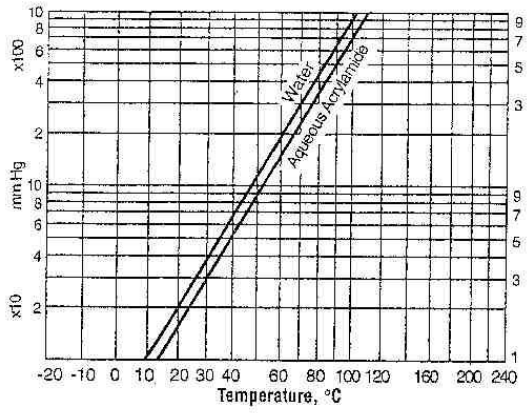
Figure 4-6 - Observed Vapor Pressure of 48.8% Aqueous Acrylamide



°C	mm Hg
23	18.05
31	29.79
38	43.36
53	92.72
70	209.49

Table 4-4 - Vapor Phase Concentrations of AAm in PPM (100% Solid and 50% Aqueous AAm)

Temperature °C	Vapor Phase Concentration AAm over 100% Solid AAm	Vapor Phase Concentration AAm over 50% Aqueous AAm
10	6.2	1.3
20	16.6	3.5
25	26	5.6
30	41	9
37	75	17
80	1700	430

Table 4-5 - Vapor Phase Concentrations of AAm in PPM of Different AAm Solutions

Temperature °C	Weight Percent AAm in Aqueous Solutions				
	10	18	25	35	50
10	0.35	0.57	0.74	0.94	1.3
20	0.94	1.6	2.0	2.6	3.6
→ 25	1.5	2.5	3.2	4.1	5.7
30	2.4	4.0	5.1	6.5	9.1
37	4.4	7.3	9.5	12	17
50	13	22	27	38	54
70	56	94	114	158	225
80	108	180	219	303	431
90	198	332	405	560	769
100	353	591	721	997	1418

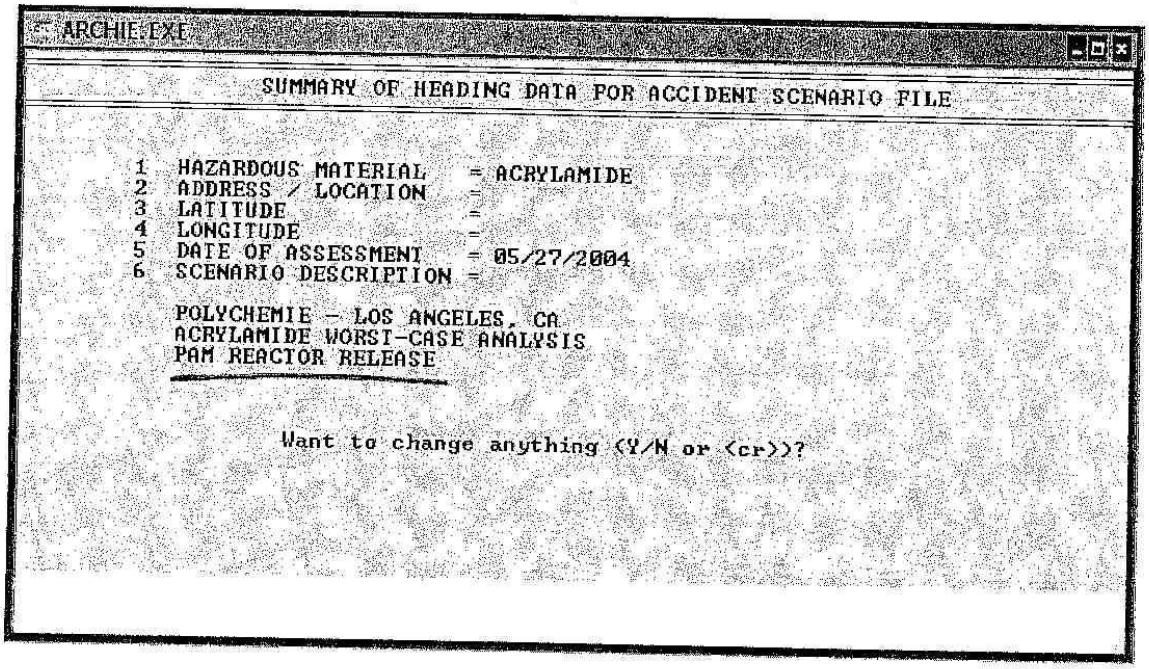
Saturated Vapor Phase Concentrations of AAm in PPM as a Function of Temperature for Different Aqueous Concentrations (Including Pure Crystal)

