. x 0.163 gal/ft = 4.14 gallons
~~Four-inch well~~ 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO
Initial		1204	0	16.5	7.85	8.17	5	0.50	7.59
During		1207	0.75	16.8	7.61	6.64	14	0.35	7.54
During		1210	1.5	16.6	7.42	11.2	37	0.63	7.83
During		1213	2.25	16.6	7.40	12.8	34	0.73	7.80
During		1215	3.0	16.7	7.46	12.7	43	0.72	7.85
During		1217	3.75	16.8	7.42	13.3	57	0.76	7.78
During		1219	4.25	16.7	7.42	13.9	54	0.80	7.83
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-0450 1230	Lab:
Field ID #:	Filtered? ~~ON~~: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

- Water is cloudy brown, with a strong H_2S odor.
(10 ppm in well / 0 in breathing space)

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/30/96 QX 10

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by:

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Site Location: NAS Alameda	Well Number: MO5 ~~10~~ 12
Date(s): 5/13/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 5.0

Depth to water measured from TOC (ft): Before Purging: 7.60

Minimum Purge Volume:

~~Three-inch well~~ 3 X ft X 0.367 gal/ft = gallons

Two-inch well 3 X 7.4 ft. X 0.163 gal/ft = 3.6 gallons

Four-inch well 3 X ft. X 0.653 gal/ft. = gallons

Total purged gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO
Initial		1237	0	16.9	8.25	2.75	3	0.15	9.67
During		1241	0.5	16.9	7.83	2.67	0	0.13	7.62
During		1243	1.0	16.8	7.50	4.37	31	0.22	7.58
During		1245	1.5	16.8	7.44	5.30	53.	0.27	7.62
During		1247	2.0	16.8	7.40	6.01	87	0.32	7.58
During		1249	3.0	17.1	7.37	6.56	98	0.35	7.50
During		1251	3.5	16.9	7.40	6.53	151	0.34	7.56
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-505-0460 1255	Lab:
Field ID #:	Filtered? ~~Y~~/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs, TPPH~~,
2 ml zinc acetate plus NaOH	~~TEPH, TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Water is cloudy, brown with an H_2S odor

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet

h = ht. of water col. in feet

vol. of col. = πr^{2h}

7.48 gal./ft.^{3}

V_2" casing = 0.163 gal./ft.

V_3" casing = 0.367 gal./ft.

V_4" casing = 0.653 gal./ft.

$V_{4.5}$" casing = 0.826 gal./ft.

V_6" casing = 1.47 gal./ft.

V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/98 OK KH

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PROJECT NO 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: TM / MV

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SITE LOCATION: NAS Alameda	WELL NUMBER: MOSBS-01
DATE(S): 5/11/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 15
Depth to water measured from TOC (ft): Before Purging: 6.47

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 9.53 ft. x 0.163 gal/ft = 4.2 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 4.2 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other DO	Other Sal
Initial		1435	0	17.0	7.18	2.92		4.34	0.15
During		1436	0.7	17.2	7.25	2.96	249	5.47	0.04
During		1438	1.4	16.9	6.92	2.25	556	5.38	0.10
During		1440	2.1	17.4	6.84	3.77	840	4.23	0.19
During		1441	2.8	17.5	6.87	3.51	778	4.57	0.17
During		1442	3.5	17.5	6.84	4.08	765	4.42	0.20
During		1444	4.2	17.7	6.90	4.84	779	4.25	0.25
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-047@1450	Lab: Recra
Field ID #: MOSBS01	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comment: ~~Turbidity~~ Water is cloudy, brown, with no odor or sheen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WRP: Well PBS 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM/MV

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Site Location: NAS Alameda	Well Number: MCSHW-01
Date(s): 5/11/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15

Depth to water measured from TOC (ft): Before Purging: 4.90

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.2 ft. X 0.163 gal/ft = 5.00 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: Sal	DO	
Initial		1542	0	18.6	7.66	1.46	360	0.01	2.18	
During		1544	.75	17.0	7.54	0.56	>1000	0.02	2.40	
During		1545	1.5	19.1	7.28	0.66	>1000	0.02	2.50	
During		1547	2.25	19.2	7.31	0.65	>1000	0.02	1.73	
During		1549	3.00	19.1	7.32	0.69	>1000	0.02	2.51	
During		1550	3.75	19.1	7.34	0.73	800	0.03	2.77	
During			5.00	19.1	7.36	0.69	720	0.03	2.60	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S05-048 @1600	Lab: Ricca
Field ID #: MCSHW-01-0130	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Water is cloudy with a slight solvent odor.

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

Page 1 of 1

Site Location: NAS Alameda	Well Number: M06-06
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.65

Depth to water measured from TOC (ft): Before Purging: 3.50

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 9.15 ft. X 0.163 gal/ft = 4.47 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Salinity
Initial		835	0	17.3	5.85	.473	110	CL	.02
During		837	1	17.8	6.12	.499	111	CL	.02
During		840	2	18.1	6.42	.671	116	CL	.02
During		841	3	18.1	6.52	.865	63.1	CL	.03
During		842	4	18.2	6.75	1.30	107	CL	.05
During		845	5	18.2	6.84	1.26	10.5	CL	.05
During									
After			Sample Time =				0900		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S06-003	Lab: Accra Lab Net
Field ID #: M06-06-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

0.5

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by:

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M07A-01
DATE(S): 5/12/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9.7

Depth to water measured from TOC (ft): Before Purging: 2.51

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 6.69 ft. X 0.163 gal/ft = 3.0 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft.² ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other Sal	DO	
Initial	1108 ~~0.5~~		0	18.0	5.86	21.0	1	1.26	7.81	
During	1110 ~~1.0~~		0.5	18.8	6.30	5.81	4	0.30	7.94	
During	~~1113~~	1113	1.0	18.1	6.12	4.34	2	0.22	7.97	
During	~~1116~~	1114	1.5	18.0	6.00	5.05	0	0.26	7.80	
During		1116	2.0	18.3	5.83	8.13	0	0.44	7.80	
During		1119	2.5	18.2	5.97	7.42	1	0.40	7.85	
During		1121	3.0	18.4	5.90	12.1	0	.70	8.02	
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-020 @ 1130	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pesticides~~, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108-S07-021 @ 1150
Blank Sample Info:	For VOCs, metals,
Other Sample Info:	TPPH & TEPH

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSB / CLG

Page 1 of 1

Site Location: NAS Alameda	Well Number: M07A-03
Date(s): 5/4/98 Water level + purge 5/5 sampled	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 11.85

Depth to water measured from TOC (ft): Before Purging: 5.11 11.74'

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 11.74 ft. X 0.163 gal/ft = 5.74 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	
Initial		1435	0	20.4	6.73	35.5	5	Water is yellowish	2.19
During		1445	1	19.7	6.73	36.1	-10	brown, murky	2.28
During		1450	2	19.6	6.73	36.5	-10	[illegible]	2.31
During		1454	3	19.5	6.78	36.9	-10	black w/	2.34
During		1501	4	19.6	6.85	38.6	-10	particulates	2.46
During		1507	5	19.7	6.90	39.9	-10	well is	2.56
During		1512	6	19.8	6.93	40.2	-10	almost dry	2.57
After								at 6 gal purged	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-01 @ 1515 5/5	Lab: Recra
Field ID #: M07A-03-03	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Note: No measurable product in well, some particulate black specs visible in water

5/5/98 DTW 8.46

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2 casing = 0.163 gal./ft.
V_3 casing = 0.367 gal./ft.
V_4 casing = 0.653 gal./ft.
$V_{4.5}$ casing = 0.826 gal./ft.
V_6 casing = 1.47 gal./ft.
V_8 casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by:

Page 1 of 1

Site Location: NAS Alameda	Well Number: M07A-04
Date(s): 5/4/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 6.75

Depth to water measured from TOC (ft): Before Purging: 2.04 4.71'

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 4.71 ft. x 0.163 gal/ft = 2.32 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 2.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1216	0	17.7	6.59	8.03	70	water is pale	0.43
During		1228	0.5	17.1	6.90	10.4	230	yellow-brown	0.61
During		1232	1.0	16.9	6.92	9.93	290	some odor	0.53
During		1234	1.5	16.8	6.94	9.44	315		0.52
During		1236	2.0	16.8	6.95	9.31	405		0.50
During		1239	2.5	16.9	6.94	9.21	70		0.5
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-016	Lab: Kyra
Field ID #: M07A-04-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Note: No visible product in water

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

UA | Uribe & Associates Environmental Consulting Services

Well Purging & Sampling Log

Water level Only

Sample(s) collected by:

Project No.: 200-42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: M07A-04
Date(s): 5/12/98/1300	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 1.05

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other: Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by:

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M07A-05
DATE(S): 5/4/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.0'

Depth to water measured from TOC (ft): Before Purging: 2.51' 12.49' of H_2O

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 12.49 ft. X 0.163 gal/ft = [redacted] 6 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft.³ = ____ gallons
Total purged 4.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Salinity
Initial		1100	0	18.6°	6.82	36.2	-10	Water is	2.28
During		1115	0.5	17.6	6.76	36.9	-10	brown, smells	2.34
During		1120	1	17.1	6.74	36.5	-10	of sulfur	2.3
During		1123	1.5	17.0	6.77	37.0	-10	water becomes (at 2 gal)	2.34
During		1125	2.0	17.3	6.77	37.8	-10	black w/black	2.4
During		1130	3.0	17.2	6.82	44.6	32	particulates	2.8
During		1133	4.0	17.6	6.87	53.6	240	floating product	3.5
After		1138	~~5.0~~ 4.5	18.7	7.00	53.4	-10	Purged dry at 4.5 gallons	3.5a

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-022	Lab: Recra Lab Net
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, ~~SVOCs~~, metals, ~~Pest/PCBs~~, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen + TOC

Note: No [redacted] measurable product in well or visible on water level probe.

Particulates of product visible in purge water - string is black & oily

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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Well Purging & Sampling Log

Sample(s) Collected by:

Project No.: 200-42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: M07A-05
Date(s): 5/12/98/1302	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: ~~[illegible]~~ 2.01

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSB/CLG

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Site Location: NAS Alameda	Well Number: M07A-08
Date(s): 5/5/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 11.04

Depth to water measured from TOC (ft): Before Purging: 1.85

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 9.19 ft. x 0.163 gal/ft = 4.49 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1020	0	17.8	6.81	45.3	-10	Dark gray	0.93
During		1024	1	19.8	6.94	4.87	-10	heavy petrole	0.27
During		1026	2	19.5	6.73	12.2	32	um odor,	0.64
During		1028	3	19.9	6.91	5.19	-10	particulates	0.29
During		1029	4	20.1	6.80	5.04	-10	Present	0.26
During		1031	5	19.9	6.81	6.50	-10	water clearer	0.34
During		1032	6	19.9	6.77	7.21	-10	as purge	0.39
After								continued	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-0323@1035	Lab: Recra
Field ID #: M07A-08-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity,
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/29/96 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by:

water level only

Project No: 200 42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: M07A-08
Date(s): 5/12/98 1535	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 0.60

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other: Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSB/CLG

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: M07A-09
DATE(S): 5/5/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 10.99

Depth to water measured from TOC (ft): Before Purging: 2.47 5.52

Minimum Purge Volume:

Three-inch well	3 X	ft X 0.367 gal/ft =		gallons
Two-inch well	3 X	8.52 ft. X 0.163 gal/ft =	4.17	gallons
Four-inch well	3 X	ft. X 0.653 gal/ft. =		gallons

Total purged 4.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1105	0	17.9	6.77	30.9	-10	Heavy	1.93
During		1110	1	18.4	6.77	25.2	-10	Petroleum	1.53
During		1114	2	17.8	6.81	35.1	65	odor, water	2.21
During		1116	3	17.9	6.86	33.9	-10	is pale yellowish	2.13
During		1118	4	17.8	6.86	35.9	999	brown with	2.26
During		1122	4.5	18.0	7.72	0.21	-10	Black particulates	0.0
During									
After								well purged	

*CL = clear CO = cloudy TU = turbid

dry at 4.5 gals

Well Sampling

Sample #: 108-S07-017 @1540	Lab: Kiera
Field ID #: M07A-09-G30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by:

water level only.

