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STRATUS
ENVIRONMENTAL, INC.

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January 14, 2002

Eva Chu
Hazardous Materials Specialist
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

JAN 24 2002

RE: Interstate Brands Corporation Facility, 945 53rd Street, Oakland, California
(STID # 3928)

Dear Ms. Chu:

As a follow up to your September 17th, 2001 email (copy attached), and as per your conversation with Edward McCarthy of Blankinship & Associates on December 27th, 2001, please find enclosed an addendum to the December 01, 2000 Human Health Risk Analysis (HHRA) prepared for the Interstate Brands Corporation (IBC) facility at 945 53rd Street in Oakland, California.

The original HHRA included an analysis of a commercial scenario only. This addendum, to be used in conjunction with the original HHRA, includes a residential scenario analysis and an estimation of benzene dissipation.

The last groundwater sampling was conducted on March 23, 1999. Analytical results from this sampling event are presented in Table 1. Data from this sampling event showed no detectable contaminants in soil, but did report volatile organic compounds (VOCs), including benzene, in groundwater collected from MW-1 and Boring A. Boring logs indicate that the primary vadose zone soil type is clayey silt.

Consistent with the analysis performed in our earlier report dated December 1, 2000, tier II RBCA calculations were done using the RBCA Tool Kit for Chemical Releases. This analysis tool was used to estimate site-specific target levels (SSTLs) for chemicals of concern, using techniques consistent with American Society of Testing and Materials (ASTM) E1939-95 and ASTM PS-104, and with current U.S. Environmental Protection Agency and California Environmental Protection Agency guidelines. A summary of site-specific residential SSTLs is presented in Table 2. RBCA Tool Kit printouts showing input parameters reflecting a residential scenario are also attached. All other input parameters remained the same as those used in the evaluation of the commercial scenario presented in our original report dated December 1, 2000.

As Table 2 indicates, the estimated site-specific commercial SSTLs for both volatilization to indoor and outdoor air are above the concentration of VOCs detected in groundwater in March 23, 1999.

In addition, the Oakland Urban Land Redevelopment Program (OULRP) guidance document (http://www.oaklandpw.com/ulrprogram/guidance.pdf) contains RBCA Look-up Table 2 that lists a groundwater SSTL for benzene volatilization to indoor air of 1.4 milligrams per liter (mg/L). This value is well above the benzene concentration of 0.058 mg/L detected on March 23, 1999.

Lastly, the concentrations of all VOCs are expected to have attenuated substantially since 1999. For example, using a highly conservative benzene dissipation rate of 10 times longer (i.e., slower) than the aquatic half-life of 29 days, the expected benzene concentration is currently estimated at less than 0.01 mg/L. As Table 2 of this document indicates, both the estimated site-specific SSTL and the OULRP SSTL (1.4 mg/L) are above this estimated benzene value.

SSTLs represent the upper bound limit of chemical concentrations that if not exceeded, indicate that the site will not likely pose an adverse impact to human health. Because the estimated site-specific residential SSTL and the OULRP SSTL values are above the concentration of VOCs detected in 1999, and are well above the estimated current concentration of VOCs in groundwater beneath the site, the current concentration of VOCs in groundwater beneath the site does not pose an adverse impact to human health under a residential land use scenario. As our original report indicted, this conclusion assumes that groundwater is not used for consumptive purposes.

It is IBC's wish that the site be closed without a deed restriction. Please process closure documentation accordingly and forward it to me at your earliest convenience. If you have any questions, please call me at (530) 676-6000.

Sincerely,
STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, R.G.
Project Manager

cc: Michael Blankinship, Blankinship & Associates, Inc.

Attachments: Tables 1 and 2
Email of Sept. 17, 2001
RBCA Output

Table 1.
Supplement to EMCON Groundwater Monitoring and Soil Analytical Data, IBC Oakland, CA

Well	Sample Date	TPH Gas ug/L	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Xylenes ug/L	MTBE ug/L
MW1 (Water)	3/23/99	9800	58	130	810	2900	<250
MW2 (Water)	3/23/99	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW3 (Water)	3/23/99	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Boring A (Water)	3/9/99	74	<0.5	1	<0.5	0.98	<0.5
Boring B (Water)	3/9/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boring A (Soil)	3/9/99	<1	<0.005	<0.005	<0.005	<0.005	<0.005
Boring B (Soil)	3/9/99	<1	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:
Source: URS/Greiner Woodward Clyde Report dated April 20, 1999
Samples collected from Borings A and B at a depth of approximately 12 feet bgs.
Soil values in mg/Kg.