Experiments have been conducted to determine the vapor phase concentration in ppm of pure crystal, as well as for different concentrations of crystal acrylamide monomer in aqueous solutions as a function of temperature. It is important to recognize that these values were obtained from vapor-liquid equilibrium experiments in a closed container. Any departure from equilibrium, such as produced in an open vessel, or from continuous air-sparging throughout the monomer liquid in an acrylamide monomer storage tank, will result in much less than the reported equilibrium vapor phase concentration.

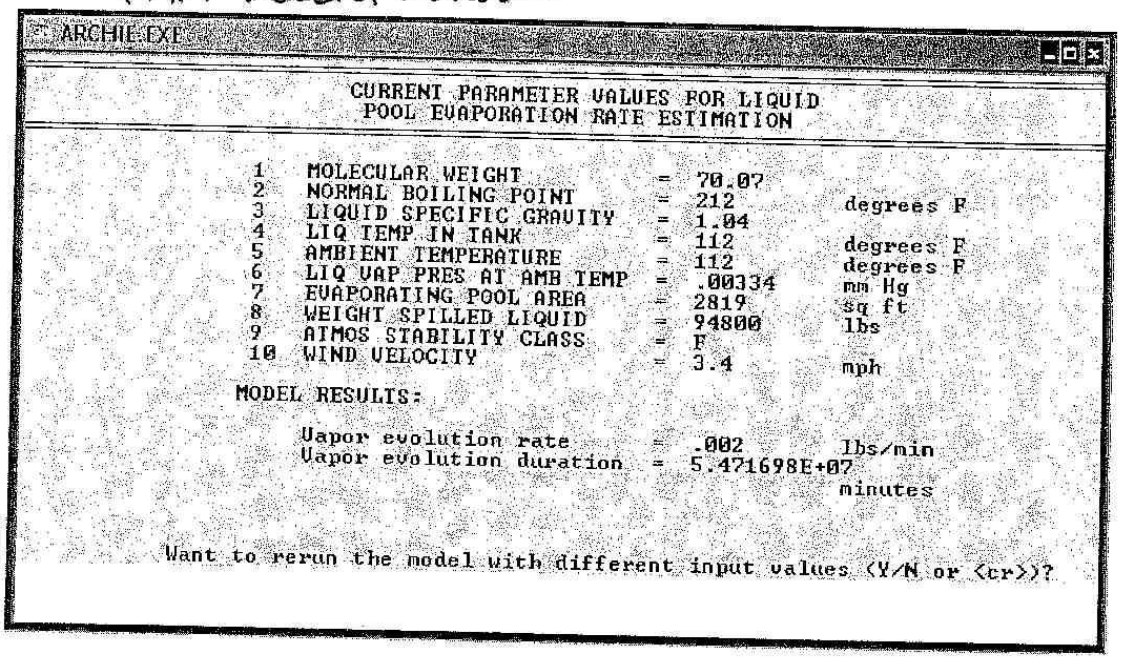
Tables 4-4 and 4-5 compare the vapor phase concentrations of solid acrylamide monomer and that of various weight % acrylamide monomer solutions as a function of temperature.