Project No. 200 42-202
CTO: 108

Page 1 of 1

Site Location: NAS Alameda	Well Number: MO7A-09
Date(s): 5/12/98/15:40	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: 1.15

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MIKE BARNES

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SITE LOCATION: NAS Alameda	WELL NUMBER: M07B-01
DATE(S): 5/13/97	WELL TYPE: (MONITORING) EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 11.15

Depth to water measured from TOC (ft): Before Purging: 4.52

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 19.89 ft. X 0.163 gal/ft = 3.25 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 3.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL%
Initial		1315	0	17.2	7.61	.235	140		0.00
During		1317	.5	17.1	7.49	.213	111	GREYISH BROWN	0.00
During		1319	1.0	17.1	7.43	.226	71000	TURBID	0.00
During		1320	2.0	17.0	7.41	.248	125	NO ODOR/NO	0.00
During		1321	2.5	17.0	7.42	.265	152	SHEEN	0.00
During		1323	3.5	16.9	7.43	.285	71000		0.01
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S21-003	Lab: REDA
Field ID #: M07B-01-Q36	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED/WATER ONLY

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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Well Purging & Sampling Log

Sample(s) Collected by:

Water level only

Project No: 200-42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: MW7C-07
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) ~~13.06~~ 13.06
Depth to water measured from TOC (ft): Before Purging: 10.90

Minimum Purge Volume:
Three-inch well 3 X _____ ft X 0.367 gal/ft = _____ gallons
Two-inch well 3 X _____ ft. X 0.163 gal/ft = _____ gallons
Four-inch well 3 X _____ ft. X 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other: Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MIKE BARNES

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Site Location: NAS Alameda	Well Number: MOTC-08
Date(s): 5/13/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.12

Depth to water measured from TOC (ft): Before Purging: 2.16

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.96 ft. X 0.163 gal/ft = 5.35 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	SAC
Initial		1445	0	17.7	6.65	.250	710		0.00
During		1446	1	17.7	6.60	.256	110	REDISH	0.00
During		1448	2	18.0	6.65	.264	444	BROWN	0.01
During		1450	3	17.7	6.55	.263	65	NO COLOR	0.01
During		1451	4	17.6	6.69	.266	65	NO SHEEN	0.01
During		1453	5.5	17.5	6.67	.268	750		0.01
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S22-011	Lab: RECRA
Field ID #: MOTC-08-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / ONLY WATER

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

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SITE LOCATION: NAS Alameda	WELL NUMBER: M09-06
DATE(S): 5/12/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:
Total depth of well (ft) 14.15
Depth to water measured from TOC (ft): Before Purging: 5.28

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 8.87 ft. X 0.163 gal/ft = 4 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft.² = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sol
Initial		935	0	18.0	6.93	.427	60	CO	.01
During		936	1	18.5	7.10	.425	956	CO	.01
During		937	2	18.6	7.17	.426	121	CO	.01
During		938	3	18.5	7.24	.422	67	CO	.01
During		940	4	18.7	7.32	.417	999	CO	.01
During		942	5	18.7	7.33	.419	115	CO	.01
During									
After						Sampling	Time	= 1000	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S09-009	Lab: Accra Lab Net
Field ID #: M09-06-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

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Site Location: NAS Alameda	Well Number: M10-01
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.61

Depth to water measured from TOC (ft): Before Purging: 3.65

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x ____ ft. x 0.163 gal/ft = 4.9 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal
Initial		1010	0	16.2	7.39	.613	240	CL	.02
During		1011	1	16.3	7.36	.737	200	CL	.03
During		1012	2	16.3	7.36	.753	160	CL	.03
During		1013	3	16.3	7.33	.787	171	CL	.03
During		1015	4	16.3	7.33	.835	556	CL	.03
During		1020	5	16.3	7.33	.785	420	CL	.03
During									
After				Sample Time			1030		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S10-003	Lab: Pace Lab Net
Field ID #: M10-01-G3C	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 QX KH

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PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MIKE BARNES

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SITE LOCATION: NAS Alameda	WELL NUMBER: M101-A
DATE(S): 5/13/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.54

Depth to water measured from TOC (ft): Before Purging: 2.27

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 10.11 ft. X 0.163 gal/ft = 4.9 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		1005	0	16.4	6.98	1.21	246		0.05
During		1008	1	16.4	6.90	1.32	193	GREYISH	0.06
During		1010	2	16.4	6.94	1.44	67	SEMI-TURBID	0.06
During		1012	3	16.6	7.00	1.53	86	ODOR OF	0.07
During		1014	4	16.5	6.95	1.57	79	PETRO / ~~[illegible]~~	0.07
During		1015	5	16.5	6.92	1.56	92	SHEEN	0.07
During								ON WATER	
After								SURFACE	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S14-003	Lab:
Field ID #: ~~[illegible]~~ M101-A-G50	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY /
WELL LID NOT SECURED W/ BOLTS

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: Susan Mike

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Site Location: NAS Alameda	Well Number: M11-01
Date(s): 5/12/98	Well Type: (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9.15

Depth to water measured from TOC (ft): Before Purging: 6.15

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 3 ft. x 0.163 gal/ft = 1.47 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 1.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal
Initial		1145	0	15.5	6.88	1.31	112	CO	.05
During		1146	.25	15.5	6.84	1.35	113	CO	.06
During		1147	.50	15.7	6.89	1.31	113	CO	.05
During		1148	.75	15.7	6.88	1.29	861	CO	.05
During		1149	1.00	15.7	6.87	1.32	870	CO	.05
During		1152	1.50	15.7	6.89	1.29	112	CO	.05
During									
After			Sample Time = 1200						

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S11-011	Lab: Bova Lab Not
Field ID #: M11-01-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_5" casing = 1.47 gal./ft.
V_6" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SL, MB

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SITE LOCATION: NAS Alameda	WELL NUMBER: M11-02
DATE(S): 5/12/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9.81

Depth to water measured from TOC (ft): Before Purging: 5.10

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 4.71 ft. X 0.163 gal/ft = 2.01 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 2.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal ‰
Initial		1330	0	17.4	6.84	.781	111	TU gray	.03
During		1331	.5	18.0	6.81	.806	429	TU "	.03
During		1332	1	18.2	6.82	.752	114	TU "	.03
During		1333	1.5	18.4	6.83	.681	120	TU "	.03
During		1334	2	18.4	6.82	.814	110	TU "	.03
During		1335	2.5	18.4	6.83	.810	120	TU gray	.03
During									
After						Sample Time = 1345			

*CL = clear /CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S01-012	Lab: Accu Lab Vet
Field ID #: M11-02-030	Filtered?-Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP. Well P&S 10/3/96 OX KH

U&A | URIBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO. 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC, MB

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SITE LOCATION: NAS Alameda	WELL NUMBER: M11-05
DATE(S): 5/12/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.20

Depth to water measured from TOC (ft): Before Purging: 5.00

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X ____ ft. X 0.163 gal/ft = 4.50 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Gal'y
Initial		1112	0	17.4	7.22	.897	188	CO	.03
During		1113	1	17.4	7.20	.893	184	CO	.03
During		1114	2	17.6	7.00	3.10	356	CO	.15
During		1115	3	17.7	7.00	3.51	537	CO	.17
During		1116	4	17.6	7.08	3.50	480	CO	.17
During		1117	5	17.7	7.05	3.45	475	CO	.17
During									
After					Sample Time =		1130		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S11-013	Lab: Rocky Lab Nat
Field ID #: M11-05-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions
- r = well radius in feet
- h = ht. of water col. in feet
- vol. of col. = $\pi r^2 h$
- 7.48 gal./ft.^{3}
- V_2" casing = 0.163 gal./ft.
- V_3" casing = 0.367 gal./ft.
- V_4" casing = 0.653 gal./ft.
- $V_{4.5}$" casing = 0.826 gal./ft.
- V_6" casing = 1.47 gal./ft.
- V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

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Site Location: NAS Alameda	Well Number: ~~MW~~ - M11-06
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.08

Depth to water measured from TOC (ft): Before Purging: 5.30

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 8.78 ft. x 0.163 gal/ft = 4.2 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal
Initial		1036	0	17.3	7.18	.561	94	CL	.02
During		1037	1	17.6	7.21	.583	112	CL	.02
During		1038	2	17.5	7.31	.573	110	CL	.02
During		1040	3	17.5	7.37	.749	712	CL	.03
During		1042	4	17.5	7.35	.732	80	CL	.03
During		1044	5	17.5	7.34	.564	410	CL	.03
During									
After						Sample Time = 1100			

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S11-014	Lab: Accra Lab Not
Field ID #: M11-06 Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:	108 S11 015, M11-06Q30D
Blank Sample Info:	for
Other Sample Info:	VOCs and Metals
	Sample Time = 1110

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: SC, MB

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Site Location: NAS Alameda	Well Number: M12-01
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.73

Depth to water measured from TOC (ft): Before Purging: 4.41

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 10.32 ft. X 0.163 gal/ft = 5.05 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
- Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal %
Initial		1410	0	18.4	6.95	1.08	28	CL	.04
During		1412	1	18.7	7.00	1.16	649	CL	.05
During		1413	2	18.9	6.99	1.19	368	CL	.05
During		1417	3	18.9	7.03	1.17	442	CL	.05
During		1420	4	18.8	7.03	1.18	404	CL	.05
During		1425	5.5	18.9	7.02	1.19	233	CL	.05
During									
After				Sample		Time	1430		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S12-003	Lab: Recra Lab Net
Field ID #: M12-01-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: HSB / CLG

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Site Location: NAS Alameda	Well Number: M13-06
Date(s): 5/6/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 7.49

Depth to water measured from TOC (ft): Before Purging: 2.51

Minimum Purge Volume:
- Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 6.99 ft. X 0.163 gal/ft = 3.41 gallons
- Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons

Total purged 3.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal (%)
Initial		1505	0	17.0	7.16	0.407	500	Water is	0.01
During		1509	1	17.1	7.22	0.420	600	light brown	0.01
During		1511	1.5	17.4	7.26	0.422	475	no odor	0.01
During		1513	2	17.3	7.24	0.423	405		0.01
During		1514	3	17.3	7.24	0.427	470		0.01
During		1515	3.5	17.1	7.22	0.441	300		0.01
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S13-009@1530	Lab: Kiera
Field ID #: M13-06-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen
No measurable product using interface probe.	

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MB, DC

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Site Location: NAS Alameda	Well Number: M13-09
Date(s): 5/12/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 12.56

Depth to water measured from TOC (ft): Before Purging: 2.49

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 10.07 ft. x 0.163 gal/ft = 4.9 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1510	0	18.8	6.62	.610	22	CO	.02
During		1511	1	19.1	6.24	.597	114	CO	.02
During		1512	2	18.8	6.25	.583	632	CO	.02
During		1515	3	18.7	6.26	.572	44	CO	.02
During		1516	4	18.4	6.25	.565	410	CO	.02
During		1517	5	18.3	6.30	.570	488	CO	.02
During									
After						Sample Time: 1530			

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S13-010	Lab: Accra Lab Net
Field ID #: M13090030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, TOC, Anions, TDS, Sulfide, alkalinity, Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Well Purging & Sampling Log

Sample(s) Collected by:

Water level only

Project No 200-42-202
CTO: 108

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Site Location: NAS Alameda	Well Number: M16-C4
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.30

Depth to water measured from TOC (ft): Before Purging: 1.54

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X ____ ft. X 0.163 gal/ft = ____ gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO (mg/l)	Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MB, SC

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SITE LOCATION: NAS Alameda	WELL NUMBER: MBG1
DATE(S): 5/14/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.70

Depth to water measured from TOC (ft): Before Purging: 2.96

Minimum Purge Volume:

Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.8 ft. X 0.163 gal/ft = 5.78 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Sal
Initial		900	0	16.07	16.0	5.34	7	CL, yellow	.28
During		901	1	16.1	6.42	11.4	14	"	.6
During		902	2	16.3	6.72	16.7	200	"	.9
During		903	3	16.4	6.82	18.6	269	"	1.1
During		904	4	16.4	6.89	18.8	278	"	1.1
During		906	6	16.4	7.00	18.7	406	"	1.1
During									
After					Sample Time =			0930	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBG-009	Lab: Derik Yan Net
Field ID #: MBG-1-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info: MBD/MS sample taken

Blank Sample Info: None; same id;

Other Sample Info: double volume

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: SC, MB

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Site Location: NAS Alameda	Well Number: MBG2
Date(s): 5/14/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.91

Depth to water measured from TOC (ft): Before Purging: 4.10

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 10.81 ft. x 0.163 gal/ft = 5.29 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other*	Su
Initial		955	0	16.1	7.46	2.70	14	Sulfur odor	.13
During		956	1	16.0	7.03	5.06	14	"	.13
During		957	2	15.9	6.99	5.64	39	"	.2
During		958	3	15.8	7.00	5.43	13	"	.29
During		959	4	15.9	7.01	5.49	15	"	.30
During		1000	5.5	16.1	7.00	5.48	223	"	.30
During									
After				Sample time = 1030					

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBE-010	Lab: Accra Lab Net
Field ID #: MBE-2-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, ~~TOC~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: NSB/CLG

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Site Location: NAS Alameda	Well Number: MW360-1
Date(s): 5/6/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.91

Depth to water measured from TOC (ft): Before Purging: 3.53

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.38 ft. X 0.163 gal/ft = 5.6 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal (%)
Initial		1405	0	17.6	6.82	4.01	45	Water is	0.20
During		1411	1	17.6	6.87	4.09	911	pale yellowish	0.2
During		1414	2	17.6	6.83	4.10	999	brown w/	0.2
During		1425	3	17.7	6.83	4.11	999	no odor	0.21
During		1427	4	17.8	6.87	4.10	999	some sand	0.20
During		1430	5.5	17.8	6.88	4.10	999		0.20
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-0 25 @1430	Lab: Recra
Field ID #: MW360-1-0 30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