Table 2.
Estimated Residential Site-Specific Target Level (SSTL) Summary and Comparision to Latest Groundwater Data, IBC, Oakland, CA

Pathway →	*SSTL for* Groundwater Volatilization to Indoor Air (mg/L)	*SSTL for* Groundwater Volatilization to Outdoor Air (mg/L)	Latest Groundwater Data from March 23, 1999 (mg/L)
Chemical			
Benzene	0.21	100	0.058
Toluene	100	>520	0.13
Ethylbenzene	>170	>170	0.81
Xylene (mixed isomers)	>200	>200	2.9
Methyl t-Butyl ether	2300	>48000	<0.250

Jay Johnson

From: *Mike Blankinship [blankinship@envtox.com]*
Sent: Tuesday, September 18, 2001 8:01 AM
To: Jay Johnson
Subject: FW: IBC STID 3928 Status

Jay

Give me a call to discuss. Looks like we almost have it.

Mike

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-----Original Message-----
From: Chu, Eva, Env. Health [mailto:EChu@co.alameda.ca.us]
Sent: Monday, September 17, 2001 3:41 PM
To: 'Mike Blankinship'
Subject: RE: IBC STID 3928 Status

Mike,

I have just about completed the closure summary for the IBC site at 945 53rd Street, Oakland, CA. The risk assessment completed addressed commercial exposure. Can you re-run the spreadsheet and evaluate risk for a residential scenario? That way, we can close the site without a deed restriction. An alternative is to compare residual groundwater concentrations with Oakland's Tier 2 RBCA for sandy silt sediments.

I took the liberty to compare residual soil concentrations with Oakland's SSTLs, and BTEX did not exceed SSTLs for a residential scenario for soil vapor volatilization to indoor air.

If you re-run the spread sheet, you can also evaluate TPH by using the fractionation method, as proposed by the Massachusetts' (sp?) Environmental Department. If you have any questions, give me a call.