• For PAM Reactor, actual conditions are ~5 wt% and 95°F (.35°C) ≈
use data @ 10wt%, 37°C
y_i = 4.4 ppm /10^6
= 4.4×10^{-6} mol frac
partial press = $P = y_i P$
$P = 4.4 \times 10^{-6} \times 760$ mmHg
= 0.00334 mmHg

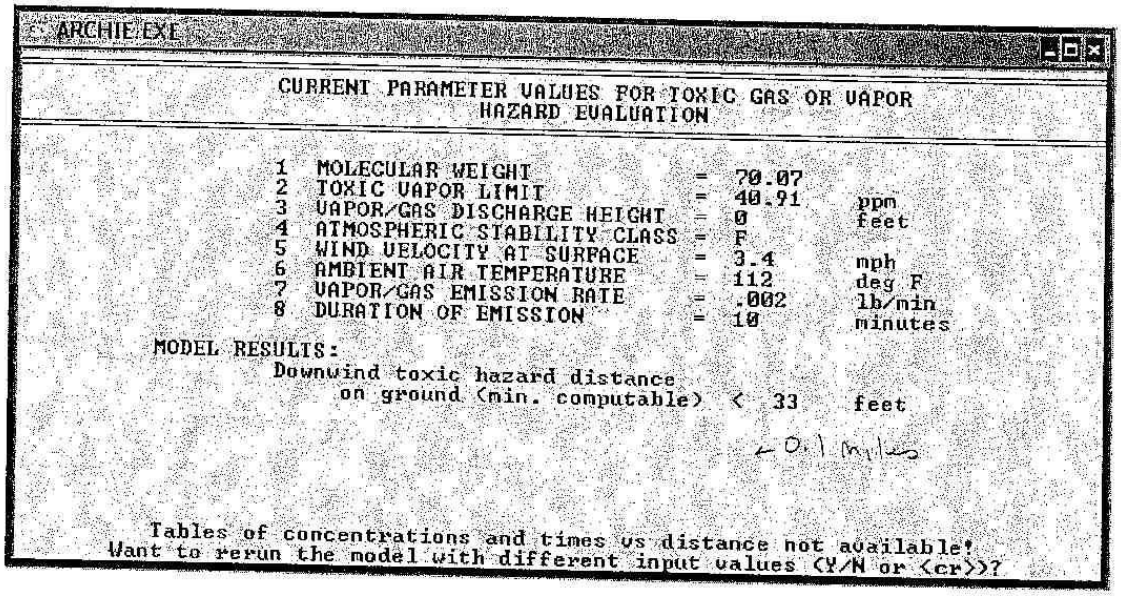
• for ADAM-Quat Rxtr, actual cond. are ~5 wt%, 131°F (55°C)
use data @ 10 wt% and 70°F
y_i = 56 ppmv/10^6
$P = \frac{56}{10^6} \times 760$ mmHg
= 0.0426 mmHg


ARCHIE.EXE
SUMMARY OF HEADING DATA FOR ACCIDENT SCENARIO FILE
1 HAZARDOUS MATERIAL = ACRYLAMIDE
2 ADDRESS / LOCATION =
3 LATITUDE =
4 LONGITUDE =
5 DATE OF ASSESSMENT = 05/27/2004
6 SCENARIO DESCRIPTION =
POLYCHEMIE – LOS ANGELES, CA
ACRYLAMIDE WORST-CASE ANALYSIS
PAM REACTOR RELEASE
Want to change anything (Y/N or <cr>)?

