RO 408

Hwang, Don, Env. Health

From: Woodburne, Keith [kwoodburne@TRCSOLUTIONS.com]

Sent: Tuesday, June 27, 2006 9:49 AM

To: Hwang, Don, Env. Health

Cc: Shelby.S.Lathrop@conocophillips.com; Drogos, Donna, Env. Health

Subject: Status of SCM, RBCA, and Closure Request review for 76 Station No. 3135, 845 66th Avenue, Oakland

Don,

Have you completed your review of the SCM, RBCA, and Closure Request review for the 76 Station No. 3135 Oakland? I believe we have addressed your most recent questions regarding the submittals and would like to move forward on the closure to facilitate pending site redevelopment.

Please let me know if you have any additional questions and when we can expect a response from the ACHCS.

Regards,

Keith Woodburne, R.G.
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7/20/06

RBCA Tool Kit for Chemical Releases, Version 1.3b

Main Screen

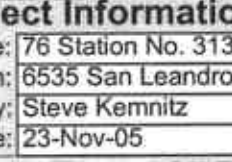
RBCA Tool Kit for Chemical Releases
Version 1.3b © 2000

1. Project Information

Site Name:	76 Station No. 3135		
Location:	6535 San Leandro Street, Oakland, Ca.		
Compl. By:	Steve Kemnitz		
Date:	23-Nov-05	Job ID:	42013810

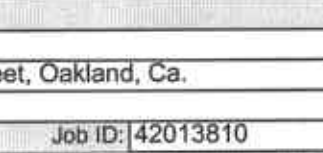
2. Which Type of RBCA Analysis?

○ Tier 1



Generic Values
On-Site
Exposure

◉ Tier 2



Site-Specific Values
On- or Off-Site Exposure

3. Calculation Options

Affects which input data are required

☑ ***Baseline Risks (Forward mode)***

☑ ***RBCA Cleanup Standards (Backward mode)***

4. RBCA Evaluation Process

Prepare Input Data

Data Complete? (■ yes, ■ no)

- ■□ Exposure Pathways
- ■□ Constituents of Concern (COCs)
- ■□ Transport Models
- ■□ Soil Parameters
- ■□ GW Parameters
- ■□ Air Parameters

Review Output

- Exposure Flowchart
- COC Chem. Parameters
- Input Data Summary
- User-Spec. COC Data...
- Transient Domenico Analysis...
- Baseline Risks...
- Cleanup Standards...

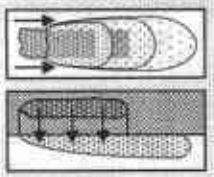
5. Commands and Options

New Site	Load Data...	Save Data As...	Quit
Print Sheet	Set Units	Custom Chem. Data...	*Help*

Exposure Pathway Identification

Site Name: 76 Station No. 3135
Location: 6535 San Leandro Street, Oakland, Ca.
Compl. By: Steve Kemnitz
Job ID: 42013810 Date: 23-Nov-05

1. Groundwater Exposure



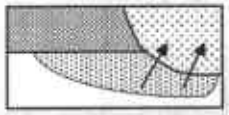
Groundwater Ingestion/ Surface Water Impact

Receptor Type:	Com.	Res.	S.W.
	On-site	Off-site1	Off-site2

Source Media:

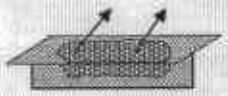
	Distance to GW receptors			
☑ Affected Groundwater	0	239.993	820.21	(ft)
	On-site	Off-site1	Off-site2	
☑ Affected Soils Leaching to Groundwater	0	239.993	820.21	(ft)

GW Discharge to Surface Water Exposure



☑ Swimming
☑ Fish Consumption
☐ Aquatic Life Protection
Enter ALP Criteria

2. Surface Soil Exposure

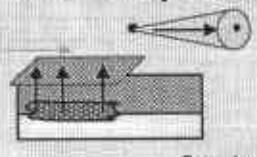


Direct Ingestion and Dermal Contact

Receptor Type:	Com.	No off-site receptors
	On-site	

Construction Worker ☑

3. Air Exposure

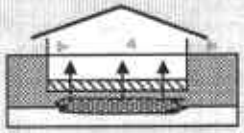


Volatilization and Particulates to Outdoor Air Inhalation

Receptor Type:	Com.	Res.	Res.
	On-site	Off-site1	Off-site2
	0	239.993	239.993 (ft)

Construction worker ☑

☑ Affected Soils--Volatilization to Ambient Outdoor Air
☑ Affected Groundwater--Volatilization to Ambient Outdoor Air
☐ Affected Surface Soils--Particulates to Ambient Outdoor Air



Volatilization to Indoor Air Inhalation

Receptor Type:	Com.	No off-site receptors
	On-site	

☑ Affected Soils--Volatilization to Enclosed Space
☑ Affected Groundwater--Volatilization to Enclosed Space

4. Commands and Options

Main Screen | Print Sheet | Set Units | Help

■□ Exposure Factors & Target Risks | Exposure Flowchart

Commands and Options

Return | Print Sheet | Help

Site Name: 76 Station No. 3135 Job ID: 42013810
Location: 6535 San Leandro Street, Oakland, Date: 23-Nov-05
Compl. By: Steve Kemnitz