No measurable product using interface probe, only water

Double volume for MS/MSD

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/98 OX KN

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Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MB / SC

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Site Location: NAS Alameda	Well Number: MB63
Date(s): 5/14/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.62

Depth to water measured from TOC (ft): Before Purging: 3.47

Minimum Purge Volume:
- Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 11.15 ft. x 0.163 gal/ft = 5.45 gallons
- Four-inch well 3 X ____ ft. x 0.653 gal/ft.* ____ gallons

Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other: DO (mg/l)	Sal (%)
Initial		1209	0	16.3	7.05	.655	3	9.12	.03
During		1210	1	16.2	7.04	.789	161	9.09	.03
During		1211	2	16.3	7.05	.769	173	9.12	.03
During		1212	3	16.4	7.04	.791	185	9.12	.03
During		1213	4	16.3	7.10	.798	175	9.11	.03
During		1215	5.5	16.4	7.05	.793	16	9.10	.03
During									
After					Sample Time = 1230				

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBG-011	Lab: Parca Yes No
Field ID #: MB6-3-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and 2 ml zinc acetate plus NaOH to pH > 9	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH, TEPH, ~~TPH~~, Anions, TDS, Sulfide, alkalinity Nitrate/Nitrite as Nitrogen

Quality Control Samples:
Duplicated Sample Info:
Blank Sample Info:
Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

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PROJECT NO: 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MB / SC

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SITE LOCATION: NAS Alameda	WELL NUMBER: MBG-4
DATE(S): 5/14/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.21

Depth to water measured from TOC (ft): Before Purging: 3.74

Minimum Purge Volume:
- Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
- Two-inch well 3 X 10.47 ft. X 0.163 gal/ft = 5.12 gallons
- Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons

Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)	
Initial			0	16.6	8.05	.539	10	9.76	.02	CC
During			1	16.8	7.61	.524	37	11.82	.02	Dark
During			2	16.5	7.41	.534	46	11.90	.02	Brow
During			3	16.4	7.50	.539	52	11.91	.02	
During			4	16.5	7.41	.534	49	11.90	.02	
During			5.5	16.4	7.18	.557	49	12.15	.02	
During										
After				Sample Time =				11:15		

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SBG-012	Lab: Data Lab Net
Field ID #: MBG-4-030	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, ~~TX~~, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: CLG / MSB

Page 1 of 1

Site Location: NAS Alameda	Well Number: MW360-2
Date(s): 5/6/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.98 Ft

Depth to water measured from TOC (ft): Before Purging: 3.96 Ft

Minimum Purge Volume:
Three-inch well 3 X ____ ft X 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.02 ft. X 0.163 gal/ft = 5.38 gallons
Four-inch well 3 X ____ ft. X 0.653 gal/ft. = ____ gallons
Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		0955	0	16.8	6.80	4.59	74		0.23
During		0956	1	17.0	6.37	4.72	71	WATER IS	0.24
During		1000	2	16.8	6.28	4.75	>1000	BROWNISH	0.24
During		1001	3	17.3	6.26	4.76	>1000	TURBID	0.24
During		1003	4	17.2	6.38	4.77	73	NO ODOR/	0.24
During		1005	5.5		6.60	4.74	>1000	NO SHEEN	0.24
During								PPM = 15.0	
After								IN BREATHING ZONE.	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-026 @ 1015	Lab: Recra
Field ID #:	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO PRODUCT MEASURED w/ INTERFACE PROBE, ONLY WATER
DOUBLE VOLUME FOR MS/MSD

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

UA | Uribe & Associates Environmental Consulting Services

PROJECT NO.: 200 42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: JM / NV

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MW360-3
DATE(S): 5/14/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.0

Depth to water measured from TOC (ft): Before Purging: 3.29

Minimum Purge Volume:
- Three-inch well 3 X ___ ft X 0.367 gal/ft = ___ gallons
- Two-inch well 3 X 1.76 ft. X 0.163 gal/ft = 5.7 gallons
- Four-inch well 3 X ___ ft. X 0.653 gal/ft. = ___ gallons
- Total purged 5.7 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (umhos/cm) mS/cm	Turbidity (NTUs)	DO (mg/l)	Other Sal (%)
Initial		1511	0	18.9	7.66	1.27	0	5.74	0.06
During		1512	0.95	18.9	7.08	1.26	115	8.92	0.05
During		1515	1.9	18.9	7.00	1.30	963	2.91	0.05
During		1516	2.8	18.7	6.98	1.31	>1000	2.74	0.06
During		1518	3.8	18.3	6.99	1.32	>1000	3.61	0.06
During		1519	4.8	18.8	6.98	1.33	>1000	3.41	0.06
During		1521	5.7	18.8	6.96	1.33	>1000	2.95	0.06
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-027 @ 1530	Lab: Recra
Field ID #: MW360-3	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Water is cloudy with a yellow color and a solvent odor

Quality Control Samples:

Duplicated Sample Info:	108-S04-028 @
Blank Sample Info:	for VOCs & metals only
Other Sample Info:	

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 QX KH

U&A | Uribe & Associates Environmental Consulting Services

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: JM / MY

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MW360-4
DATE(S): 05/06/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.00

Depth to water measured from TOC (ft): Before Purging: 2.91

Minimum Purge Volume:

Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 11.1 ft. x 0.163 gal/ft = 5.4 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged ____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other sal	Other DO
Initial		1139	0	18.6	7.63	1.10	126	0.05	8.06
During		1140	1	18.7	7.46	0.63	65	0.03	7.97
During		1142	2	18.5	7.42	0.63	213	0.02	8.03
During		1144	3	18.5	7.33	0.66	504	0.02	8.04
During		1145	4	18.5	7.28	0.71	932	0.03	8.09
During		1147	5	18.5	7.27	0.73	>1000	0.03	8.14
During		1149	6	18.5	7.27	0.76	>1000	0.03	8.14
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S04-0296 11/00	Lab:
Field ID #:	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Comments: Water was cloudy-brown with no odor or sheen

Sampled at 1100

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MIKE BARNES

Page 1 of 1

Site Location: NAS Alameda	Well Number: MW530-2
Date(s): 5/13/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 13.80

Depth to water measured from TOC (ft): Before Purging: 3.99

Minimum Purge Volume:
- Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x 9.81 ft. x 0.163 gal/ft = 4.79 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 5.0 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAND
Initial		1521	0	18.8	7.57	.741	225		0.03
During		1525	1	18.7	7.48	.685	110	GREY/SILT	0.02
During		1526	2	19.0	7.51	.872	820	BROWN	0.03
During		1527	3	19.3	7.50	.758	764	NO ODOR	0.03
During		1529	4	19.5	7.46	.788	931	NO SHEEN	0.03
During		1531	5	19.4	7.49	.769	94		0.03
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S23-006	Lab: RECAA
Field ID #: MW530-2-030	Filtered?-Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 QX KH

U&A | URIBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) Collected by: MIKE BARNES

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: ~~MW574-4~~ MW547-4
DATE(S): 5/13/98	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 15.00

Depth to water measured from TOC (ft): Before Purging: 2.78

Minimum Purge Volume:
Three-inch well 3 X ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 X 12.22 ft. x 0.163 gal/ft = 5.97 gallons
Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL%
Initial		1401	0	17.9	7.13	.752	111		0.03
During		1405	1	17.9	6.94	.816	409	GREY/BY	0.03
During		1406	2.5	17.7	6.99	.869	999	TURBID	0.03
During		1407	3.5	17.4	7.01	.878	71000	NO ODOR	0.03
During		1411	5.0	17.7	7.03	.885	71000	NO SHEEN	0.03
During		1413	6.0	17.7	7.06	.894	116		0.03
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S22-012	Lab: RECRA
Field ID #: MW574-4-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen.

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

~~Duplicated Sample Info:~~

Blank Sample Info:

Other Sample Info: MS/MSD TAKEN 108-S22-012 (2 VOLUMES)

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/30/98 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSB / CLG

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Site Location: NAS Alameda	Well Number: MWD13-2
Date(s): 5/6/98	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.69

Depth to water measured from TOC (ft): Before Purging: 2.80

Minimum Purge Volume:
- Three-inch well 3 x 11.87 ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 x ____ ft. x 0.163 gal/ft = 5.8 gallons
- Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons

Total purged 6 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~µmhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	S.I. %
Initial		1320	0	17.7	6.86	0.207	166	lots of	0.0
During		1322	1	17.9	6.75	0.209	200	particulates	0.0
During		1324	2	18.0	6.79	0.213	250	Brownish	0.0
During		1325	3	17.9	6.85	0.216	109	water, no	0.0
During		1326	4	17.9	6.90	0.218	260	odor	0.0
During		1327	5	17.8	6.96	0.221	265		0.0
During		1329	6	17.8	6.96	0.222	255		0.0
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, Alkalinity,
to pH > 9	Nitrate/Nitrite as Nitrogen
No measurable product using interface probe, only water	

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

URBE & ASSOCIATES ENVIRONMENTAL CONSULTING SERVICES

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MIKE BARNES

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: MW03-3
DATE(S): 5/13/97	WELL TYPE (MONITORING, EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.58

Depth to water measured from TOC (ft): Before Purging: 3.52

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 11.06 ft. x 0.163 gal/ft = 5.4 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft.³ ____ gallons
Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	PARAMETERS Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		855	0	15.8	7.08	.532	250		0.01
During		858	1	15.9	7.31	.332	174	GREYISH	0.01
During		900	2	16.0	7.41	.345	106	SOMETHING	0.01
During		902	3	16.1	7.56	.346	163	NO ODOR	0.01
During		904	4	16.0	7.63	.344	157	NO SHEEN	0.01
During		905	5.5	15.8	7.73	.342	123		
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-SY-0003	Lab: REZPA
Field ID #: MW03-3-Q30	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite ~~as Nitrogen~~

NO OIL ENCOUNTERED / ONLY WATER

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.³
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

U&A | Uribe & Associates Environmental Consulting Services

Project No.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MIKE BARNES

Page 1 of 1

Site Location: NAS Alameda	Well Number: MWOE-05
Date(s): 5/13/97	Well Type (Monitoring, Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 14.20

Depth to water measured from TOC (ft): Before Purging: 3.01 ft

Minimum Purge Volume:
Three-inch well 3 x ____ ft x 0.367 gal/ft = ____ gallons
Two-inch well 3 x 11.19 ft. x 0.163 gal/ft = 5.47 gallons
Four-inch well 3 x ____ ft. x 0.653 gal/ft. = ____ gallons
Total purged 5.5 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	SAL %
Initial		1108	0	17.8	7.40	.412	110		0.01
During		1111	1	18.2	7.25	.457	792	BROWNISH	0.01
During		1114	2	18.3	7.26	.467	>1000	RED SEMI	0.01
During		1117	3	18.4	7.01	.469	122	TURBID	0.01
During		1118	4	18.4	7.00	.463	94	NO/OPEN	0.01
During		1120	5.5	18.4	7.02	.465	100	NO/SHEEN	0.01
During									
After									

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S13-011	Lab:
Field ID #: MWOE-5-030	Filtered? ON: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

NO OIL ENCOUNTERED / WATER ONLY

Quality Control Samples:

Duplicated Sample Info:	SAMPLE # 108-S13-012
~~Blank Sample Info:~~	FIELD ID # MWOE-5-030D
~~Other Sample Info:~~	↳ VOC'S METALS
	TPH-E, TPH-P

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

U&A | Urbe & Associates Environmental Consulting Services

PROJECT NO.: 200-42-202
CTO: 108

Well Purging & Sampling Log

Sample(s) collected by: MSS / CLG

PAGE 1 OF 1

SITE LOCATION: NAS Alameda	WELL NUMBER: B-W-1
DATE(S): 5/5/98 (well developed 5/6/98 sampled)	WELL TYPE (MONITORING / EXTRACTION, ETC.):
PURGING EQUIPMENT: Disposable bailer	MEASUREMENT REFERENCE DATUM: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) 9.45

Depth to water measured from TOC (ft): Before Purging: 1.98 7.47

Minimum Purge Volume:
- Three-inch well 3 X 7. ft x 0.367 gal/ft = ____ gallons
- Two-inch well 3 X 7.47 ft. x 0.163 gal/ft = 3.65 gallons
- Four-inch well 3 X ____ ft. x 0.653 gal/ft. = ____ gallons
- Total purged 4 gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	Other	Sal
Initial		1135	0	18.5	6.79	34.8	-10	Petroleum	2.19
During		1144	2/3	20.5	6.65	4.02	-10	odor	0.23
During		11[illegible]5	1½	18.9	6.70	21.1	-10	Black	1.2[illegible]
During		1147	2	18.5	6.90	29.1	30.	Particulates	1.80
During		1153	3	18.4	1.06	22.7	660		1.37
During		—	4	-	.	—	-		.
During								[illegible] bails	
After								dry at ~3 gal	