evachu

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1131 Harbor Bay Parkway
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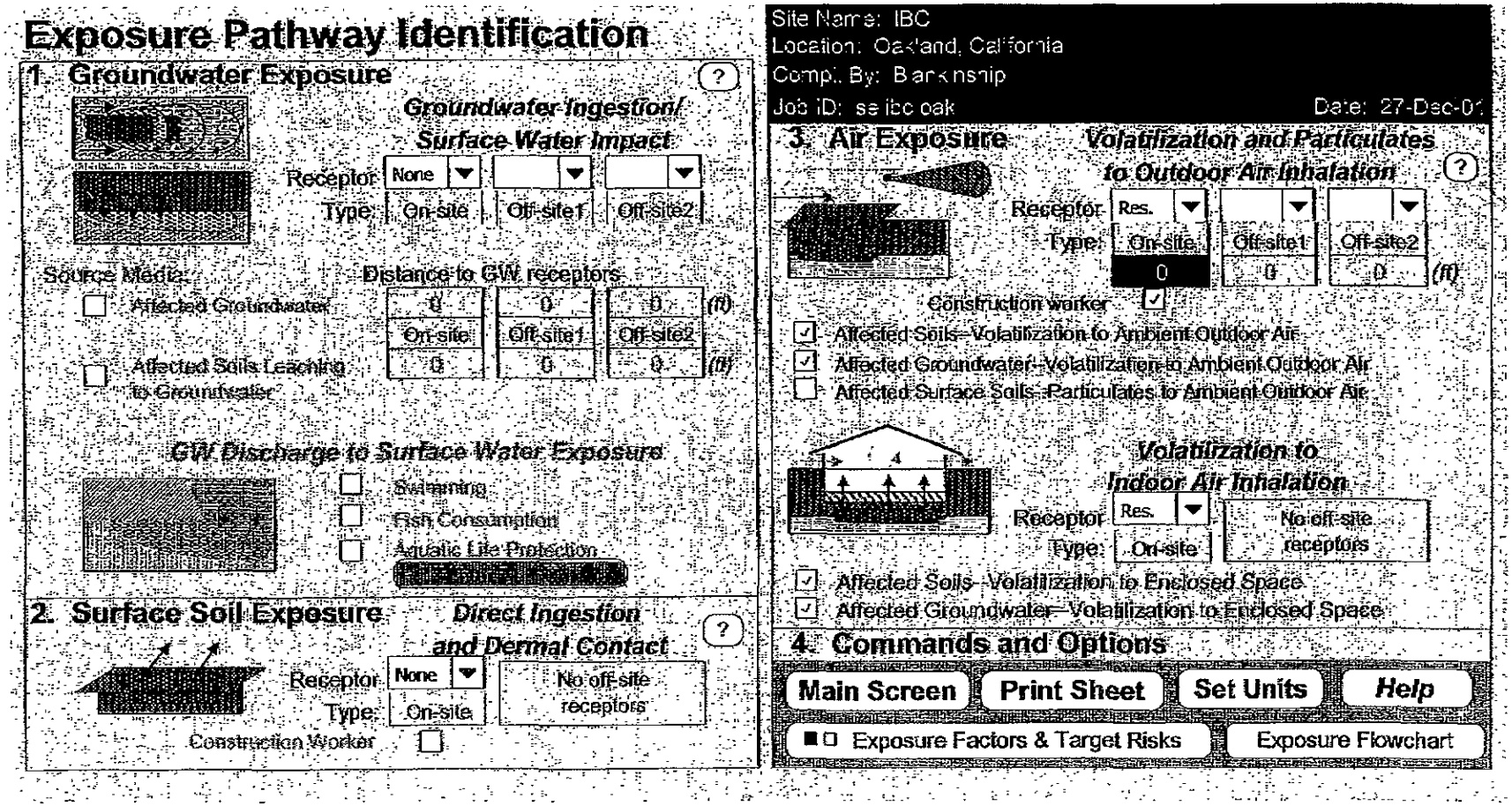
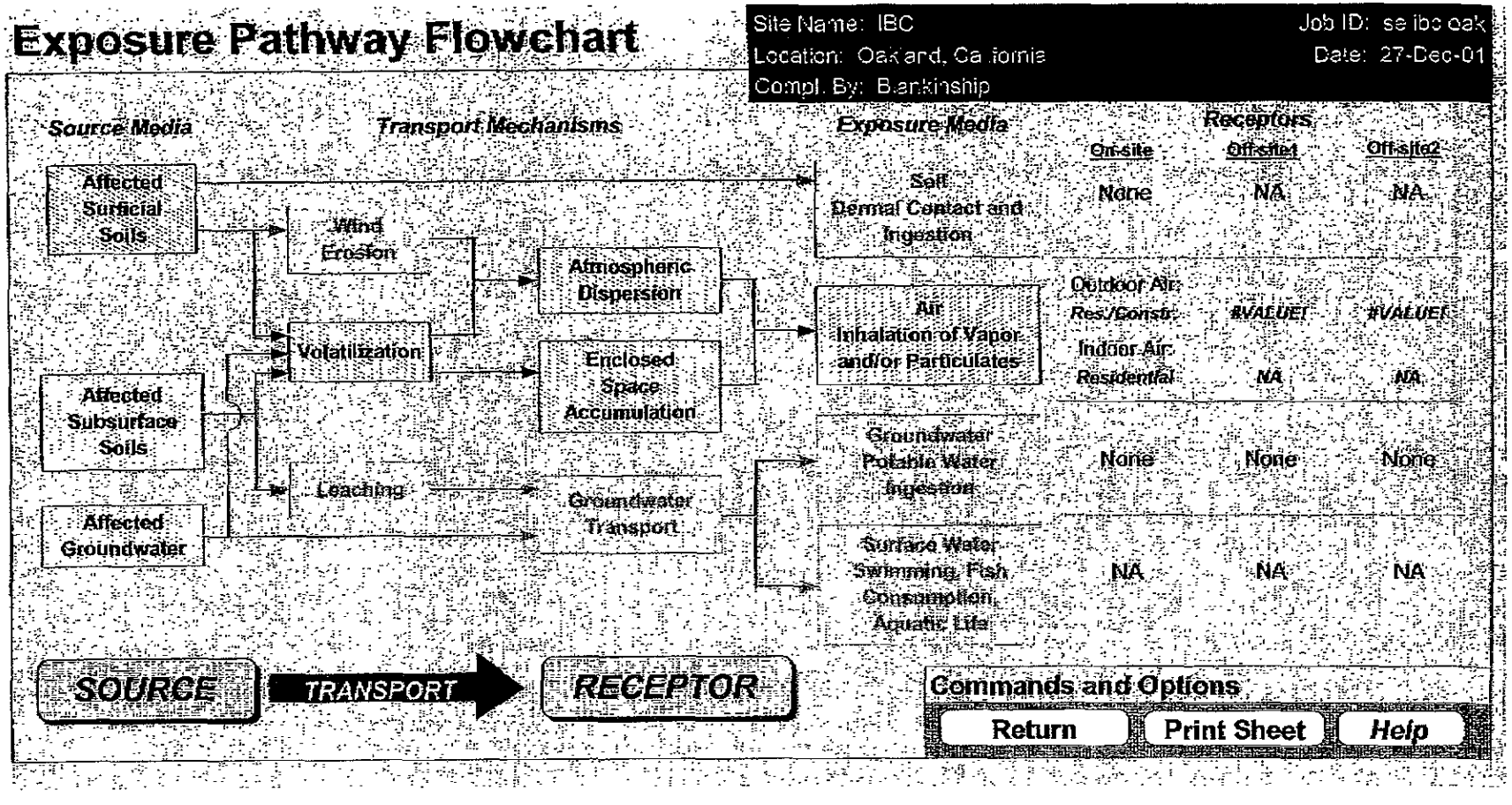
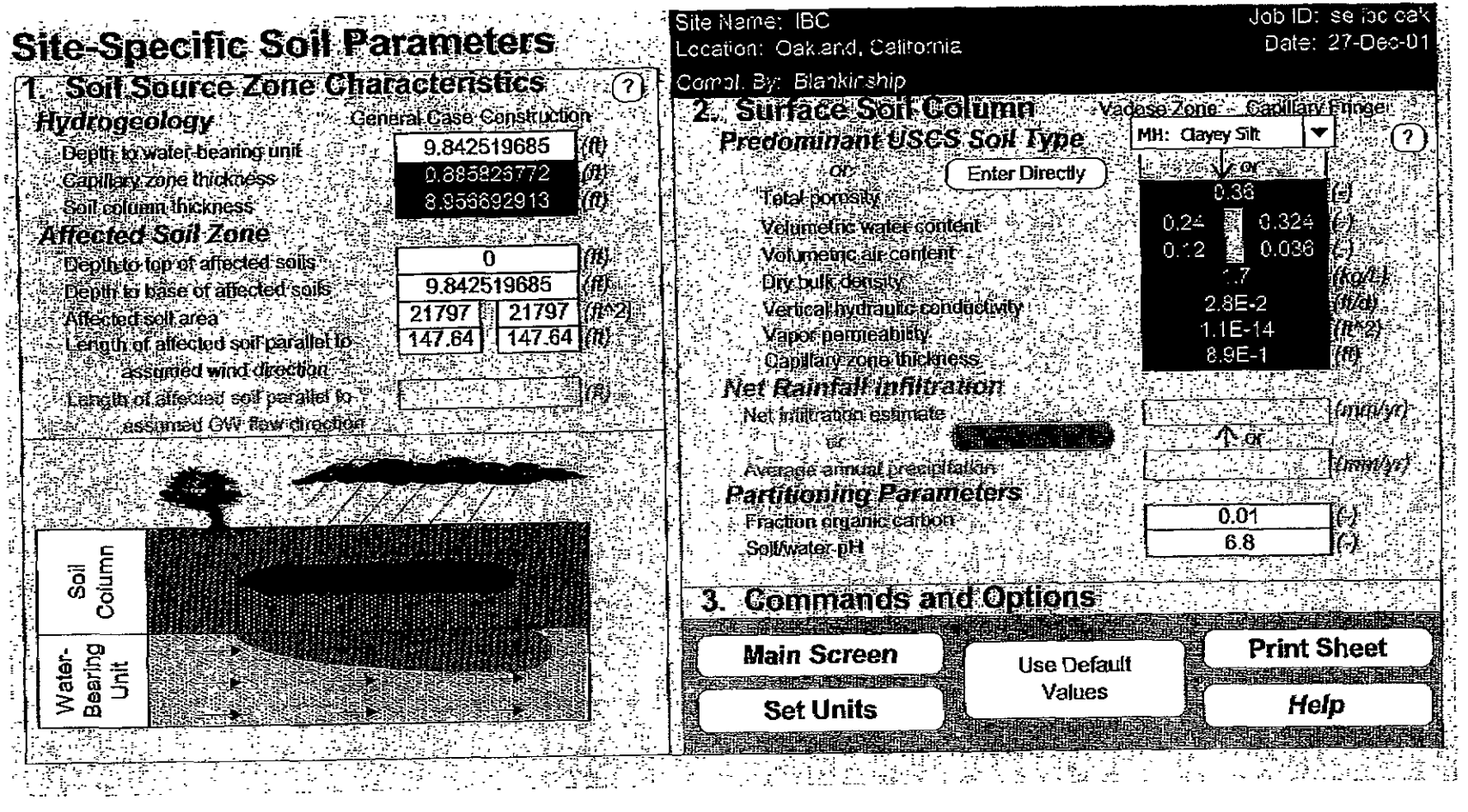
(510) 337-9335 fax