Groundwater Source Zone Concentration Calculator

UCL Percentile: 95%

Paste Defaults | Mean Option

Constituent	Detection Limit (mg/L)	No. of Samples	No. of Detects	Estimated Distribution of Data	Max. Conc. (mg/L)	Mean Conc. (mg/L)	UCL on Mean (mg/L)
Benzene	#N/A	11	11	Lognormal	3.2E-3	3.5E-4	5.6E-4
Toluene	#N/A	11	11	Normal	6.0E-4	2.8E-4	3.4E-4
Ethylbenzene	#N/A	11	11	Lognormal	1.6E-1	6.6E-4	2.2E-3
Xylene (mixed isomers)	#N/A	11	11	Lognormal	2.7E-1	1.2E-3	3.9E-3
Methyl t-Butyl ether	#N/A	11	11	Lognormal	4.5E-2	1.3E-3	3.7E-3
TPH - Aliph >C05-C06	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Aliph >C06-C08	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Aliph >C08-C10	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Aliph >C10-C12	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Aliph >C12-C16	#N/A	11	11	Normal	1.0E-5	1.0E-5	1.0E-5
TPH - Aliph >C16-C21	#N/A	11	11	Normal	1.0E-5	1.0E-5	1.0E-5
TPH - Aliph >C21-C34	#N/A	11	11	Normal	1.0E-5	1.0E-5	1.0E-5
TPH - Arom >C05-C07	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Arom >C07-C08	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Arom >C08-C10	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Arom >C10-C12	#N/A	11	11	Lognormal	2.3E+0	7.6E-2	1.9E-1
TPH - Arom >C12-C16	#N/A	11	11	Normal	1.0E-5	1.0E-5	1.0E-5
TPH - Arom >C16-C21	#N/A	11	11	Normal	1.0E-5	1.0E-5	1.0E-5
TPH - Arom >C21-C35	#N/A	11	11	Normal	1.0E-5	1.0E-5	1.0E-5

Return | Print Sheet | Help

Location: 6535 San Leandro Street, Oakland, Date: 23-Nov-05
Compl. By: Steve Kemnitz

Groundwater Source Zone Concentration Calculator

UCL Percentile: 95%

Paste Defaults | Mean Option

Constituent	Detection Limit	No. of Samples	No. of Detects	Estimated Distribution of Data	Max. Conc.	Mean Conc.	UCL on Mean
	(mg/L)				(mg/L)	(mg/L)	(mg/L)

Enter Analytical Data from Groundwater Source Zone (up to 50 Data Points)

Analytical Data

	1	2	3	4	5	6	7	8	9	10	11	12	13
ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11		
Date	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05		
	(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*
	2.50E-4	9.10E-4	2.50E-4	2.50E-4	2.50E-4	3.20E-3	2.50E-4	2.50E-4	2.50E-4	2.50E-4	2.50E-4		
	2.50E-4	2.50E-4	2.50E-4	2.50E-4	2.50E-4	6.00E-4	2.50E-4	2.50E-4	2.50E-4	2.50E-4	2.50E-4		
	2.50E-4	1.60E-2	2.50E-4	2.50E-4	2.50E-4	1.60E-1	2.50E-4	2.50E-4	2.50E-4	2.50E-4	2.50E-4		
	5.00E-4	2.10E-2	5.00E-4	5.00E-4	5.00E-4	2.70E-1	5.00E-4	5.00E-4	5.00E-4	5.00E-4	5.00E-4		
	1.20E-3	4.50E-2	3.60E-3	2.50E-4	5.50E-4	2.40E-2	2.50E-4	2.50E-4	2.50E-4	5.20E-3	2.50E-4		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5		
	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5		
	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.90E-1	5.80E-1	2.50E-2	3.00E-1	2.50E-2	2.30E+0	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2		
	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5		
	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5		
	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5	1.00E-5		

Enter Analytical Data from Groundwater Source Zone (up to 50 Data Points)

Analytical Data

	1	2	3	4	5	6	7	8	9	10	11	12	13
ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11		
Date	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05	27-Sep-05		
	(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

14	15	16	17	18	19	20	21	22	23	24	Analytical Data 25	26
(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

Analytical Data

14	15	16	17	18	19	20	21	22	23	24	25	26
(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

Analytical Data

27	28	29	30	31	32	33	34	35	36	37	38	39
(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

Analytical Data

27	28	29	30	31	32	33	34	35	36	37	38	39
(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

40	41	42	43	44	45	46	47	48	49	50

(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

40	41	42	43	44	45	46	47	48	49	50
(mg/L)	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*	*(mg/L)*

Commands and Options

Return | Print Sheet | Help

Site Name: 76 Station No. 3135 Job ID: 42013810
Location: 6535 San Leandro Street, Oakland Date: 23-Nov-05
Compl. By: Steve Kemnitz

Soil Source Zone Concentration Calculator

UCL Percentile: 95%

Paste Defaults | Mean Option

Constituent	Detection Limit (mg/kg)	No. of Samples	No. of Detects	Estimated Distribution of Data	Max. Conc. (mg/kg)	Mean Conc. (mg/kg)	UCL on Mean (mg/kg)
Benzene	#N/A	50	50	Lognormal	1.8E+1	1.2E-2	2.2E-2
Toluene	#N/A	50	50	Lognormal	2.9E+2	1.2E-2	2.3E-2
Ethylbenzene	#N/A	50	50	Lognormal	1.4E+2	1.2E-2	2.5E-2
Xylene (mixed isomers)	#N/A	50	50	Lognormal	7.5E+2	2.1E-2	4.7E-2
Methyl t-Butyl ether	#N/A	50	50	Normal	2.5E-2	2.5E-2	2.5E-2
TPH - Aliph >C05-C06	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Aliph >C06-C08	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Aliph >C08-C10	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Aliph >C10-C12	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Aliph >C12-C16	#N/A	50	50	Lognormal	1.4E+3	3.5E+0	4.6E+0
TPH - Aliph >C16-C21	#N/A	50	50	Lognormal	1.4E+3	3.5E+0	4.6E+0
TPH - Aliph >C21-C34	#N/A	50	50	Lognormal	1.4E+3	3.5E+0	4.6E+0
TPH - Arom >C05-C07	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Arom >C07-C08	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Arom >C08-C10	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Arom >C10-C12	#N/A	50	50	Lognormal	3.8E+3	2.3E+0	3.7E+0
TPH - Arom >C12-C16	#N/A	50	50	Lognormal	1.4E+3	3.5E+0	4.6E+0
TPH - Arom >C16-C21	#N/A	50	50	Lognormal	1.4E+3	3.5E+0	4.6E+0
TPH - Arom >C21-C35	#N/A	50	50	Lognormal	1.4E+3	3.5E+0	4.6E+0

Return | Print Sheet | Help

Location: 6535 San Leandro Street, Oakland, CA Date: 23-Nov-05
Compl. By: Steve Kemnitz