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S07-018 [illegible]	Lab: [illegible]
Field ID #: [illegible]-030	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = $\pi r^2 h$
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WP: Well P&S 10/3/96 OX KH

UA | Uribe & Associates Environmental Consulting Services

Well Purging & Sampling Log

Water level Only

Project No: 200 42-202
CTO: 108

Sample(s) collected by:

Page 1 of 1

iously sampled - re-measured with oil/water interface probe

Site Location: NAS Alameda	Well Number: W-1
Date(s): 5/12/98/13:20	Well Type: (Monitoring) Extraction, etc.):
Purging Equipment: Disposable bailer	Measurement Reference Datum: Top of casing

DATA FROM IMMEDIATELY BEFORE AND AFTER DEVELOPMENT:

Total depth of well (ft) _____

Depth to water measured from TOC (ft): Before Purging: _____

Minimum Purge Volume:
Three-inch well 3 x _____ ft x 0.367 gal/ft = _____ gallons
Two-inch well 3 x _____ ft. x 0.163 gal/ft = _____ gallons
Four-inch well 3 x _____ ft. x 0.653 gal/ft. = _____ gallons
Total purged _____ gallons

	Time Since Purging Started (min)	Time	Cumulative Volume Removed (gals)	Parameters: Temp (°C)	pH	Conductivity (~~umhos/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	Other: Sal (%)	
Initial			0							
During										
During										
During										
During										
During										
During										
After										

*CL = clear CO = cloudy TU = turbid

Well Sampling

Sample #: 108-S -0	Lab:
Field ID #:	Filtered? Y/N: For metals analysis only
Preservatives: HCl for VOCs and TPPH, HNO_3 for metals, and	Analysis Requested: VOCs, SVOCs, metals, Pest/PCBs, TPPH,
2 ml zinc acetate plus NaOH	TEPH, TOC, Anions, TDS, Sulfide, alkalinity
to pH > 9	Nitrate/Nitrite as Nitrogen

Quality Control Samples:

Duplicated Sample Info:

Blank Sample Info:

Other Sample Info:

Formulas/Conversions

r = well radius in feet
h = ht. of water col. in feet
vol. of col. = πr^{2h}
7.48 gal./ft.^{3}
V_2" casing = 0.163 gal./ft.
V_3" casing = 0.367 gal./ft.
V_4" casing = 0.653 gal./ft.
$V_{4.5}$" casing = 0.826 gal./ft.
V_6" casing = 1.47 gal./ft.
V_8" casing = 2.61 gal./ft.

Frank WIP: Well P&S 10/3/96 OX KH

Quarter 4 – 76 Sheets

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MC01-E Date: 8/3/98

Personnel: KS, MAV

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 19.5 ft

Depth to Water: 5.95 ft

Water Column: 13.55 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 13.55 x 0.163 x 3 = 6.63 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1155	0	5.95	7.82	3.12	20.2	17	1.20	0.15
1158	1		7.74	3.37	19.3	14	1.24	0.16
1200	2		7.74	3.38	19.2	17	1.29	0.16
1203	3		7.74	3.31	19.1	21	1.31	0.16
1207	4		7.76	3.23	19.1	20	1.10	0.17
1212	5		7.78	3.13	19.1	20	1.36	0.15
1216	6.5		7.79	3.04	19.0	25	1.36	0.15

Begin Purge: 11:55 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 12.16 Purged Dry? NO

Total Volume Purged: 6.63 How Measured? Calculation using H_2O column & pipe size

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/3/98 @ 1220 Sample Number (s): 108-S01-042

Comments: Slight odor of solvents; Brownish in color

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M002-E Date: 8/3/98

Personnel: Karen S + Miguel V

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 20.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 7.21 ft

Water Column: 12.79 ft Well Volume: _____ gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %

Begin Purge: ~~1315~~ Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? _____

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/3/98 @ 1315 Sample Number (s): _____

Comments: water level only

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MC03-E Date: 8/3/98

Personnel: KS, MAV

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 21.25 ft

Depth to Water: 6.11 ft

Water Column: 15.14 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 0.163 X 15.14 X 3 = 7.3 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1343	0	6.11	7.18	0.387	22.1	1	3.93	0.02
1346	1.5		7.23	0.647	20.4	0	1.55	0.02
1349	3.0		7.23	0.667	20.0	0	1.58	0.02
1353	4.5		7.23	0.677	19.9	1	1.04	0.02
1356	6.0		7.24	0.666	19.4	1	1.31	0.02
1358	7.5		7.24	0.667	19.6	1	1.25	0.02

Begin Purge: 1343 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1358 Purged Dry? NO

Total Volume Purged: _____ How Measured? _____

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/3/98 @ 1400 Sample Number (s): ~~[illegible]~~ 108-501-043

Comments: ~~The water was~~ There were no odors or color in the water

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M027E Date: 8/3/98

Personnel: KS, MAV

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 22.0 ft

Depth to Water: 4.90 ft

Water Column: 17.1 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 17.1 x 0.163 x 3 = 8.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1105	0	4.90	6.86	1.97	21.0	5	2.20	0.09
1107	1.5		6.75	6.45	20.6	1	1.64	0.34
1112	3.0		6.75	6.13	19.8	5	1.42	0.32
1115	4.5		6.71	7.11	19.5	4	1.57	0.38
1119	6.5		6.67	8.22	19.5	2	1.57	0.44
1124	8.4		6.63	9.39	19.8	4	1.60	0.52

Begin Purge: 1105 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1124 Purged Dry? NO

Total Volume Purged: 8.4 gal How Measured? Calculation using H_2O column and pipe size

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/3/98 @ 11:30 Sample Number (s): 108501044

Comments: No odors are evident. The water has a slight yellow color

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: 028A Date: 8/3/98

Personnel: Karen Stover, Miguel Villicaña

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 14.00 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.35 ft

Water Column: 7.65 ft Well Volume: 7.65 X 0.163 X 3 = 3.74 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0925	0	6.35	6.58	1.18	19.0	8	1.09	0.05
0930	0.5		6.64	1.17	18.6	10	1.79	0.05
0932	1.0		6.68	1.17	18.3	10	1.75	0.05
0934	1.5		6.69	1.16	18.3	6	1.76	0.05
0937	2.0		6.70	1.15	18.4	10	1.29	0.05
0939	2.5		6.71	1.14	18.4	10	2.14	0.05

Begin Purge: 0925 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 0939 Purged Dry? NO

Total Volume Purged: 3.74 gal How Measured? Calculate based on water column and pipe size.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: ~~10:00~~ 3/8/98 @ 10:00 Sample Number (s): 108501045

Comments: Water clear, no odors

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M028-C Date: 8/4/98

Personnel: Miguel V + Karen S

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 90.00 ft

Depth to Water: 6.97 ft

Water Column: 83.03 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 83.03 x 0.367 x 3 = 91.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~umhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
9:31	0	6.97	7.16	28.0	19.4	5	4.27	1.72
9:34	15		7.16	31.5	18.6	>1000	0.92	1.95
9:38	30		7.18	31.6	18.0	360	1.76	1.97
9:41	45		7.18	31.6	17.9	87	1.93	1.97
9:45	60		7.21	31.4	18.0	61	3.04	1.96
9:48	75		7.20	31.4	17.9	169	2.26	1.96
9:53	91.4		7.17	31.4	18.0	92	181	1.96

Begin Purge: 9:31 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 9:52 Purged Dry? NO

Total Volume Purged: >91.4 How Measured? calculated using flow rate (calibrated 5 gallon buckets)

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/4/98 @ 1015 Sample Number (s): 108501046

Comments: Water - blueish/black in color; Water cleared progressively as pumping continued

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M028-E Date: 8-3-98

Personnel: M. Crutty, B. Mollolland.

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 21.0 ft

Depth to Water: 6.00 ft

Water Column: 15.00 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 15.00 x .163 = 2.45 x 3 = 7.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
9:00	0	6.00	4.74	1.21	18.8	3	1.76	0.05
9:14	2		4.69	1.29	18.6	5	1.68	0.05
9:22	4		4.68	1.39	18.5	8	1.75	0.05
9:27	6		4.66	1.40	18.3	8	1.73	0.05
9:36	7.4		4.66	2.10	18.0	8	1.73	0.10

Begin Purge: 9:00 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 9:36 Purged Dry? no.

Total Volume Purged: 7.4 gal How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8-3-98 9:40 A. Sample Number (s): Field: M028-E-Q40 Lab: 108-501-047

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M029-E Date: 8-3-98

Personnel: B. Mullholland, M. Gentry

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 20.00 ft

Depth to Water: 4.40 ft

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Water Column: 15.6 ft Well Volume: 15.6x.163 = 2.54x3 = 7.62 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
11:28	0	4.40	8.02	1.01	20.5	6	1.77	0.07
11:34	2		8.01	1.65	20.1	2	1.79	0.06
11:43	4		8.05	1.71	20.3	3	1.88	0.06
11:50	6		7.96	1.76	20.3	3	1.85	0.08
11:53	7.6		8.00	1.76	20.0	4	1.89	0.08

Begin Purge: 11:28 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 11:53 Purged Dry? no.

Total Volume Purged: 7.62 gal. How Measured? graduated bucket.

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8-3-98 12:00 & 12:05 → Duplicate Sample Number (s): Lab ID's: 108-501-048 & 108-501-049

Comments: Field IDs: M029E-Q40 & M029-E-Q40A ↓ Duplicate sample.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M030-E Date: 8/3/98

Personnel: KS, MAV

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 16.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.98 ft

Water Column: 11.02 ft Well Volume: _____ gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %

Begin Purge: _____ Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? _____

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/3/98@1255 Sample Number (s): _____

Comments: Water level only

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M031-E Date: 8/3/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 18.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.39 ft

Water Column: 13.61 ft Well Volume: _____ gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %

Begin Purge: _____ Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? _____

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 1430 / 8/3/98 Sample Number (s): _____

Comments: Water sample only

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M034-A Date: 8-3-98

Personnel: B. Mulholland, M. Country

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 12.50 ft Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.17 ft

Water Column: 8.33 ft Well Volume: 8.33 x .163 = 1.36 = 4.08 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1:08	0	4.17	7.00	1.31	20.9	4	1.71	0.06
1:11	1	4.17	7.01	1.45	20.6	4	1.71	0.06
1:14	2	4.17	7.01	1.46	20.6	4	1.76	0.05
1:17	3	4.20	7.02	1.50	20.1	4	1.80	0.05
1:20	4	4.19	7.02	1.49	20.1	4	1.85	0.05

Begin Purge: 1:08 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1:20 Purged Dry? No

Total Volume Purged: 4.08 How Measured? grad. bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-3-98, 1:25P Sample Number (s): Lab: 108-501-050 Field: M034-A-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M035-A Date: 8-3-98

Personnel: B. Mullholland, M. Country

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 14.00 ft Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.11 ft

Water Column: 7.89 ft Well Volume: 7.89 x .163 = 1.28 x 3 = 3.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
2:03	0	6.11	7.11	.596	19.5	37	1.77	0.02
2:06	1		7.12	6.00	19.5	35	1.75	0.02
2:10	2		7.14	.600	19.5	37	1.89	0.02
2:12	3		7.19	.610	19.5	31	1.91	0.02
2:20	3.8		7.20	.615	19.5	31	1.90	0.02

Begin Purge: 2:03 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 2:20 Purged Dry? no.