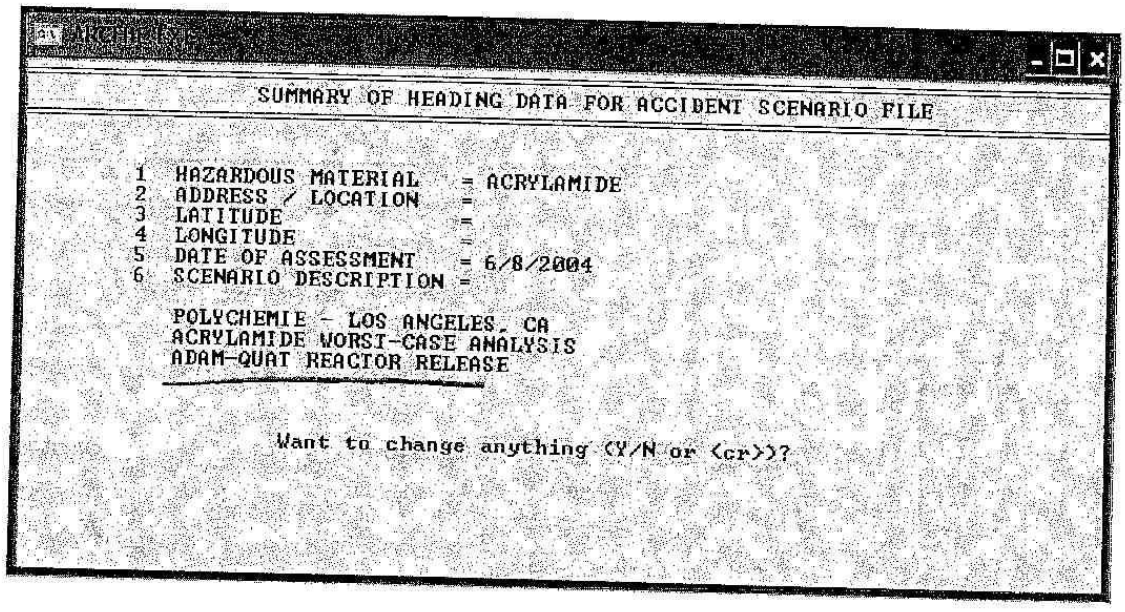
PAM Reactor Release



```
ARCHIE.EXE

        CURRENT PARAMETER VALUES FOR LIQUID
        POOL EVAPORATION RATE ESTIMATION

 1  MOLECULAR WEIGHT              =  70.07
 2  NORMAL BOILING POINT          =  212          degrees F
 3  LIQUID SPECIFIC GRAVITY       =  1.04
 4  LIQ TEMP IN TANK              =  112          degrees F
 5  AMBIENT TEMPERATURE           =  112          degrees F
 6  LIQ VAP PRES AT AMB TEMP      =  .00334       mm Hg
 7  EVAPORATING POOL AREA         =  2819         sq ft
 8  WEIGHT SPILLED LIQUID         =  94800        lbs
 9  ATMOS STABILITY CLASS         =  F
10  WIND VELOCITY                 =  3.4          mph

MODEL RESULTS:

     Vapor evolution rate        =  .002         lbs/min
     Vapor evolution duration    =  5.471698E+07
                                                 minutes


Want to rerun the model with different input values (Y/N or <cr>)?
```



```
ARCHIE.EXE

        CURRENT PARAMETER VALUES FOR TOXIC GAS OR VAPOR
                    HAZARD EVALUATION

 1  MOLECULAR WEIGHT              =  70.07
 2  TOXIC VAPOR LIMIT             =  40.91        ppm
 3  VAPOR/GAS DISCHARGE HEIGHT    =  0            feet
 4  ATMOSPHERIC STABILITY CLASS   =  F
 5  WIND VELOCITY AT SURFACE      =  3.4          mph
 6  AMBIENT AIR TEMPERATURE       =  112          deg F
 7  VAPOR/GAS EMISSION RATE       =  .002         lb/min
 8  DURATION OF EMISSION          =  10           minutes

MODEL RESULTS:
     Downwind toxic hazard distance
          on ground (min. computable)  <  33      feet

                                          ← 0.1 miles


   Tables of concentrations and times vs distance not available!
Want to rerun the model with different input values (Y/N or <cr>)?
```