Soil Source Zone Concentration Calculator

UCL Percentile: 95%

Paste Defaults | Mean Option

Constituent	Detection Limit (mg/kg)	No. of Samples	No. of Detects	Estimated Distribution of Data	Max. Conc. (mg/kg)	Mean Conc. (mg/kg)	UCL on Mean (mg/kg)

Enter Analytical Data from
Soil Source Zone
(up to 50 Data Points)

Analytical Data

	1	2	3	4	5	6	7	8	9	10	11	12	13
ID	MW1 (5)	MW1 (10)	MW1 (14)	MW2 (5)	MW2 (10)	MW2 (12)	MW3 (5)	MW3 (10)	SW-1(9.0)	SW-2(9.0)	MW4(14.5)	MW5(13)	MW6(5)
Date	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	29-Nov-89	29-Nov-89	14-Aug-90	14-Aug-90	14-Aug-90
	(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
	1.20E-2	9.40E-3	7.50E-3	7.50E-2	2.50E-3	2.50E-3	9.40E-3	8.80E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3
	1.60E-1	2.40E-2	3.10E-2	7.10E-3	1.70E-2	2.80E-2	4.80E-2	1.50E-2	2.50E-3	2.50E-3	2.50E-3	1.00E-2	4.20E-2
	2.50E-3	2.50E-3	2.50E-3	2.50E-3	8.80E-3	1.00E-1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3
	2.50E-3	2.50E-3	2.50E-3	2.50E-3	1.80E-2	1.50E-2	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3
	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	1.40E+3	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
	1.40E+3	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
	1.40E+3	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	5.00E-1	5.00E-1	5.00E-1	2.40E+0	2.20E+0	6.80E+0	5.00E-1	5.00E-1	1.60E+0	3.80E+0	5.00E-1	5.00E-1	5.00E-1
	1.40E+3	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
	1.40E+3	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
	1.40E+3	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0

Enter Analytical Data from Soil Source Zone (up to 50 Data Points)

Analytical Data

	1	2	3	4	5	6	7	8	9	10	11	12	13
ID	MW1 (5)	MW1 (10)	MW1 (14)	MW2 (5)	MW2 (10)	MW2 (12)	MW3 (5)	MW3 (10)	SW-1(9.0)	SW-2(9.0)	MW4(14.5)	MW5(13)	MW6(5)
Date	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	27-Apr-90	29-Nov-89	29-Nov-89	14-Aug-90	14-Aug-90	14-Aug-90
	(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*

Analytical Data

14	15	16	17	18	19	20	21	22	23	24	25	26
MW6(10)	MW6(12.5)	MW6(15.5)	MW7(5)	MW8(5)	MW8(10)	MW8(13)	MW9(5.5)	MW9(10)	MW9(13)	MW10(5)	MW10(10.5)	MW10(13)
14-Aug-90	14-Aug-90	14-Aug-90	28-Apr-93	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92
(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
2.60E-1	3.40E+0	4.30E-1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	5.80E-1	2.50E-3
2.20E-1	1.20E+1	4.10E-1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	3.80E-1	2.50E-3
3.40E-1	2.00E+1	5.00E-1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	4.40E+0	9.00E-3
1.20E+0	3.60E+0	1.20E-1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	1.00E+1	6.30E-3
2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
5.10E+0	9.30E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	3.90E+1	2.50E+0
5.10E+0	9.30E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	3.90E+1	2.50E+0
5.10E+0	9.30E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	3.90E+1	2.50E+0
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
1.80E+1	1.60E+2	2.50E+0	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	5.00E-1	2.10E+2	5.00E-1
5.10E+0	9.30E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	3.90E+1	2.50E+0
5.10E+0	9.30E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	3.90E+1	2.50E+0
5.10E+0	9.30E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	3.90E+1	2.50E+0

Analytical Data

14	15	16	17	18	19	20	21	22	23	24	25	26
MW6(10)	MW6(12.5)	MW6(15.5)	MW7(5)	MW8(5)	MW8(10)	MW8(13)	MW9(5.5)	MW9(10)	MW9(13)	MW10(5)	MW10(10.5)	MW10(13)
14-Aug-90	14-Aug-90	14-Aug-90	28-Apr-93	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92	29-Sep-92
(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*

										Analytical Data		
27	28	29	30	31	32	33	34	35	36	37	38	39
MW11(5)	SW-3 (9.0)	SW-4 (9.0)	SW-5 (9.0)	SW-6 (8.0)	D1(3.5)	D2(3.5)	D3(3.5)	D4(3.5)	D5(3.5)	D6(3.5)	P1(6.0)	P2(5.5)
25-Jul-01	29-Nov-89	29-Nov-89	29-Nov-89	29-Nov-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	29-Dec-89	29-Dec-89
(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
1.20E-2	2.50E-3	1.20E+0	2.00E-1	2.50E-3	2.50E-3	8.00E-2	1.40E-1	1.10E-1	2.50E-3	2.50E-3	8.60E-2	6.10E+0
2.10E-2	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	1.70E-1	2.50E-3	2.90E+2
2.50E-3	4.20E-1	2.10E+0	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	1.80E-1	1.40E+2
1.50E-2	2.30E+0	1.00E+0	1.10E-1	2.50E-3	2.50E-3	2.50E-3	3.10E-1	1.00E-1	2.50E-3	2.50E-1	8.50E+0	7.50E+2
2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
7.90E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
7.90E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
7.90E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
5.00E-1	5.60E+0	3.20E+1	4.80E+0	5.00E-1	5.00E-1	1.50E+0	6.60E+0	7.40E+0	1.90E+0	2.00E+0	1.50E+1	3.80E+3
7.90E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
7.90E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
7.90E+1	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0

Analytical Data

27	28	29	30	31	32	33	34	35	36	37	38	39
MW11(5)	SW-3 (9.0)	SW-4 (9.0)	SW-5 (9.0)	SW-6 (8.0)	D1(3.5)	D2(3.5)	D3(3.5)	D4(3.5)	D5(3.5)	D6(3.5)	P1(6.0)	P2(5.5)
25-Jul-01	29-Nov-89	29-Nov-89	29-Nov-89	29-Nov-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	29-Dec-89	29-Dec-89
(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*