Total Volume Purged: 3.8 gal. How Measured? grad. bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-3-98, 2:30 Sample Number (s): Lab: 108-501-051

Comments: Field: M035-A-040

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M03-04 Date: 8/4/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: 55 ppm Breathing Zone: 107 ppm

Depth to Well Bottom: 11 ft

Depth to Water: 5.56 ft

Water Column: 5.44 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.44 x 0.163 x 3 = 2.66 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~µmhos/cm~~)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1143	0	5.56	7.13	7.04	22.0	41	1.55	0.38
1147	1		7.06	6.85	22.2	61	1.47	0.36
1149	1.5		7.05	6.96	21.9	171	1.68	0.37
1253	2.0		7.07	7.16	21.9	285	2.45	0.38
1258	>2.66		7.13	7.49	21.6	821	3.	0.40

Begin Purge: 1143 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1258 Purged Dry? yes

Total Volume Purged: >2.66 How Measured? calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/4/98 @ 1440 Sample Number (s): 108503010

Comments: confidence in toc (PID) reading low; strong odor (solvents) ~~greenish~~ yellow/brown in color

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MQ3-05 Date: 8/4/98

Personnel: KS, MAV

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 13.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.08 ft

Water Column: 6.92 ft Well Volume: 6.92 X 0.163 X3 = 3.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~umhos/cm~~)	Temperature (°C ~~°F~~)	Turbidity NTU	DO mg/L	Salinity %
1335	0	608	7.50	7.00	23.9	31	2.80	0.42
1337	0.5		7.56	6.92	23.0	19	1.75	0.37
1341	1.0		7.57	6.99	23.1	13	1.96	0.42
1344	1.5		7.57	7.26	22.9	13	2.16	0.39
1346	2.0		7.57	7.13	22.5	11	2.71	0.38
1350	2.5		7.59	7.32	22.6	37	2.17	0.39
1357	3.0		7.71	7.26	22.7	491	2.81	0.39
1403	>3.5		7.70	7.61	22.9	632	3.16	0.41

Begin Purge: 1335 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1403 Purged Dry? No (Nearly)

Total Volume Purged: > 3.5 How Measured? Calibrated 5gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/4/98 @ 1410 Sample Number (s): 108503011

Comments: No odors evident. Brow/greenish water color.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M03-07 Date: 8/4/98

Personnel: Miguel Karen

Organic Vapor Concentration TOC: – ppm Breathing Zone: – ppm

Depth to Well Bottom: 13.0 ft

Depth to Water: 3.19 ft

Water Column: 9.81 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 9.81 x 0.163 x 3 = 4.80 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
12:24	0	3.19	7.19	1.66	23.7	6	3.77	0.07
12:25	1		7.13	1.63	24.1	30	2.16	0.07
12:27	2		7.11	1.71	23.9	102	2.53	0.08
12:30	3		7.13	1.67	23.4	270	2.82	0.07
1233	4		7.17	1.64	21.8	576	2.90	0.07
12:36	>4.8		7.17	1.62	21.8	635	2.06	0.07

Begin Purge: 12:24 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 12:36 Purged Dry? almost

Total Volume Purged: >4.8 How Measured? calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/4/98 @ 1245 Sample Number (s): 108503012

Comments: Lamp out on PID meter; dark yellow color; no evident odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D04-01 Date: 8/5/98

Personnel: Miguel V/ Karen S

Organic Vapor Concentration TOC: — ppm Breathing Zone: — ppm

Depth to Well Bottom: 96 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.32 ft

Water Column: 90.68 ft Well Volume: 90.68 x 0.367 x 3 = 99.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos/cm~~ mS)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1353	0	5.32	6.98	2.68	23.6	~~0.48~~ 73	7.45	0.13
1355	20		7.05	49.5	22.0	16	2.62	3.20
1358	40		6.91	53.5	21.0	2	2.29	3.52
1403	60		6.90	63.8	20.8	1	3.02	3.56
1408	80		6.89	64.1	20.7	2	2.75	3.57
1412	>99.8		6.88	54.2	20.6	1	2.34	3.58

Begin Purge: 1353 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1412 Purged Dry? NO

Total Volume Purged: >99.8 = 100 How Measured? ~~108504030~~ calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/5/98 @ 1425 Sample Number (s): 108504030

Comments: No odor but significant breeze may have effect
Water clear.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D04-02 Date: 8/5/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: — ppm Breathing Zone: — ppm

Depth to Well Bottom: 96.5 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.05 ft

Water Column: 90.45 ft Well Volume: 90.45 x 0.367 x 3 = 99.6 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1226	0	6.05	7.20	33.3	21.5	10	4.54	2.10
1229	20		6.96	48.5	19.8	36	1.95	3.15
1233	40		6.93	48.9	19.6	~~48.9~~ 16	2.04	3.18
1238	60		6.92	49.0	19.3	7	1.98	3.20
1242	80		6.91	49.1	19.2	5	1.93	3.20
1246	>99.6		6.88	49.0	19.1	3	2.28	3.20

Begin Purge: 1226 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1246 Purged Dry? NO

Total Volume Purged: >99.6 How Measured? ~~108504031~~ calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/5/98 @ 1255 Sample Number (s): 108504031

Comments: Water has no noticable odors or color

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D04-03 Date: 8/5/98

Personnel: Miguel + Karen

Organic Vapor Concentration TOC: — ppm Breathing Zone: — ppm

Depth to Well Bottom: 94 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.51 ft

Water Column: 87.49 ft Well Volume: 87.49 x 0.367 x 3 = 96.3 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos/cm~~ mS)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0851	0		7.58	3.46	19.4	10	7.56	0.17
0854	20		6.62	69.2	18.7	114	1.63	4.0
0858	40		6.67	70.9	19.7	102	2.83	4.0
0901	60		6.73	70.9	19.7	86	3.43	4.0
0905	80		6.73	70.7	19.4	96	3.38	4.0
0912	>96.3		6.71	70.6	19.3	49	2.53	4.0

Begin Purge: 0851 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 0912 Purged Dry? NO

Total Volume Purged: >96.3 How Measured? Calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/5/98 @ 0920 Sample Number (s): 108504032

Comments: * salinity possibly out of calibration - screen flashing
No odor, No color ; bolts stripped - don't tighten.
L mild scent of H_2S (boiled eggs) ; Methane plume at 6 ft below surface. LEL @ 5 ; this plume @ 25

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M04-05 Date: 8-4-98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 4.90 ft

Water Column: 8.60 ft

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 8.60 x .163 = 1.40 x 3 = 4.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
9:55	0	4.90	6.61	.693	20.0	9	1.64	0.02
9:58	1		6.66	.684	22.9	15	1.31	0.02
10:01	2		6.68	.688	22.5	20	1.80	0.02
10:04	3		6.69	.693	22.1	18	1.20	0.02
10:10	4.2		6.73	.681	22.1	18	1.35	0.02

Begin Purge: 9:55 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 10:10 Purged Dry? no.

Total Volume Purged: 4.2 gal. How Measured? grad. bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-4-98, 10:15 Sample Number (s): Field: M04-05-Q40
Lab: 108-504-033

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M04-06 Date: 8-4-98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 9.3 ft

Water Column: 4.2 ft

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 4.2x.163=.684x3= 2.1 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
11:34	0	9.3	8.82	1.20	20.3	>1000	2.25	0.05
11:37	.5		8.76	.643	20.3	491	2.10	0.02
11:39	1.0		8.78	.632	20.2	799	1.92	0.02
11:41	1.5		8.62	.673	20.1	>1000	2.25	0.02
11:50	2.1		9.97	.642	20.2	>1000	2.15	0.02

Begin Purge: 11:34 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: Purged Dry? yes

Total Volume Purged: 2.1 gal. How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-4-98, 1:00 Sample Number (s): Field: M04-06-Q40
Lab: 108-504-034

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M04-07 Date: 8-4-98

Personnel: B. Mulholland, M. Crowtry

Organic Vapor Concentration TOC: 0.00 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 5.21 ft

Water Column: 8.29 ft

Well Volume: (2)inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 8.29 x .163 = 1.35 x 3 = 4.0 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
8:51	0	5.21	7.08	1.02	22.2	9	1.47	0.04
8:55	1		7.06	1.00	22.1	9	1.50	0.04
8:59	2		7.08	1.00	22.0	10	1.61	0.04
9:04	3		7.09	0.95	21.5	10	1.55	0.04
9:09	4		7.10	0.95	21.5	10	1.54	0.04

Begin Purge: 8:51 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 9:09 Purged Dry? _____

Total Volume Purged: 4.0 How Measured? grad. bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-4-98, 9:15 Sample Number (s): Lab: 108-304-035 Field: M04-07-Q40

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D05-02 Date: 8/5/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: — ppm Breathing Zone: — ppm

Depth to Well Bottom: 67 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 7.17 ft

Water Column: 59.83 ft Well Volume: 59.83 x 0.367 x 3 = 65.9 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~µmhos/cm~~)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1056	0	717	8.24	12.2	23.0	18	6.17	0.71
1058	15		6.84	44.2	21.1	17	1.70	2.85
1100	30		6.79	44.5	20.5	23	2.73	2.88
1102	45		6.79	44.4	20.4	17	2.03	2.88
1106	60		6.78	44.4	20.4	7	2.47	2.87
1110	>65.9		6.83	44.5	20.4	4	2.90	2.87

Begin Purge: 1056 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1110 Purged Dry? No

Total Volume Purged: >65.9 How Measured? Calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/5/98 @ 1120 Sample Number (s): 108S05049

Comments: No odors or color noted

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-01 Date: 8-5-98

Personnel: B. Mullholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14.00 ft Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 7.45 ft

Water Column: 6.55 ft Well Volume: 6.55 x .163 = 1.06 x 3 = 3.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
9:47	0		6.51	23.3	20.4	23	2.28	1.42
9:50	.5		6.48	23.2	20.6	23	2.82	1.41
9:52	1		6.48	23.5	20.5	25	2.54	1.42
9.54	2		6.47	23.9	20.1	25	2.66	1.45
9.55	3		6.48	23.2	20.1	24	3.10	1.41

Begin Purge: 9:47 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 9:55 Purged Dry? NO

Total Volume Purged: 3.2 GAL How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-5-98, 10:00 Sample Number (s): Lab: 108-505-051 Field: M05-01-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MO5-02 Date: 8.5.98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 1.8 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14.00 ft

Depth to Water: 8.12 ft

Water Column: 5.88 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.88 x .163 = 0.96 x 3 = 2.88 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
10:17	0		7.50	1.08	22.5	39	2.21	0.05
10:21	.5		6.59	4.70	22.9	39	4.73	0.27
10:23	1		6.44	9.9	22.7	40	4.25	0.55
10:25	2		6.55	6.92	22.6	40	4.20	0.41
10:27	3		6.55	7.09	22.9	42	3.59	0.38

Begin Purge: 10:17 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 10:27 Purged Dry? NO

Total Volume Purged: 2.88 GAL How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8.5.98, 10:30 Sample Number (s): LAB: 108-505-052 FIELD: MO5-02-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-03 Date: 8·5·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 55 ppm Breathing Zone: 25 ppm

Depth to Well Bottom: 12.00 ft

Depth to Water: 4.98 ft

Water Column: 7.02 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 7.02 × .163 = 1.14 × 3 = 3.43 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
10:52	0		6.12	1.08	22.8	69	1.70	0.04
10:54	1		6.25	1.11	21.9	68	2.02	0.04
10:57	2		6.32	1.15	21.7	70	2.44	0.04
10:58	3		6.34	1.16	21.4	70	3.0	0.05
10:59	3.5		6.32	1.11	21.8	65	2.35	0.05

Begin Purge: 10:52 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 10:59 Purged Dry? NO

Total Volume Purged: 3.5 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·5·98, 11:00 Sample Number (s): LAB: 108·505·053 FIELD: MOS·03·Q40

Comments: FREE PRODUCT IN WATER, STRONG ODOR

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-04 Date: 8·5·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 2.1 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.94 ft

Water Column: 8.06 ft Well Volume: 8.06 × .163 = 1.3 × 3 = 3.94 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
11:22	0		6.64	3.52	23.5	2.0	1.23	0.17
11:24	1		6.62	3.47	22.8	28	1.77	0.19
11:27	2		6.62	3.13	23.1	8	4.41	0.17
11:30	3		6.58	3.09	23.2	15	4.35	0.17
11:31	4		6.59	2.73	23.3	15	3.04	0.14

Begin Purge: 11:22 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 11:31 Purged Dry? NO

Total Volume Purged: 4.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·5·98, 11:35 Sample Number (s): LAB: 108·505·054 FIELD: M05-04-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-05 Date: 8·5·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14.00 ft

Depth to Water: 7.99 ft

Water Column: 6.01 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 6.01 x 0.163 = 0.98 x 3 = 2.9 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
11:55	0		6.81	3.79	22.4	22	3.22	0.21
11:56	0.5		7.01	1.41	21.3	25	3.77	0.07
11:59	1		6.93	1.52	21.1	28	3.62	0.07
12:00	2		6.82	2.14	20.9	28	3.98	0.10
12:02	3.		6.86	1.89	20.9	25	3.99	0.08

Begin Purge: 11:55 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 12:02 Purged Dry? NO

Total Volume Purged: 3 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·5·98, 12:05 Sample Number (s): LAB: 108·505·055 FIELD: M05-05-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-06 Date: 8·5·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 13.00 ft

Depth to Water: 5.96 ft

Water Column: 7.04 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 7.04×0.163=1.15 = 3.44 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1:04	0		7.56	0.038	236	5	3.29	0.01
1:06	1		7.50	0.037	23.7	5	1.12	0.01
1:07	2		7.43	0.481	23.6	5	0.78	0.01
1:10	3		7.42	0.480	23.6	5	1.02	0.01
1:11	3.5		7.16	2.11	22.7	7	2.17	0.10

Begin Purge: 1:04 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1:11 Purged Dry? NO

Total Volume Purged: 3.5 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·5·98, 1:15 Sample Number (s): LAB: 108-S05-056 FIELD: MOS-06-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-07 Date: 8·5·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 3.8 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 17.00 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 9.88 ft