SUMMARY OF HEADING DATA FOR ACCIDENT SCENARIO FILE
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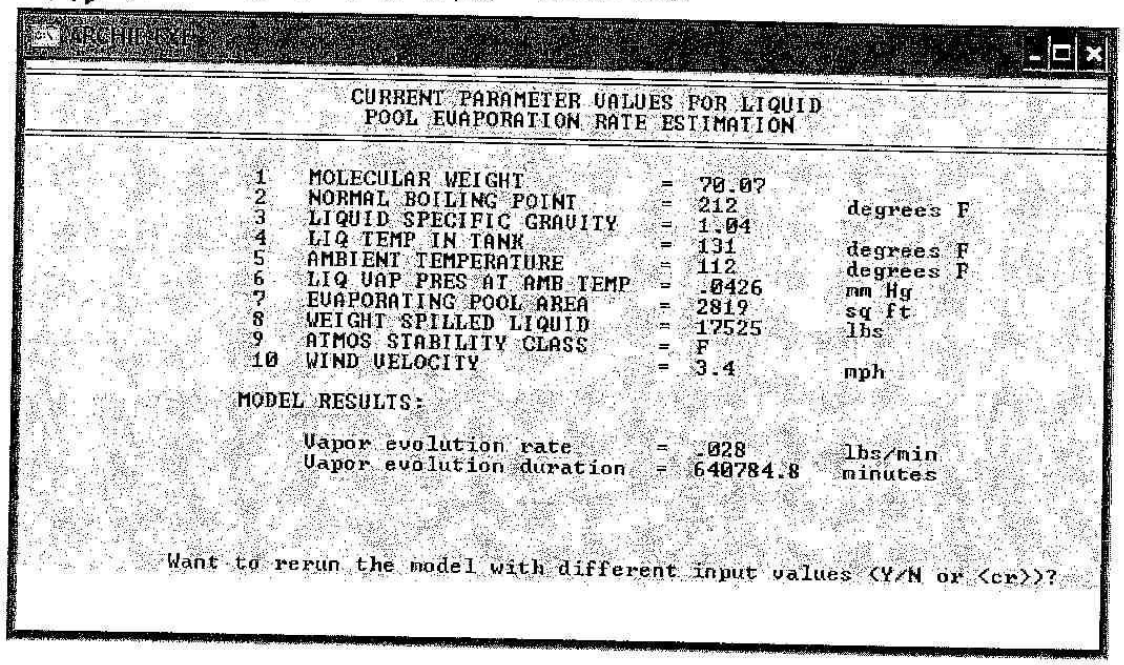
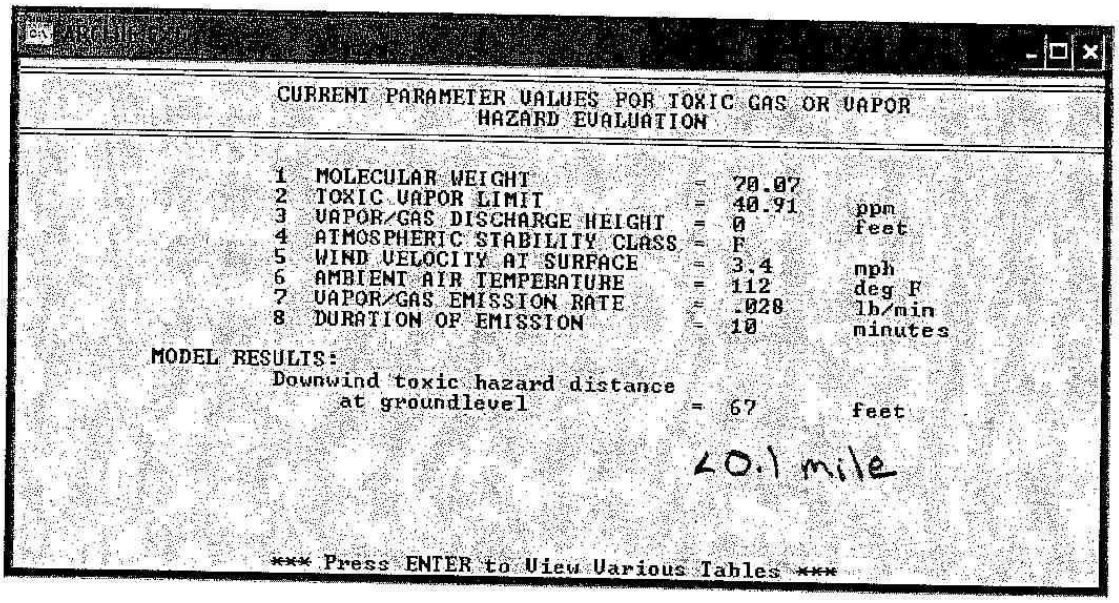
2 ADDRESS / LOCATION =
3 LATITUDE =
4 LONGITUDE =
5 DATE OF ASSESSMENT = 6/8/2004
6 SCENARIO DESCRIPTION =
POLYCHEMIE - LOS ANGELES, CA
ACRYLAMIDE WORST-CASE ANALYSIS
ADAM-QUAT REACTOR RELEASE
Want to change anything (Y/N or <cr>)?