Exposure Pathway Identification
1. Groundwater Exposure
Groundwater Ingestion/
Surface Water Impact
Receptor
None
Type
On-site
Off-site1
Off-site2
Source Media:
Affected Groundwater
Affected Soils Leaching to Groundwater
Distance to GW receptors
0
On-site
0
Off-site1
0
Off-site2
(ft)
GW Discharge to Surface Water Exposure
Swimming
Fish Consumption
Aquatic Life Protection
2. Surface Soil Exposure
Direct Ingestion
and Dermal Contact
Receptor
None
Type
On-site
No off-site receptors
Construction Worker
Site Name: IBC
Location: Oakland, California
Comp.. By: Bankship
Job ID: se ibc oak
Date: 27-Dec-01
3. Air Exposure
Volatilization and Particulates
to Outdoor Air Inhalation
Receptor
Res.
Type
On-site
Off-site1
Off-site2
0
0
0
(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
Res.
Type
On-site
No off-site receptors
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


Exposure Pathway Flowchart
Site Name: IBC
Location: Oakland, California
Compl. By: B.arkinship
Job ID: se ibc oak
Date: 27-Dec-01
Source Media
Transport Mechanisms
Exposure Media
Receptors
On-site
Off-site1
Off-site2
Affected Surficial Soils
Affected Subsurface Soils
Affected Groundwater
Wind Erosion
Volatilization
Leaching
Atmospheric Dispersion
Enclosed Space Accumulation
Groundwater Transport
Soil
Dermal Contact and Ingestion
None
NA
NA
Air
Inhalation of Vapor and/or Particulates
Outdoor Air
Res/Constr
#VALUE!
#VALUE!
Indoor Air
Residential
NA
NA
Groundwater
Potable Water Ingestion
None
None
None
Surface Water
Swimming, Fish Consumption, Aquatic Life
NA
NA
NA
SOURCE
TRANSPORT
RECEPTOR
Commands and Options
Return
Print Sheet
Help


Site-Specific Soil Parameters
1. Soil Source Zone Characteristics
Hydrogeology
General Case Construction
Depth to water-bearing unit 9.842519685 (ft)
Capillary zone thickness 0.885826772 (ft)
Soil column thickness 8.956692913 (ft)
Affected Soil Zone
Depth to top of affected soils 0 (ft)
Depth to base of affected soils 9.842519685 (ft)
Affected soil area 21797 21797 (ft^2)
Length of affected soil parallel to assumed wind direction 147.64 147.64 (ft)
Length of affected soil parallel to assumed GW flow direction (ft)
Soil Column
Water-Bearing Unit
Site Name: IBC
Location: Oakland, California
Cornpl. By: Blankinship
Job ID: se ibc oak
Date: 27-Dec-01
2. Surface Soil Column
Vadose Zone
Capillary Fringe
Predominant USCS Soil Type
MH: Clayey Silt
or
Enter Directly
or
Total porosity 0.38 (-)
Volumetric water content 0.24 0.324 (-)
Volumetric air content 0.12 0.036 (-)
Dry bulk density 1.7 (kg/L)
Vertical hydraulic conductivity 2.8E-2 (ft/d)
Vapor permeability 1.1E-14 (ft^2)
Capillary zone thickness 8.9E-1 (ft)
Net Rainfall Infiltration
Net infiltration estimate (mm/yr)
or
Average annual precipitation (mm/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