Water Column: 7.12 ft Well Volume: 7.12 × 0.163 = 1.16 × 3 = 3.48 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1:35	0		7.02	0.360	22.8	98	2.59	0.01
1:37	1		6.55	0.488	22.4	92	2.46	0.01
1:39	2		6.45	0.731	22.2	74	2.29	0.02
1:40	3		6.51	1.00	22.2	75	2.91	0.04
1:42	3.5		6.47	1.82	22.2	71	2.16	0.02

Begin Purge: 1:35 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1:42 Purged Dry? NO

Total Volume Purged: 3.5 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·5·98, 1:45 Sample Number (s): LAB: 108-505-057 FIELD: MOS-07-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-08 Date: 8·5·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft

Depth to Water: 9.56 ft

Water Column: 5.44 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.44 x .163 = 0.89 x 3 = 2.66 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
2:10	0		7.11	0.620	23.0	8	2.07	0.02
2:11	0.5		6.98	0.584	23.0	5	2.75	0.01
2:13	1		6.77	0.846	23.0	10	4.12	0.02
2:15	2		6.78	0.681	22.7	20	3.26	0.02
2:17	3		6.84	1.18	22.7	22	2.44	0.05

Begin Purge: 2:10 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 2:17 Purged Dry? NO

Total Volume Purged: 3.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8·5·98, 2:20 Sample Number (s): LAB: 108·505·058 FIELD: MOS-08·040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-09 Date: 8/6/98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15 ft

Depth to Water: 8.95 ft

Water Column: 6.05 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 6.05 x 0.163 = 0.99 x 3 = 2.96 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
7:51	0		5.61	0.416	22.0	3	3.51	0.01
7:53	1		6.39	0.383	22.0	25	2.46	0.01
7:55	2		6.68	0.479	22.4	25	2.54	0.01
7:56	2.5		6.73	0.482	22.3	25	2.66	0.01
7:58	3		6.74	0.479	22.3	26	2.78	0.01

Begin Purge: 7:51 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 7:58 Purged Dry? NO

Total Volume Purged: 3.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8-6-98, 8:00 Sample Number (s): LAB: 108-505-059 FIELD: M05-09-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-10 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft

Depth to Water: 9.44 ft

Water Column: 5.56 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.56 x 0.163 = 0.91 x 3 = 2.71 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
9:40	0		7.04	1.70	19.4	20	2.28	0.07
9:41	0.5		6.62	1.49	19.4	20	1.73	0.06
9:43	1		6.55	1.50	19.3	22	2.16	0.06
9:45	2		6.55	1.48	19.3	22	2.73	0.06
9:46	3		6.56	1.48	19.3	22	3.27	0.06

Begin Purge: 9:40 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 9:46 Purged Dry? NO

Total Volume Purged: 3.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 9:50 Sample Number (s): LAB: 108·505·060 FIELD: MOS-10-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOS-11 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.5 ft

Depth to Water: 9.42 ft

Water Column: 6.08 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 6.08 × 0.163 = 0.99 × 3 = 2.97 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
9:12	0		6.92	5.11	18.8	3	2.33	0.26
9:14	0.5		6.62	9.2	18.8	20	2.36	0.50
9:16	1		6.49	9.2	18.8	20	2.53	0.70
9:17	2		6.49	9.2	18.8	22	2.45	0.76
9:18	3		6.46	9.2	18.8	22	2.94	0.76

Begin Purge: 9:12 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 9:18 Purged Dry? NO

Total Volume Purged: 3.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 9:20 Sample Number (s): LAB: 108·305·061 FIELD: MOS-11-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05-12 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.5 ft

Depth to Water: 9.46 ft

Water Column: 6.04 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 6.04 × 0.163 = 0.98 × 3 = 2.95 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
8:40	0		6.84	2.68	19.3	16	1.85	0.13
8:43	0.5		6.61	3.71	19.0	23	2.64	0.18
8:44	1		6.46	6.21	18.8	34	1.62	0.33
8:45	2		6.46	5.90	18.8	26	2.05	0.31
8:46	3		6.46	6.63	18.8	26	1.98	0.35

Begin Purge: 8:40 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 8:46 Purged Dry? NO

Total Volume Purged: 3.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 8:45 Sample Number (s): LAB: 108·505·062 FIELD: M05-12-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05BS-01 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft

Depth to Water: 9.64 ft

Water Column: 5.36 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.36 x 0.163 = 0.87 x 3 = 2.62 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
10:15	0		6.63	5.26	19.9	10	3.98	0.27
10:16	0.5		6.47	5.49	20.0	20	3.46	0.28
10:17	1		6.43	6.36	20.0	19	3.41	0.33
10:20	2		6.42	6.80	19.9	22	2.75	0.36
10:22	3		6.42	6.60	19.9	22	3.83	0.35

Begin Purge: 10:15 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 10:22 Purged Dry? NO

Total Volume Purged: 3 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 10:30 Sample Number (s): LAB: 108-305-063 FIELD: ~~[illegible]~~ M05BS-01-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M05HW-01 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft

Depth to Water: 8.86 ft

Water Column: 6.14 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 6.14 x 0.163 = 1.00 x 3 = 3.00 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
10:45	0		7.05	0.571	22.4	11	2.31	0.02
10:46	0.5		6.59	0.492	22.7	11	1.73	0.02
10:46	1		6.58	0.485	22.7	12	1.73	0.02
10:47	2		6.64	0.620	22.4	12	2.14	0.02
10:48	3		6.77	0.706	22.3	11	2.46	0.03

Begin Purge: 10:45 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 10:48 Purged Dry? _____

Total Volume Purged: 3 GALLONS How Measured? gsal. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98 10:50 Sample Number (s): LAB: 108·505·064 FIELD: M05HW-01-Q40

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M06-06 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0. ppm

Depth to Well Bottom: 13.00 ft

Depth to Water: 8.77 ft

Water Column: 4.23 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 4.23 × 0.163 = 0.69 × 3 = 2.07 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
11:07	0		7.15	0.294	23.4	11	2.48	0.01
11:09	0.5		6.96	0.370	23.6	11	2.45	0.01
11:10	1		6.17	0.492	23.3	11	1.70	~~0.02~~
11:12	1.5		6.97	0.637	23.3	14	2.27	0.02
11:13	2.0		6.96	0.667	23.3	12	2.28	0.02

Begin Purge: 11:07 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 11:13 Purged Dry? NO

Total Volume Purged: 2 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 11:15 Sample Number (s): LAB: 108-S06-004 FIELD: M06-06-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D07A-01 Date: 8/6/98

Personnel: Miguel V & Karen S

Organic Vapor Concentration TOC: – ppm Breathing Zone: – ppm

Depth to Well Bottom: 68.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 1.44 ft

Water Column: 66.56 ft Well Volume: 66.56 x .367 x 3 = 73.3 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0815	0	1.44	6.19	0.358	16.7	2	6.13	0.01
0818	15		6.33	18.9	20.5	20	1.71	1.13
0832	30		6.54	21.8	18.6	282	0.84	1.31
0901	45		6.48	21.8	17.8	76	2.52	1.33
	60							
	>73.3							

Begin Purge: 0815 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 0901 Purged Dry? yes

Total Volume Purged: >73.3 How Measured? Calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/6/98 Sample Number (s): 108507019

Comments: water has strong odor of sulfuric acid. Light yellow in color. As pumping continued water turned black. Well recharging very slowly. Had to pump slowly. Well went dry @ 45 gallons.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D07A-02 Date: 8/6/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: — ppm Breathing Zone: — ppm

Depth to Well Bottom: 60 ft

Depth to Water: 3.41 ft

Water Column: 56.59 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 56.59 x 0.367 x 3 = 62.3 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0944	0		8.68	0.616	19.6	7	7.94	0.03
0947	15		6.41	28.7	17.6	47	1.69	1.58
0950	30		6.44	26.2	17.5	5	2.05	1.63
0955	45		6.47	26.3	17.7	1	2.86	1.63
1000	>62.3		6.47	26.2	17.9	0	3.06	1.61

Begin Purge: 0944 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1000 Purged Dry? NO

Total Volume Purged: >62.3 How Measured? calibrated drum

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: [illegible] Sample Number (s): 108507020

Comments: water clear, no noticeable odors

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW07A-01 Date: 8/10

Personnel: Brendan & Karen

Organic Vapor Concentration TOC: — ppm Breathing Zone: ____ ppm

Depth to Well Bottom: 10.0 ft

Depth to Water: 4.10 ft

Water Column: 5.9 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.9 x 0.163 x 3 = 2.89 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1207	0	4.10	6.06	6.60	24.1	2	1.06	.35
1209	1		6.31	14.1	23.7	5	2.16	.82
1211	1.5		6.30	19.1	23.2	5	2.07	1.14
1213	2		6.41	17.7	23.1	20	2.75	1.04
1215	2.5		6.38	19.4	22.9	7	2.42	1.16
1217	2.89		6.37	20.8	22.7	8	2.18	1.25

Begin Purge: 1207 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1217 Purged Dry? NO

Total Volume Purged: 2.89 How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/10/98 @ Sample Number (s): 108507022

Comments: Slight yellow tint, no noticable odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MO7A-03 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.5 ft

Depth to Water: 8.88 ft

Water Column: 6.62 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 6.62 x 0.163 = 1.08 x 3 = 3.24 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~µmhos~~/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
11:38	0		6.03	38.1	21.1	22	2.21	2.43
11:40	1		6.11	39.3	20.8	22	2.80	2.52
11:42	2		6.09	40.3	20.5	21	2.93	2.59
11:44	3		6.00	40.3	20.6	22	1.68	2.59
11:45	3.5		6.08	40.8	20.2	22	4.25	2.62

Begin Purge: 11:38 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 11:45 Purged Dry? NO

Total Volume Purged: 3.5 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 11:45 Sample Number (s): LAB: 108-807-023 FIELD: MO7A-03-Q40

Comments: ODOR (Sulfur)

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-04 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 7.00 ft

Depth to Water: 3.45 ft

Water Column: 3.55 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 3.55 x 0.163 = 0.58 x 3 = 1.75 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
2:07	0		6.97	11.8	21.8	49	1.87	0.64
2:08	0.5		6.44	9.2	21.6	46	3.31	0.50
2:09	1		6.14	11.2	21.5	46	1.54	0.63
2:10	1.5		6.22	11.6	21.1	44	2.73	0.65
2:13	2		6.10	12.0	21.2	44	2.26	0.68

Begin Purge: 2:07 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 2:13 Purged Dry? NO

Total Volume Purged: 2 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 2:15 Sample Number (s): LAB: 108-507-024 FIELD: M07A-04-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-05 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.0 ft

Depth to Water: 7.63 ft

Water Column: 7.37 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 7.37 x 0.163 = 1.20 x 3 = 3.60 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
12:47	0		5.96	42.3	23.0	4	1.76	2.74
12:50	1		5.92	47.7	21.4	32	2.13	3.13
12:52	2		5.95	54.3	19.8	31	2.54	3.63
12:55	3		6.00	61.2	19.0	31	2.03	4.00
12:58	4		6.03	62.9	18.8	31	1.81	3.65

Begin Purge: 12:47 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 12:58 Purged Dry? ALMOST!