ADAM-Quat Reactor Release

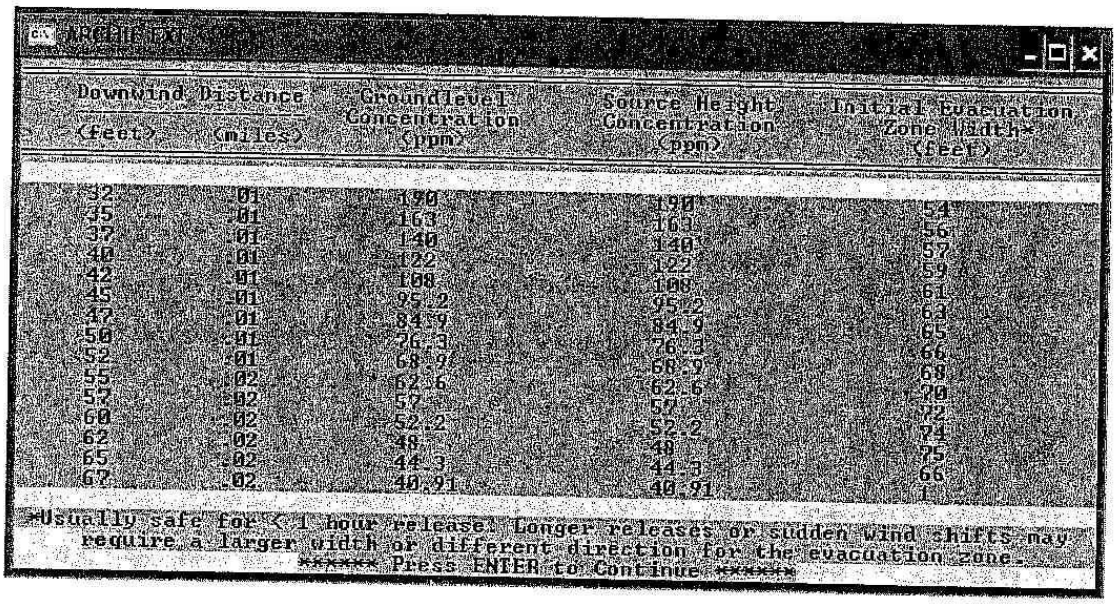


```
                CURRENT PARAMETER VALUES FOR LIQUID
                POOL EVAPORATION RATE ESTIMATION

     1   MOLECULAR WEIGHT              =  70.07
     2   NORMAL BOILING POINT          =  212          degrees F
     3   LIQUID SPECIFIC GRAVITY       =  1.04
     4   LIQ TEMP IN TANK              =  131          degrees F
     5   AMBIENT TEMPERATURE           =  112          degrees F
     6   LIQ VAP PRES AT AMB TEMP      =  .0426        mm Hg
     7   EVAPORATING POOL AREA         =  2819         sq ft
     8   WEIGHT SPILLED LIQUID         =  17525        lbs
     9   ATMOS STABILITY CLASS         =  F
     10  WIND VELOCITY                 =  3.4          mph

   MODEL RESULTS:

        Vapor evolution rate           =  .028         lbs/min
        Vapor evolution duration       =  640784.8     minutes


   Want to rerun the model with different input values (Y/N or <cr>)?
```



```
                CURRENT PARAMETER VALUES FOR TOXIC GAS OR VAPOR
                        HAZARD EVALUATION

     1  MOLECULAR WEIGHT               =  70.07
     2  TOXIC VAPOR LIMIT              =  40.91        ppm
     3  VAPOR/GAS DISCHARGE HEIGHT     =  0            feet
     4  ATMOSPHERIC STABILITY CLASS    =  F
     5  WIND VELOCITY AT SURFACE       =  3.4          mph
     6  AMBIENT AIR TEMPERATURE        =  112          deg F
     7  VAPOR/GAS EMISSION RATE        =  .028         lb/min
     8  DURATION OF EMISSION           =  10           minutes

   MODEL RESULTS:
        Downwind toxic hazard distance
          at groundlevel               =  67           feet

                                                  ~0.1 mile


   *** Press ENTER to View Various Tables ***
```