40	41	42	43	44	45	46	47	48	49	50
P2(12)	P3(5.0)	SW10	P5(4.5)	P6(3.0)	P7(4.0)	W01(8.5)	SWP2E(11.0	WP2W(11.0	SWA(9.5)	SWB(9.5)
29-Dec-89	29-Dec-89	5-Apr-91	29-Dec-89	29-Dec-89	29-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89
(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*
2.50E-3	1.30E-1	1.80E+1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3	2.50E-3
2.50E-3	2.50E-3	1.30E+2	2.50E-3	2.50E-3	2.50E-3	2.50E-3	1.60E-1	2.50E-3	2.50E-3	2.50E-3
2.50E-3	1.80E-1	3.60E+1	2.50E-3	2.50E-3	2.50E-3	2.50E-3	5.00E-1	2.50E-3	2.50E-3	2.50E-3
2.50E-3	1.30E+0	2.00E+2	2.50E-3	2.50E-3	2.50E-3	2.50E-3	3.10E+0	2.50E-3	2.50E-3	2.50E-3
2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2	2.50E-2
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
5.00E-1	1.10E+1	1.40E+3	5.00E-1	5.00E-1	5.00E-1	1.60E+0	2.00E+1	5.00E-1	2.10E+0	3.90E+0
2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0
2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0	2.50E+0

40	41	42	43	44	45	46	47	48	49	50
P2(12)	P3(5.0)	SW10	P5(4.5)	P6(3.0)	P7(4.0)	W01(8.5)	SWP2E(11.0	WP2W(11.0	SWA(9.5)	SWB(9.5)
29-Dec-89	29-Dec-89	5-Apr-91	29-Dec-89	29-Dec-89	29-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89	5-Dec-89
(mg/kg)	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*	*(mg/kg)*

RBCA Tool Kit for Chemical Releases, Version 1.3b

Site Name: 76 Station No. 3135 | Job ID: 42013810
Location: 6535 San Leandro Street, Oakland, Ca. | Date: 23-Nov-05
Compl. By: Steve Kemnitz

Commands and Options: Main Screen | Print Sheet | Help

Source Media Constituents of Concern (COCs)

Apply Raoult's Law ?

Selected COCs

COC Select: | Sort List: ?

Add/Insert | Top | MoveUp
Delete | Bottom | MoveDown

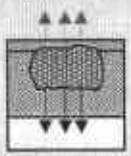
Representative COC Concentration ?

Selected COCs	Groundwater Source Zone (mg/L)	Groundwater Source Zone note	Soil Source Zone (mg/kg)	Soil Source Zone note	Mole Fraction in Source Material (-)
Benzene	5.6E-4		2.2E-2		
Toluene	3.4E-4		2.3E-2		
Ethylbenzene	2.2E-3		2.5E-2		
Xylene (mixed isomers)	3.9E-3		4.7E-2		
Methyl t-Butyl ether	3.7E-3		2.5E-2		
TPH - Aliph >C05-C06	1.9E-1		3.7E+0		
TPH - Aliph >C06-C08	1.9E-1		3.7E+0		
TPH - Aliph >C08-C10	1.9E-1		3.7E+0		
TPH - Aliph >C10-C12	1.9E-1		3.7E+0		
TPH - Aliph >C12-C16	1.0E-5		4.6E+0		
TPH - Aliph >C16-C21	1.0E-5		4.6E+0		
TPH - Aliph >C21-C34	1.0E-5		4.6E+0		
TPH - Arom >C05-C07	1.9E-1		3.7E+0		
TPH - Arom >C07-C08	1.9E-1		3.7E+0		
TPH - Arom >C08-C10	1.9E-1		3.7E+0		
TPH - Arom >C10-C12	1.9E-1		3.7E+0		
TPH - Arom >C12-C16	1.0E-5		4.6E+0		
TPH - Arom >C16-C21	1.0E-5		4.6E+0		
TPH - Arom >C21-C35	1.0E-5		4.6E+0		

Transport Modeling Options

Site Name: 76 Station No. 3135 | Job ID: 42013810
Location: 6535 San Leandro Street, Oakland, Ca. | Date: 23-Nov-05
Compl. By: Steve Kemnitz

1. Vertical Transport, Surface Soil Column



Outdoor Air Volatilization Factors (?)

- ○ Surface soil volatilization model only
- ◉ Combination surface soil/Johnson & Ettinger models
  - Thickness of surface soil zone: 7 *(ft)*
- ○ User-specified VF from other model — Enter VF Values

Indoor Air Volatilization Factors (?)

- ◉ Johnson & Ettinger model
- ○ User-specified VF from other model — Enter VF Values

Soil-to-Groundwater Leaching Factor (?)

- ◉ ASTM Model
  - ☐ Apply Soil Attenuation Model (SAM) — Enter Decay Rates
  - ☐ Allow first-order biodecay
- ○ User-specified LF from other model — Enter LF Values

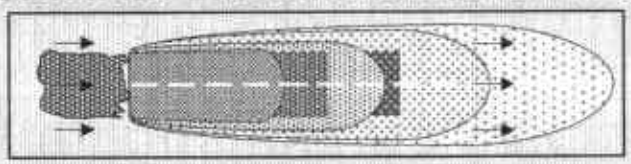
2. Lateral Air Dispersion Factor

(?)

- ◉ 3-D Gaussian dispersion model
- ○ User-Specified ADF

Off-site 1	Off-site 2	
1.00E+0	1.00E+0	(-)

3. Groundwater Dilution Attenuation Factor



Calculate DAF using Domenico Model (?)