Total Volume Purged: 4 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 1:00 Sample Number (s): LAB: 108-307-025 FIELD: M07A-05-040

Comments: ODOR (Sulfur); SLOW recharge

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-08 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 11 ft

Depth to Water: 6.21 ft

Water Column: 4.79 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 4.79 x 0.163 = 0.78 x 3 = 2.34 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
3:33	0		6.00	32.0	22.7	9	1.93	1.97
3:35	0.5		5.95	16.9	24.6	18	1.89	0.98
3:37	1		5.97	14.4	25.0	18	1.76	0.83
3:40	2		5.98	12.9	25.2	11	2.10	0.73
3:41	2.5		5.96	12.6	25.3	13	1.87	0.72

Begin Purge: 3.33 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 3.41 Purged Dry? NO

Total Volume Purged: 2.5 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98 3:45 Sample Number (s): LAB: 108·507-026 FIELD: M07A-08

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07A-09 Date: 8.6.98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 11.00 ft

Depth to Water: 6.24 ft

Water Column: 4.76 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 4.76 x 0.163 = 0.78x3 = 2.34 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
4.07	0		6.24	28.0	22.6	16	1.95	1.71
4.09	0.5		6.00	27.8	23.1	22	2.06	1.71
4.10	1		5.99	27.8	23.0	19	2.71	1.71
4.12	2		5.99	32.1	21.8	27	2.37	2.03
4.14	2.5		6.01	35.8	21.0	26	2.00	2.28

Begin Purge: 4:07 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 4:14 Purged Dry? NO

Total Volume Purged: 2.5 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-6-98, 4:15 Sample Number (s): LAB: 108-307-027 FIELD: M07A-09-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07B-01 Date: 8/7/98

Personnel: Brendan James Mulholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 11 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.65 ft

Water Column: 4.35 ft Well Volume: .71 gal
X3 = 2.1

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos/cm~~ mS)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1428	0		7.44	1.12	20.4	11	2.94	.05
1430	.5		7.14	1.11	20.5	12	2.01	.05
1432	1		7.15	0.97	20.6	12	2.39	.04
1434	1.5		7.16	0.96	20.7	13	1.72	.04
1435	2.1		7.20	0.97	20.7	14	1.96	.04

Begin Purge: 1438 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1435 Purged Dry? no

Total Volume Purged: 2.1 gal How Measured? bailer count

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7 1445 Sample Number (s): 108-521-004

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D07C-01 Date: Aug. 7, 1998

Personnel: Brendan James Mulholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 59 ft

Depth to Water: 4.80 ft

Water Column: 54.20 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 19.9 gal

3X = 60

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0936	0		7.21	1.96	17.9	20	1.51	0.09
0940	12		6.81	1.85	18.1	36	1.21	0.08
0945	24		7.01	1.86	17.9	15	2.09	0.08
0955	36		7.15	1.92	18.1	5	1.62	0.08
1002	48		6.76	1.88	18.6	5	1.12	0.08
1012	60		6.79	1.88	18.6	5	0.86	0.08

Begin Purge: 0936 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1012 Purged Dry? NO

Total Volume Purged: 60 How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 1015 Sample Number (s): 108-522-013

Comments:

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59.00
- 4.80
54.20

54.20
.367
37940
32520
16260

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M07C-07 Date: ~~8-11~~ 8-12-98

Personnel: MAV

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: _____ ft

Depth to Water: 3.63 ft

Water Column: _____ ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: _____ gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %

Begin Purge: _____ Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? _____

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: _____ Sample Number (s): _____

Comments: Water Level Only

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MOTC-08 Date: 8.11.98

Personnel: KW, MAN

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 13.5 ft

Depth to Water: 3.82 ft

Water Column: 9.68 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 9.68 X 0.163 X 3 = 4.7 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1238	0		6.89	0.283	22.4	10	1.19	0.01
1241	1		6.31	0.266	22.4	12	1.04	0.01
1245	2		6.20	0.257	22.2	65	1.70	0.01
1250	3		6.14	0.258	22.1	86	1.90	0.01
1253	>4.7		6.19	0.273	21.5	435	2.08	0.01

Begin Purge: _____ Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? 5 gal. graduated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8.11.98 @ 1255 Sample Number (s): 108522-014

Comments: The water had a yellowish/brown color with some turbidity and no odor.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D09-01 Date: 8/6/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: – ppm Breathing Zone: – ppm

Depth to Well Bottom: 60 ft

Depth to Water: 7.5 ft

Water Column: 52.5 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 52.5 x 0.367 x 3 = 57.8 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1248	0	7.5	6.79	24.9	19.3	137	1.95	2.20
1251	10		6.62	35.3	18.8	173	1.12	2.24
1254	20		6.69	35.8	18.8	47	1.52	2.28
1257	30		6.69	36.1	18.8	27	1.79	2.30
1300	40		6.65	36.2	18.9	23	1.60	2.30
1304	50		6.69	36.2	18.9	16	2.20	2.30
1308	>57.8		6.63	36.2	19.0	12	1.76	2.30

Begin Purge: 1248 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1308 Purged Dry? NO

Total Volume Purged: >57.8 How Measured? calibrated drum

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/6/98 Sample Number (s): 108S09010

Comments: No odors, water slightly cloudy.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M09-06 Date: 8/7/98

Personnel: Megan Gentry / Kris Wood

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: ~~(5.95)~~ 14.0 ft

Depth to Water: 5.95 ft

Water Column: 8.05 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: ~~3.9~~ 1.3 gal x 3 = 3.9

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0802	0		7.73	0.636	20.3	7.0	4.05	0.02
0810	1		7.75	0.323	21.6	262	4.21	0.01
0814	2		7.74	0.329	21.6	359	3.72	0.01
0818	3		7.66	0.310	21.3	416	3.55	0.01
0822	4		7.53	0.302	21.4	428	3.55	0.01
0825								

Begin Purge: 0802 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: Purged Dry?

Total Volume Purged: 3.9 How Measured? Calibrated Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 0825 Sample Number (s): Lab 108-509-012 Field M09-06-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D10B-02 Date: August 7, 1998

Personnel: Brendan Mullholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 60 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.25 ft

Water Column: 54.75 ft Well Volume: 20.1 gal

3x = 60.3 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0812	0		5.91	0.32	16.5	12	7.17	0.00
0818	12		5.66	8.91	19.8	9	2.14	0.42
0825	24		6.81	9.04	20.8	5	0.96	0.44
0831	36		7.00	9.01	20.9	8	1.34	0.44
0839	48		7.02	9.04	20.9	8	1.16	0.44
0846	60.3		6.97	9.05	21.1	5	1.43	0.44

Begin Purge: 0812 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 0846 Purged Dry? NO

Total Volume Purged: 60.3 How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 0900 Sample Number (s): 108-523-007

Comments: _____

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M10-01 Date: 8/7/98

Personnel: MG/KW

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 14 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.5 ft

Water Column: 9.5 ft Well Volume: 1.55 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~µmhos/cm~~)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0920	0		7.56	1.07	19.3	62	0.7	0.04
0924	1		7.55	0.542	21.3	92	0.94	0.02
0926	2		7.53	0.556	21.3	53	1.33	0.02
0928	3		7.53	0.572	21.3	40	1.69	0.02
0930	5		7.55	0.635	21.3	32	1.56	0.02
0933								

Begin Purge: 0920 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 0933 Purged Dry? No

Total Volume Purged: 4.6 gallon How Measured? Lab 108-510-004 / Field M10-01-Q40 / ~~Calib~~ # of Bailers

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 0933 Sample Number (s): ↓

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M101-A Date: 8/11/98

Personnel: MV/KW

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.5 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.03 ft

Water Column: 8.47 ft Well Volume: 1.38 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos/cm~~ mS)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0918	0		5.91	2.23	22.1	10	2.15	0.10
0922	1		6.19	2.33	21.9	48	3.17	0.11
0924	2		6.29	2.40	21.6	67	2.17	0.11
0927	3		6.28	2.29	21.7	222	2.09	0.11
0930	4		6.32	2.27	21.5	196	1.65	0.11
0933								

Begin Purge: 0918 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: Purged Dry? Quality: Turbid with Odor

Total Volume Purged: 4.1 gal How Measured? Cal. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/11/98 0933 Sample Number (s): F M101-A-0040 L 108-314-004

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-01 Date: 8/7/98

Personnel: MG / KW

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 9.5 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.85 ft

Water Column: 2.65 ft Well Volume: 0.43 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1005	0		7.1	1.68	18.1	71	8.96	0.07
1008	0.4		7.0	1.09	18.3	72	8.78	0.04
1009	0.8		6.94	1.41	18.6	288	2.68	0.06
1010	1.2		6.97	1.41	18.8	183	2.4	0.06
1012	1.6		7.02	1.48	18.7	167	1.80	0.06
1013								

Begin Purge: 1005 Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: 1013 Purged Dry? Almost

Total Volume Purged: 1.5 gal How Measured? Bailers #'s

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 1013 Sample Number (s): Lab 108-S11-016 Field M11-01-Q 40

Comments: LOCK IS RUSTED, SHOULD BE REPLACED

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-02 Date: 8·7·98

Personnel: K. WOOD, M. GENTRY

Organic Vapor Concentration TOC: 3.5 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 9.5 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.85 ft

Water Column: 3.65 ft Well Volume: 3.65 x 0.163 = 0.60x3 = 1.79 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
10:43	0		7.10	1.12	20.0	80	3.33	0.05
10:48	0.5		6.88	0.819	21.3	70	2.30	0.03
10:50	1		6.85	0.797	21.9	80	1.86	0.03
10:53	1.5		6.84	0.798	22.0	171	1.69	0.03
10:55	2		6.82	0.795	22.1	54	2.10	0.03

Begin Purge: 10:43 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 10:55 Purged Dry? NO

Total Volume Purged: 2 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·7·98, 11:00 Sample Number (s): LAB: 108·S11·D17 FIELD: M11-02-046

Comments: LOCK IS RUSTED-SHOULD BE REPLACED

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-05 Date: 8-7-98

Personnel: K. Wood, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14.00 ft

Depth to Water: 5.6 ft

Water Column: 8.4 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 8.4×0.163=1.37×3=4.10 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~µmhos~~/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1:54	0		7.06	5.08	21.1	115	1.33	0.26
1:57	1		7.00	4.88	22.0	124	1.13	0.25
2:00	2		7.07	5.07	22.0	160	1.30	0.26
2:04	3		7.07	5.05	22.0	79	1.06	0.26
2:07	4		7.10	5.02	22.0	37	1.70	0.26

Begin Purge: 1:54 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 2:07 Purged Dry? NO

Total Volume Purged: 4 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-7-98, 2:10 Sample Number (s): LAB: 108-511-018 FIELD: M11-05-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M11-06 [+DUP] Date: 8·7·98

Personnel: K. WOOD, M. GENTRY

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 14.00 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.7 ft

Water Column: 8.3 ft Well Volume: 8.3 x 0.163 = 1.35 x 3 = 4.05 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1:03	0		7.54	1.21	19.2	142	1.02	0.05
1:07	1		7.47	0.504	20.5	83	1.08	0.02
1:14	2		7.41	0.552	20.9	129	1.41	0.02
1:17	3		7.41	0.611	20.7	113	1.18	0.02
1:25	4		7.43	0.598	20.9	140	1.51	0.02

Begin Purge: 1:03 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1:25 Purged Dry? NO

Total Volume Purged: 4 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8·7·98, 1:25 Sample Number (s): LAB: 108-311-019 FIELD: M11-06-Q40

DUP
108-311-020
M11-06-Q40D

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M12-01 Date: 8/7/98

Personnel: Brendan James Mulholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15 ft

Depth to Water: 6.85 ft

Water Column: 8.15 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.3 gal

3x = 4

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos/cm~~ mS)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1100	0		7.15	1.07	23.0	5	2.93	0.04
1104	1		6.76	0.899	23.8	58	2.71	0.03
1106	2		6.76	1.13	23.9	55	2.27	0.05
1108	3		6.76	1.12	24.0	53	2.06	0.05
1110	4		6.77	1.13	24.0	53	2.40	0.05

Begin Purge: 1100 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1110 Purged Dry? NO

Total Volume Purged: 4 gal How Measured? bailer count

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 1120 Sample Number (s): 108-512-009

Comments:

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15.00
6.85
8.15

8.15
.163
2445
4890
815

1.3
x3
3.9

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M13-06 Date: 8/7/98

Personnel: Brendan James Mulholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 9.75 ft

Depth to Water: 4.21 ft

Water Column: 5.54 ft

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: .9 gal
X3 = 2.7

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1202	0		7.68	.216	23.9	30	2.29	0
1205	.5		7.14	.243	23.6	31	1.72	0
1207	1		7.03	.312	23.3	31	1.72	0.01
1209	1.5		7.20	.335	23.0	31	2.13	0.01
1211	2.0		7.25	.345	22.9	32	1.96	0.01
1213	2.7		7.29	.357	22.7	35	2.59	0.01

Begin Purge: 1202 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1213 Purged Dry? no

Total Volume Purged: 2.7 gal How Measured? bailer count

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7/98 1220 Sample Number (s): 108-513-013

Comments:

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9.75
-4.21
5.54

5.54
.163
1662
3324
554

.9
3
2.7

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: M13-09 Date: 8/7/98

Personnel: Brendan James Mulholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 12.5 ft

Depth to Water: 4.86 ft

Water Column: 7.64 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.1 gal

3x = 3.3

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1253	0		7.01	.494	23.3	6	2.38	.02
1255	1		6.48	.506	24.1	7	2.47	.02
1257	2		6.06	.481	23.5	11	1.79	.01
1259	3		6.15	.484	22.8	22	1.74	.02
1301	3.5		6.22	.481	22.6	21	1.83	.01

Begin Purge: 1253 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1301 Purged Dry? NO

Total Volume Purged: 3.5 gal How Measured? bailer count

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7 13:15 Sample Number (s): 108-513-014

Comments:

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12.50
- 4.86
7.64

7.64
.163
2292
3884
764

1.1
3
3.3

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MIG-04 Date: 8.12.98

Personnel: MAV

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: _____ ppm

Depth to Well Bottom: _____ ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.66 ft

Water Column: _____ ft Well Volume: _____ gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %

Begin Purge: _____ Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? _____

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: _____ Sample Number (s): _____