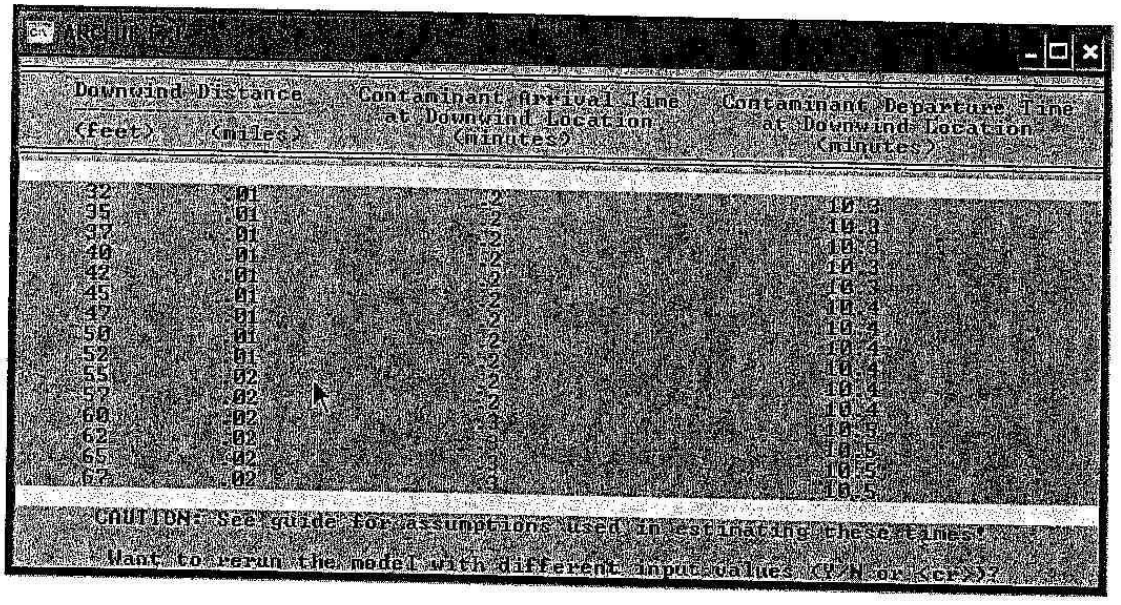
ADAM-Quat Reactor Release



Downwind Distance (feet)	(miles)	Groundlevel Concentration (ppm)	Source Height Concentration (ppm)	Initial Evacuation Zone Width* (feet)
32	.01	190	190	54
35	.01	163	163	56
37	.01	140	140	57
40	.01	122	122	59
42	.01	108	108	61
45	.01	95.2	95.2	63
47	.01	84.9	84.9	65
50	.01	76.3	76.3	66
52	.01	68.9	68.9	68
55	.02	62.6	62.6	70
57	.02	57	57	72
60	.02	52.2	52.2	74
62	.02	48	48	75
65	.02	44.3	44.3	66
67	.02	40.91	40.91	1

*Usually safe for < 1 hour release. Longer releases or sudden wind shifts may require a larger width or different direction for the evacuation zone.