- ◉ Domenico equation with dispersion only (no biodegradation)
- ○ Domenico equation first-order decay — Enter Decay Rates
- ○ Modified Domenico equation using electron acceptor superposition — Enter Site Data

Enter Directly — Biodegradation Capacity: NC (mg/L)

— or —

User-Specified DAF Values

- ○ DAF values from other model or site data — Enter DAF Values

4. Commands and Options

Main Screen | **Print Sheet** | ***Help***

Site-Specific Soil Parameters

Site Name: 76 Station No. 3135 | Job ID: 42013810
Location: 6535 San Leandro Street, Oakland, Ca. | Date: 23-Nov-05
Compl. By: Steve Kemnitz

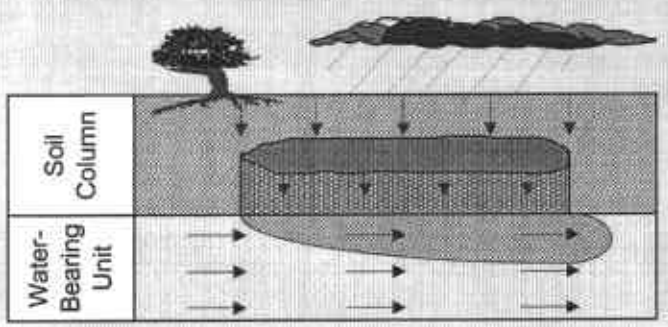
1. Soil Source Zone Characteristics

Hydrogeology

	General Case	Construction	
Depth to water-bearing unit	7		(ft)
Capillary zone thickness	0.295275591		(ft)
Soil column thickness	6.704724409		(ft)

Affected Soil Zone

Depth to top of affected soils	0		(ft)
Depth to base of affected soils	7		(ft)
Affected soil area	15000	15000	(ft^2)
Length of affected soil parallel to assumed wind direction	150	150	(ft)
Length of affected soil parallel to assumed GW flow direction	150		(ft)



2. Surface Soil Column

Vadose Zone | Capillary Fringe

Predominant USCS Soil Type

SM: Silty Sand

or Enter Directly

	Vadose Zone	Capillary Fringe	
Total porosity	0.41		(-)
Volumetric water content	0.12	0.369	(-)
Volumetric air content	0.29	0.041	(-)
Dry bulk density	1.7		(kg/L)
Vertical hydraulic conductivity	2.8E+0		(ft/d)
Vapor permeability	1.1E-12		(ft^2)
Capillary zone thickness	3.0E-1		(ft)

Net Rainfall Infiltration

Net infiltration estimate	11.81102362	(in/yr)
or Calculate		
Average annual precipitation	0	(in/yr)

Partitioning Parameters

Fraction organic carbon	0.01	(-)
Soil/water pH	6.8	(-)

3. Commands and Options

Main Screen | Use Default Values | Print Sheet
Set Units | | Help

Site-Specific Groundwater Parameters

Site Name: 76 Station No. 3135 | Job ID: 42013810
Location: 6535 San Leandro Street, Oakland, Ca. | Date: 23-Nov-05
Compl. By: Steve Kemnitz

1. Water-Bearing Unit

Hydrogeology

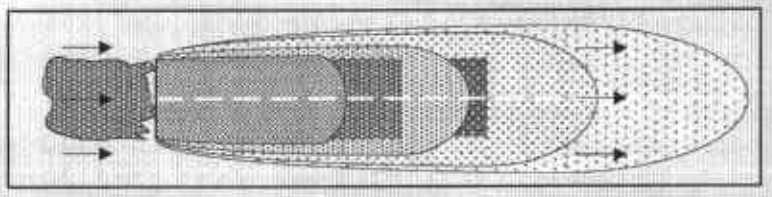
Groundwater Darcy velocity	2.2E-1	(ft/d)
Groundwater seepage velocity	5.9E-1	(ft/d)
or Enter Directly	↑ *or*	
Hydraulic conductivity	2.2E+1	(ft/d)
Hydraulic gradient	1.0E-2	(-)
Effective porosity	0.38	(-)

Sorption

Fraction organic carbon--saturated zone	0.001	(-)
Groundwater pH	6.20	(-)

2. Groundwater Source Zone

Groundwater plume width at source	147.6377953	(ft)
Plume (mixing zone) thickness at source	6.56167979	(ft)
or Calculate	↑ *or*	
Saturated thickness	10	(ft)
Length of source zone		(ft)



3. Groundwater Dispersion

Model: ASTM Default

	GW Ingestion		Soil Leaching to GW		
	Off-site 1	Off-site 2	Off-site 1	Off-site 2	
Distance to GW receptors	240	820.2	240	820.2	(ft)
or Enter Directly	↓ *or*	↓	↓ *or*	↓	
Longitudinal dispersivity	24	82.02	24	82.02	(ft)
Transverse dispersivity	7.92	27.07	7.92	27.07	(ft)
Vertical dispersivity	1.2	4.101	1.2	4.101	(ft)

4. Groundwater Discharge to Surface Water

	Off-site 2	
Distance to GW/SW disharge point	820.2	(ft)
Plume width at GW/SW discharge	0.033	(ft)
Plume thickness at GW/SW discharge	0.033	(ft)
Surface water flowrate at GW/SW discharge	3.1E-3	(ft^3/d)

5. Commands and Options

Main Screen | Use Default Values | Print Sheet
Set Units | | *Help*

Site-Specific Air Parameters

Site Name: 76 Station No. 3135 Job ID: 42013810
Location: 6535 San Leandro Street, Oakland, Ca. Date: 23-Nov-05
Compl. By: Steve Kemnitz

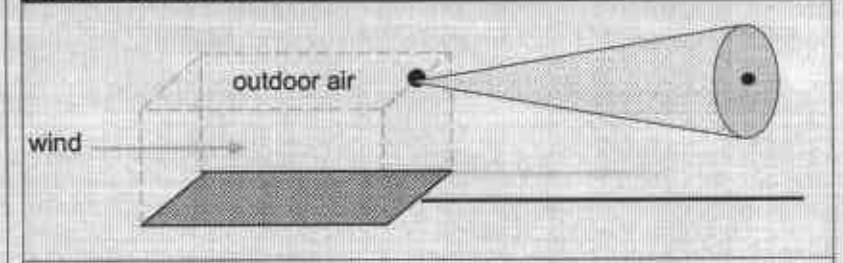
1. Outdoor Air Pathway

Dispersion in Air

	Off-site 1	Off-site 2	
Distance to offsite air receptor	239.993	239.993	(ft)
or Enter Directly	↓ or	↓	
Horizontal dispersivity	25.66	25.66	(ft)
Vertical dispersivity	17.14	17.14	(ft)