Comments: Water Level Only

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: D19-01 Date: 8/6/98

Personnel: Miguel V / Karen S

Organic Vapor Concentration TOC: - ppm Breathing Zone: - ppm

Depth to Well Bottom: 60 ft

Depth to Water: 5.15 ft

Water Column: 54.85 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 54.85 x 0.367 x 3 = 60.4 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1138	0	5.15	6.86	60.2	19.7	7	2.28	0.95
1140	10		6.86	18.0	19.1	48	2.46	1.07
1142	20		6.96	18.5	19.1	14	3.49	1.10
1145	30		6.95	18.5	19.3	4	2.22	1.09
1147	40		6.94	18.5	19.3	3	2.39	1.10
1150	50		6.94	18.5	19.3	2	2.42	1.09
1153	>60.4		6.99	18.5	19.3	2	2.66	1.10

Begin Purge: 1138 Method of Purging ☒ Pump ☐ Bailer (Disposable)

End Purge: 1153 Purged Dry? No

Total Volume Purged: >60.4 How Measured? Calibrated drum

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/6/98 @ 1205 Sample Number (s): 108519004

Comments: No noticable odors or colors

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MWOR-5 Date: 8/7/98

Personnel: Brendan James Mulholland, Jill Pollock

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15 ft

Depth to Water: 7.41 ft

Water Column: 7.59 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.2 gal
x 3 = 3.6

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1337	0		7.19	0.388	21.6	8	2.03	.01
1339	1		6.83	6.388	21.3	22	2.56	.01
1341	2		6.97	0.386	20.9	25	2.49	.01
1343	3		6.98	0.385	20.9	25	2.23	.01
1345	3.6		7.05	0.387	20.9	55	2.61	.01

Begin Purge: 1337 Method of Purging ☐ Pump ☐ Bailer (Disposable)

End Purge: 1345 Purged Dry? NO

Total Volume Purged: 3.6 gal How Measured? bailer count

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/7 1355 Sample Number (s): 108-513-015
8/7 1400 108-513-016 duplicate

Comments:

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1500
- 7.41
7.59

~~7.59~~ ~~.163~~
7.59
.163
2277
4554
759
1237 17

1.2
3
3.6

TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-1 Date: 8-4-98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 3.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.0 ft Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.34 ft

Water Column: 10.66 ft Well Volume: 10.66 x .163 = 1.74 x 3 = 5.2 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS ~~µmhos/cm~~)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
8:00	0		6.39	4.30	21.1	38	.90	0.24
8:05	1		6.44	4.32	20.8	40	1.00	0.24
8:09	2		6.44	4.30	20.6	41	1.11	0.24
8:14	3		6.47	4.35	20.5	45	1.05	0.24
8:20	4		6.50	4.35	20.5	46	1.06	0.24
8:25	5		6.50	4.30	20.6	41	1.06	0.24

Begin Purge: 8:00 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 8:25 Purged Dry? no.

Total Volume Purged: 5.2 gal. How Measured?

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-9-98, 8:30 A. Sample Number (s): Lab: 108-504-036 Field: MW360-1-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW-360-2 Date: 8-4-98

Personnel: B. Mulholland, M. Cronatry

Organic Vapor Concentration TOC: 2.3 ppm Breathing Zone: 0.00 ppm

Depth to Well Bottom: 15.00 ft Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.71 ft

Water Column: 10.29 ft Well Volume: 10.29 x .163 = 1.68 x 3 = 5.04 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
10:39	0	4.71	6.33	5.01	20.1	8	0.75	0.26
10:43	1		6.16	5.04	20.2	112	0.75	0.26
10:46	2		6.17	5.06	20.0	200	1.06	0.26
10:50	3		6.15	5.08	19.7	200	1.01	0.26
10:54	4		6.12	5.08	19.5	175	1.06	0.26
11:00	5		6.12	5.08	19.6	173	1.05	0.26

Begin Purge: 10:39 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 11:00 Purged Dry? no.

Total Volume Purged: 5.04 gal. How Measured? grad. bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-4-98, 11:05 Sample Number (s): Lab: 108-504-037 Field: MW360-2-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-3 Date: 8-5-98

Personnel: B. Mulholland, M. Country

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft

Depth to Water: 4.18 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Water Column: 10.82 ft Well Volume: 10.82 x .163 = 1.76 x 3 = 5.28 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
7:44	0	4.18	6.42	1.36	21.3	5	1.57	0.06
7:50	1		6.48	1.27	22.0	14	1.15	0.05
7:54	2		6.48	1.33	21.3	15	1.54	0.05
8:00	3.5		6.50	1.35	21.0	17	1.04	0.06
8:05	5.28		6.54	1.35	21.0	17	2.00	0.06

Begin Purge: 7:44 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 8:05 Purged Dry? no.

Total Volume Purged: 5.28 gal How Measured? grad. bucket

QA\QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8-5-98, 8:10, 8:15 (Dupe) Sample Number (s): Field: MW360-3-Q90 & MW360-3-Q (Dupe) Lab: 108-504-038 & 108-504-039 (Dupe)

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW360-4 Date: 8-5-98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 2.8 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 15.00 ft Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.50 ft

Water Column: 10.5 ft Well Volume: 10.5 x .163 = 1.71 x 3 = 5.13 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
8:49	0	4.50	6.68	1.01	20.5	3	1.05	0.04
8:53	1		6.61	0.85	21.7	52	1.65	0.04
8:57	2		6.70	0.80	21.3	59	1.69	0.04
9:02	3.5		6.74	0.79	21.3	45	1.68	0.03
9:09	5.0		6.75	0.65	21.3	50	1.75	0.03

Begin Purge: 8:49 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 9:09 Purged Dry? no.

Total Volume Purged: 5.13 How Measured? grad. bucket.

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8-5-98, 9:15 Sample Number (s): Lab: 108-504-040 Field: MW360-4-040

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW530-2 Date: 8.10.98

Personnel: CW, MAV

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.65 ft

Water Column: 10.35 ft Well Volume: 10.35 X 0.163 X 3 = 5.1 gal

Time	Vol. Purged	Water Level	pH	Conductivity mS ~~(µmhos/cm)~~	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1310	0		7.21	1.63	23.3	448	0.95	0.07
1313	1		6.93	0.605	24.7	248	1.18	0.03
1315	2		6.90	0.592	25.4	164	1.36	0.02
1319	3		6.94	0.666	24.7	265	1.39	0.02
1325	>5		6.96	0.740	24.4	203	1.85	0.03

Begin Purge: 1310 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1325 Purged Dry? _____

Total Volume Purged: > 5 gallons How Measured? Bailer ~~108523008~~

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8.10.98 @ 1330 Sample Number (s): 108523008

Comments: Grayish/brown water with turbidity and no odor

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MWD 13-2 Date: 8·10·98

Personnel:

Organic Vapor Concentration TOC: ppm Breathing Zone: ppm

Depth to Well Bottom: 15 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.09 ft

Water Column: 10.91 ft Well Volume: 10.91 x .163 x 3 = 5.34 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos/cm~~ mS)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1317	0		8.52	.504	24.0	3	3.23	.01
1319	1		7.24	.500	22.6	8	3.13	.01
1320	2		7.14	.470	22.7	10	3.14	.01
1322	3		7.14	.385	22.5	10	2.82	.01
1324	4		7.15	.458	22.7	12	3.11	.01
1326	5.34		7.14	.392	21.8	8	2.65	.01

Begin Purge: 1317 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1326 Purged Dry? No

Total Volume Purged: 5.34 How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 8/10/98 @ 1340 Sample Number (s): 108519005

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MWD13-3 Date: 8.11.98

Personnel: KW, MAV

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: _____ ppm

Depth to Well Bottom: 15.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.76 ft

Water Column: 9.24 ft Well Volume: 9.24 X 0.163 X 3 = 4.5 gal

Time	Vol. Purged	Water Level	pH	Conductivity ~~(µmhos/cm)~~ mS	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1021	0	5.76	7.51	0.364	19.8	10	1.71	0.01
1023	1		7.44	0.347	19.9	9	1.62	0.01
1027	2		7.45	0.344	19.7	10	1.05	0.01
1030	3		7.44	0.345	19.7	10	1.29	0.01
1033	>4.5		7.44	0.347	19.6	10	1.63	0.01

Begin Purge: _____ Method of Purging ☐ Pump ☑ Bailer (Disposable)

End Purge: _____ Purged Dry? _____

Total Volume Purged: _____ How Measured? Calibrated 5gal bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 8.11.98 @ 1035 Sample Number (s): 108S19006

Comments: Greyish water with turbidity and an unidentified odor.

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MBG-1 Date: 8/10/98

Personnel: MV / ICW

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 15.0 ft

Depth to Water: ~~(6.03)~~ 3.64 ft

Water Column: ~~(8.97)~~ 11.36 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: ~~(1.46)~~ 1.85 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1007	0		6.46	11.2	21.6	43	1.55	0.63
1022	1.5		6.50	20.6	19.9	297	2.12	1.23
1025	3		6.41	21.3	19.1	494	2.02	1.28
1029	4.5		6.37	20.5	19.1	707	1.68	1.22
1032	6		6.42	20.0	19.1	559	1.86	1.18
1040								

Begin Purge: 1007 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1032 Purged Dry? Dry Water Quality: Turbid, greenish, no odor

Total Volume Purged: 5.6 How Measured? Cal. Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 08/10/98 Sample Number (s): 108 SBG-013 F: MBG1-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MBG-02 Date: 8/10/98

Personnel: Miguel Villicaña, Kris Wood

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 15.0 ft

Depth to Water: 5.30 ft

Water Column: 9.7 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 1.58 gal

Time	Vol. Purged	Water Level	pH	Conductivity (mS µmhos/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0915	0		6.22	19.1	19.7	15	1.82	1.12
0920	1		6.63	4.93	20.5	28	1.56	0.25
0924	2		6.52	5.17	20.7	45	1.85	0.26
0928	3		6.43	5.40	20.1	32	1.73	0.28
0935	5		6.48	5.89	19.4	53	2.29	0.31
0940								

Begin Purge: 0915 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 0935 Purged Dry? No

Total Volume Purged: 4.7 gal How Measured? Gal. Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/10/98 0940 ~~108-SBG-014~~ Sample Number (s): L 108-SBG-014 F MBG2-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MBG-03 Date: 8/10/98

Personnel: Miguel Villicaña, Kris Wood

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 15 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.78 ft

Water Column: 10.22 ft Well Volume: 1.67 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
0806	0		6.11	0.98	18.8	5.0	1.48	0.04
0818	1		6.35	0.99	18.7	179	1.32	0.04
0820	2		6.44	1.03	18.4	375	1.58	0.04
0822	3		6.50	1.03	18.5	508	1.68	0.04
0825	5		6.50	1.00	18.1	839	1.60	0.04
0838								

Begin Purge: 0806 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 0838 Purged Dry? No Water: yellowish, clear, no odor

Total Volume Purged: 5.0 gal How Measured? Calibrated bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/10/98 0838 Sample Number (s): Lab 108-SBG-015 Field MBG3-Q40

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: MW547-4 Date: 8/11/98

Personnel: MV ICW

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 15.0 ft Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.06 ft

Water Column: 10.94 ft Well Volume: 1.78 gal

Time	Vol. Purged	Water Level	pH	Conductivity mS (~~µmhos/cm~~)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
1122	0		6.61	1.01	22.1	10	2.03	0.04
1131	1.5		6.50	1.05	21.5	952	1.72	0.04
1134	3		6.49	1.05	21.1	>1000	1.95	0.04
1141	4.5		6.50	1.05	20.8	>1000	1.44	0.04
1144	5.5		6.48	1.04	20.9	>1000	2.19	0.04
1150								

Begin Purge: 1122 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 1144 Purged Dry? No

Total Volume Purged: 5.35 How Measured? Cal. Bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8/11/98 1150 Sample Number (s): F MW547-4-Q40 L 108-522-015

Comments:

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TETRA TECH EM INC.

MONITORING WELL SAMPLING SHEET

Monitoring Well No.: W-1 Date: 8·6·98

Personnel: B. Mulholland, M. Gentry

Organic Vapor Concentration TOC: 0.0 ppm Breathing Zone: 0.0 ppm

Depth to Well Bottom: 10.00 ft

Depth to Water: 4.35 ft

Water Column: 5.65 ft

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume: 5.65×0.163=0.92×3=2.76 gal

Time	Vol. Purged	Water Level	pH	Conductivity (~~µmhos~~ mS/cm)	Temperature (°C/°F)	Turbidity NTU	DO mg/L	Salinity %
2:52	0		6.04	15	23.9	14	2.02	0.85
2:53	0.5		5.89	15.6	24.6	14	2.08	0.90
2:54	1		5.90	25.0	23.5	27	2.31	1.53
2:56	2		6.00	34.2	22.3	22	2.11	2.16
2:57	3		6.11	35.7	21.8	22	8.59	2.26

Begin Purge: 2:52 Method of Purging ☐ Pump ☒ Bailer (Disposable)

End Purge: 2:57 Purged Dry? YES

Total Volume Purged: 3.0 GALLONS How Measured? grad. bucket

QA\QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 8·6·98, 3:00 Sample Number (s): LAB: 108-507-028 FIELD: W-1-040

Comments:

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