Air Source Zone

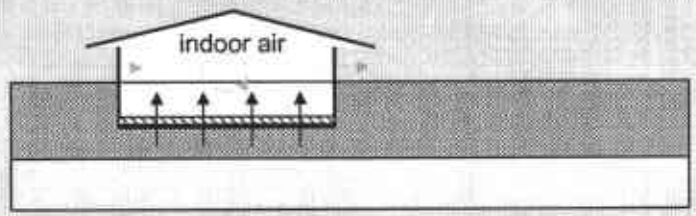
Air mixing zone height	6.56167979	(ft)
Ambient air velocity in mixing zone	637795.2756	(ft/d)
Areal particulate emission flux	6.9E-14	(g/cm^2/s)



2. Indoor Air Pathway

Building Parameters

	Residential	Commercial	
Building volume/area ratio	6.56166	9.84252	(ft)
Foundation area	753.474	753.474	(ft^2)
Foundation perimeter	111.549	111.549	(ft)
Building air exchange rate	1.2E+1	2.0E+1	(1/d)
Depth to bottom of foundation slab	0.49213	0.49213	(ft)
Convective air flow through cracks	0.0E+0	0.0E+0	(ft^3/d)
Foundation thickness	0.492125984		(ft)
Foundation crack fraction	0.01		(-)
Volumetric water content of cracks	0.12		(-)
Volumetric air content of cracks	0.26		(-)
Indoor/Outdoor differential pressure	0		(psi)



3. Commands and Options

Main Screen | Use Default Values | Print Sheet
Set Units | | *Help*

RBCA SITE ASSESSMENT

Site Name: 76 Station No. 3135
Site Location: 6535 San Leandro Street, Oakland, Ca.

Completed By: Steve Kemnitz
Date Completed: 23-Nov-05

Job ID: 42013810

SOIL (0 - 7 ft) SSTL VALUES

Target Risk (Class A & B) 1.0E-6
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

Groundwater DAF Option: Domenico - No Decay
(One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	X Soil Leaching to Groundwater Ingestion / Discharge to Surface Water			X Soil Vol. to Indoor Air	X Soil Volatilization to Outdoor Air				X Surface Soil Inhalation, Ingestion,Dermal Contact		Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (240 ft)	Off-site 2 (820.2 ft)	On-site (0 ft)	On-site (0 ft)		Off-site 1 (240 ft)	Off-site 2 (240 ft)	On-site (0 ft)				Only if "yes" left
CAS No.	Name	(mg/kg)	Commercial	Residential	Surf. Water	Commercial	Commercial	Construction Worker	Residential	Residential	Commercial	Construction Worker	(mg/kg)	"a" if yes	
71-43-2	Benzene	2.2E-2	3.2E-2	5.8E-2	2.3E+2	7.4E-2	1.1E+1	1.0E+1	1.8E+1	1.8E+1	2.5E+0	9.4E+0	3.2E-2	☐	<1
108-88-3	Toluene	2.3E-2	1.4E+2	3.0E+2	>7.5E+2	8.8E+1	>7.5E+2	>7.5E+2	>7.5E+2	>7.5E+2	3.8E+3	7.0E+2	8.8E+1	☐	<1
100-41-4	Ethylbenzene	2.5E-2	1.8E+2	3.8E+2	>6.3E+2	3.0E+2	>6.3E+2	>6.3E+2	>6.3E+2	>6.3E+2	3.0E+3	1.6E+3	1.8E+2	☐	<1
1330-20-7	Xylene (mixed isomers)	4.7E-2	>5.0E+2	>5.0E+2	>5.0E+2	>5.0E+2	>5.0E+2	>5.0E+2	>5.0E+2	>5.0E+2	4.9E+4	1.5E+4	1.5E+4	☐	<1
1634-04-4	Methyl t-Butyl ether	2.5E-2	9.3E-1	2.0E+0	NC	6.6E+2	>9.4E+3	7.5E+3	>9.4E+3	>9.4E+3	2.8E+2	2.7E+2	9.3E-1	☐	<1
0-00-0	TPH - Aliph >C05-C06	3.7E+0	>4.9E+2	>4.9E+2	NC	>4.9E+2	>4.9E+2	>4.9E+2	>4.9E+2	>4.9E+2	1.3E+5	2.7E+4	2.7E+4	☐	<1
0-00-0	TPH - Aliph >C06-C08	3.7E+0	>2.6E+2	>2.6E+2	NC	>2.6E+2	>2.6E+2	>2.6E+2	>2.6E+2	>2.6E+2	1.3E+5	2.7E+4	2.7E+4	☐	<1
0-00-0	TPH - Aliph >C08-C10	3.7E+0	>1.4E+2	>1.4E+2	NC	>1.4E+2	>1.4E+2	>1.4E+2	>1.4E+2	>1.4E+2	3.1E+3	1.2E+3	1.2E+3	☐	<1
0-00-0	TPH - Aliph >C10-C12	3.7E+0	>8.6E+1	>8.6E+1	NC	>8.6E+1	>8.6E+1	>8.6E+1	>8.6E+1	>8.6E+1	3.1E+3	1.7E+3	1.7E+3	☐	<1
0-00-0	TPH - Aliph >C12-C16	4.6E+0	>3.8E+1	>3.8E+1	NC	>3.8E+1	>3.8E+1	>3.8E+1	>3.8E+1	>3.8E+1	3.1E+3	2.4E+3	2.4E+3	☐	<1
0-00-0	TPH - Aliph >C16-C21	4.6E+0	>1.6E+1	>1.6E+1	NC	NC	NC	NC	NC	NC	NC	NC	>1.6E+1	☐	NA
0-00-0	TPH - Aliph >C21-C34	4.6E+0	>1.6E+1	>1.6E+1	NC	NC	NC	NC	NC	NC	NC	NC	>1.6E+1	☐	NA
0-00-0	TPH - Arom >C05-C07	3.7E+0	1.3E+0	2.8E+0	NC	1.3E+0	1.9E+2	1.0E+1	3.8E+2	3.8E+2	6.7E+1	9.4E+0	1.3E+0	■	2.9E+0
0-00-0	TPH - Arom >C07-C08	3.7E+0	2.5E+2	5.4E+2	NC	8.8E+1	>1.4E+3	9.6E+2	>1.4E+3	>1.4E+3	4.5E+3	8.4E+2	8.8E+1	☐	<1
0-00-0	TPH - Arom >C08-C10	3.7E+0	3.0E+2	6.6E+2	NC	1.3E+2	>1.0E+3	9.0E+2	>1.0E+3	>1.0E+3	1.1E+3	5.4E+2	1.3E+2	☐	<1
0-00-0	TPH - Arom >C10-C12	3.7E+0	4.8E+2	>6.3E+2	NC	>6.3E+2	>6.3E+2	>6.3E+2	>6.3E+2	>6.3E+2	1.2E+3	8.3E+2	4.8E+2	☐	<1
0-00-0	TPH - Arom >C12-C16	4.6E+0	>2.9E+2	>2.9E+2	NC	>2.9E+2	>2.9E+2	>2.9E+2	>2.9E+2	>2.9E+2	1.3E+3	1.1E+3	1.1E+3	☐	<1
0-00-0	TPH - Arom >C16-C21	4.6E+0	>1.0E+2	>1.0E+2	NC	NC	NC	NC	NC	NC	NC	NC	>1.0E+2	☐	NA
0-00-0	TPH - Arom >C21-C35	4.6E+0	>8.3E+0	>8.3E+0	NC	NC	NC	NC	NC	NC	NC	NC	>8.3E+0	☐	NA

">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated

RBCA SITE ASSESSMENT

Site Name: 76 Station No. 3135 | Completed By: Steve Kernitz | Job ID: 42013810

Site Location: 6535 San Leandro Street, Oakland, Ca. | Date Completed: 23-Nov-05

GROUNDWATER SSTL VALUES

Target Risk (Class A & B) 1.0E-6

Target Risk (Class C) 1.0E-5

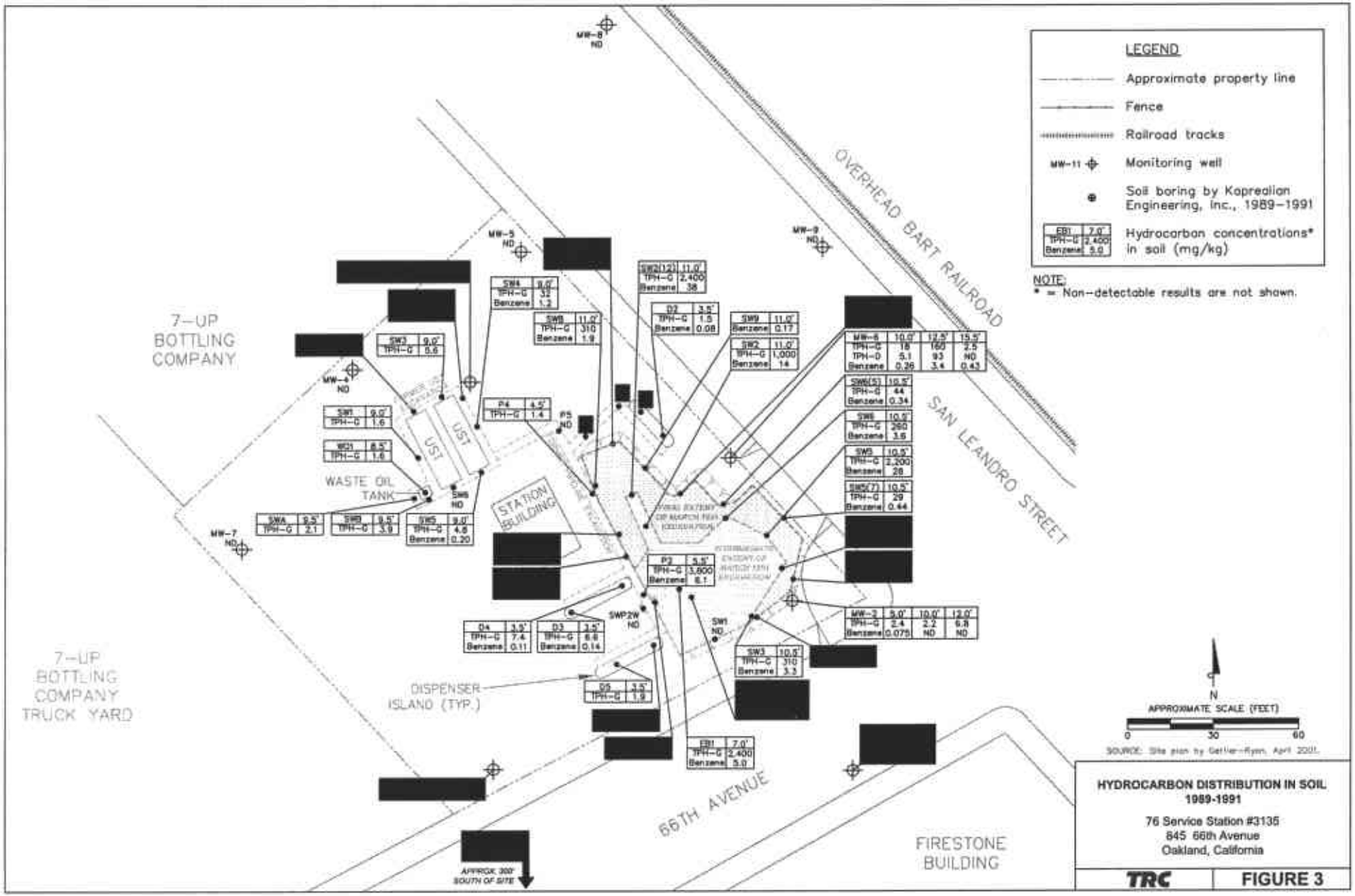
Target Hazard Quotient 1.0E+0

Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	X Groundwater Ingestion / Discharge to Surface Water			X GW Vol. to Indoor Air	X Groundwater Volatilization to Outdoor Air			Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (240 ft)	Off-site 2 (820.2 ft)	On-site (0 ft)	On-site (0 ft)	Off-site 1 (240 ft)	Off-site 2 (240 ft)			Only if "yes" left
CAS No.	Name	(mg/L)	Commercial	Residential	Surf. Water	Commercial	Commercial	Residential	Residential	(mg/L)	"■" if yes	
71-43-2	Benzene	5.6E-4	9.9E-3	1.8E-2	7.0E+1	9.8E-2	9.4E+0	9.2E+0	9.2E+0	9.9E-3	☐	<1
108-88-3	Toluene	3.4E-4	2.0E+1	4.4E+1	>5.2E+2	1.1E+2	>5.2E+2	>5.2E+2	>5.2E+2	2.0E+1	☐	<1
100-41-4	Ethylbenzene	2.2E-3	1.0E+1	2.2E+1	>1.7E+2	>1.7E+2	>1.7E+2	>1.7E+2	>1.7E+2	1.0E+1	☐	<1
1330-20-7	Xylene (mixed isomers)	3.9E-3	>2.0E+2	>2.0E+2	>2.0E+2	>2.0E+2	>2.0E+2	>2.0E+2	>2.0E+2	>2.0E+2	☐	NA
1634-04-4	Methyl t-Butyl ether	3.7E-3	1.0E+0	2.2E+0	NC	3.5E+3	>4.8E+4	>4.8E+4	>4.8E+4	1.0E+0	☐	<1
0-00-0	TPH - Aliph >C05-C06	1.9E-1	>3.6E+1	>3.6E+1	NC	>3.6E+1	>3.6E+1	>3.6E+1	>3.6E+1	>3.6E+1	☐	NA
0-00-0	TPH - Aliph >C06-C08	1.9E-1	>5.4E+0	>5.4E+0	NC	>5.4E+0	>5.4E+0	>5.4E+0	>5.4E+0	>5.4E+0	☐	NA
0-00-0	TPH - Aliph >C08-C10	1.9E-1	>4.3E-1	>4.3E-1	NC	>4.3E-1	>4.3E-1	>4.3E-1	>4.3E-1	>4.3E-1	☐	NA
0-00-0	TPH - Aliph >C10-C12	1.9E-1	>3.4E-2	>3.4E-2	NC	>3.4E-2	>3.4E-2	>3.4E-2	>3.4E-2	>3.4E-2	☐	NA
0-00-0	TPH - Aliph >C12-C16	1.0E-5	>7.6E-4	>7.6E-4	NC	>7.6E-4	>7.6E-4	>7.6E-4	>7.6E-4	>7.6E-4	☐	NA
0-00-0	TPH - Aliph >C16-C21	1.0E-5	>2.5E-6	>2.5E-6	NC	NC	NC	NC	NC	>2.5E-6	☐	NA
0-00-0	TPH - Aliph >C21-C34	1.0E-5	>2.5E-6	>2.5E-6	NC	NC	NC	NC	NC	>2.5E-6	☐	NA
0-00-0	TPH - Arom >C05-C07	1.9E-1	3.1E-1	6.6E-1	NC	1.5E+0	1.5E+2	1.8E+2	1.8E+2	3.1E-1	☐	<1
0-00-0	TPH - Arom >C07-C08	1.9E-1	2.0E+1	4.4E+1	NC	9.0E+1	>5.2E+2	>5.2E+2	>5.2E+2	2.0E+1	☐	<1
0-00-0	TPH - Arom >C08-C10	1.9E-1	4.1E+0	8.8E+0	NC	2.9E+1	>6.5E+1	>6.5E+1	>6.5E+1	4.1E+0	☐	<1
0-00-0	TPH - Arom >C10-C12	1.9E-1	4.1E+0	8.8E+0	NC	>2.5E+1	>2.5E+1	>2.5E+1	>2.5E+1	4.1E+0	☐	<1
0-00-0	TPH - Arom >C12-C16	1.0E-5	4.1E+0	>5.8E+0	NC	>5.8E+0	>5.8E+0	>5.8E+0	>5.8E+0	4.1E+0	☐	<1
0-00-0	TPH - Arom >C16-C21	1.0E-5	>6.5E-1	>6.5E-1	NC	NC	NC	NC	NC	>6.5E-1	☐	NA
0-00-0	TPH - Arom >C21-C35	1.0E-5	>6.6E-3	>6.6E-3	NC	NC	NC	NC	NC	>6.6E-3	☐	NA

">" indicates risk-based target concentration greater than constituent solubility value. NA = Not applicable. NC = Not calculated.


LEGEND
Approximate property line
Fence
Railroad tracks
MW-11 Monitoring well
Soil boring by Kaprealian Engineering, Inc., 1989-1991
EB1 7.0' TPH-G 2,400 Benzene 5.0
Hydrocarbon concentrations* in soil (mg/kg)
NOTE:
* = Non-detectable results are not shown.
7-UP BOTTLING COMPANY
7-UP BOTTLING COMPANY TRUCK YARD
OVERHEAD BART RAILROAD
SAN LEANDRO STREET
66TH AVENUE
FIRESTONE BUILDING
UST
UST
WASTE OIL TANK
STATION BUILDING
DISPENSER ISLAND (TYP.)
APPROX. 300' SOUTH OF SITE
MW-8 ND
MW-5 ND
MW-9 ND
MW-4 ND
MW-7 ND
P5 ND
SW6 ND
SWP2W ND
SW1 ND
N
APPROXIMATE SCALE (FEET)
0 30 60
SOURCE: Site plan by Gettler-Ryan, April 2001.
HYDROCARBON DISTRIBUTION IN SOIL
1989-1991
76 Service Station #3135
845 66th Avenue
Oakland, California
TRC
FIGURE 3