****** Press ENTER to Continue ******



Downwind Distance (feet)	(miles)	Contaminant Arrival Time at Downwind Location (minutes)	Contaminant Departure Time at Downwind Location (minutes)
32	.01	2	10.3
35	.01	2	10.3
37	.01	2	10.3
40	.01	2	10.3
42	.01	2	10.3
45	.01	2	10.3
47	.01	2	10.4
50	.01	2	10.4
52	.01	2	10.4
55	.02	2	10.4
57	.02	2	10.4
60	.02	2	10.4
62	.02	3	10.5
65	.02	3	10.5
67	.02	3	10.5

CAUTION: See guide for assumptions used in estimating these times.

Want to rerun the model with different input values (Y/N or <cr>)?

WORST-CASE SCENARIO FOR TOXIC LIQUIDS
Polychemie Inc. - Los Angeles, CA
GESI Project No. 02512.01

Toxic Liquid	Maximum Quantity Released[1] QS	Area of Dike[2] A (ft^2)	Density Factor[3] of Liquid DF	Maximum Area of Pool[4] (ft^2)	Liquid Factor Ambient[5] LFA	Release Rate[6] QR (lb/min)	Duration of Release[7] t (min)	Maximum Duration of Release[8] (min)	Toxic Endpoint[9] (mg/l)	Release Rate/ Toxic Endpoint	Reference Table	Reference Table to Use	Distance to Endpoint[10] (miles)
Acrylamide, 50% density, lb/gal: 8.68	20,000 gals 173,600 lbs, 50% 86,800 lbs, 100%	NA	0.47	81,019	4.32E-06	0.49	354,532	10	0.11	4.5	3	- Buoyant - Urban - 10 minute release	0.1 (Shortest reportable distance)
Maximum On-site[11] 781,200 lbs, 37% 390,600 lbs, 100%	*RAILCAR RELEASE*												
Acrylamide, 50% density, lb/gal: 8.68	30,000 gals 260,400 lbs, 50% 130,200 lbs, 100%	2819 (asumed similar to existing dike area)	0.47	121,528	4.32E-06	0.02	15,284,022	10	0.11	0.15	3	- Buoyant - Urban - 10 minute release	0.1 (Shortest reportable distance)
	TANK (proposed) RELEASE												

NOTES:
- Calculations are based on U.S. EPA RMP Guidance for Offsite Consequence Analysis provided by the EPA dated April 15, 1999.
1 - Maximum quantity released is equal to the capacity of the largest vessel handling the liquid.
2 - For the release rate, use the minimum of the dike area (less tank area) or the area calculated using the density factor (see Note 4).
3 - Density Factor of Liquid, $DF = 1/ 0.033 * density\ of\ substance(lb/ft^3) = 1/ 0.033 * (8.68\ lb/gal * 0.7.4805\ gal/ft^3)$ [Eq. D-4]
4 - Maximum area of the liquid pool, A (ft^2) = Quantity Released,QS(lb) * Density Factor of the Liquid (DF) [Eq. 3-6]
5 - Liquid Factor Ambient (LFA) = $0.284 * MW\ (71.08)^{2/3} * VP\ (0.02166\ mmHg) / 82.05*298$ [Eq. D-2]
6 - Release Rate, QR = 1.4 * LFA * Area of the Pool or Dike (whichever is less). [Eq. 3-7]
Release Rate (no passive mitigation), QR = QS * 1.4 * LFA * DF. [Eq. 3-3]
7 - Duration of Release,t = Quantity Released,QS (lb) / Release Rate, QR (lb/min) [Eq. 3-5]
8 - Maximum Duration of the release is from the EPA RMP Guidance for OCA. The maximum duration for water solutions of toxic substances is 10 minutes. [Sect. 3.3]
9 - Toxic Endpoint from Appendix B of *California Accidental Release Prevention (CalARP) Program: Administering Agency Guidance*, California Governor's Office of Emergency Services (OES), August 28, 2003.
10 - Distance to endpoint is calculated using Reference Table.
11 - Maximum on-site based on 2 storage tanks and 2 railcars.

By: NSB 05/27/2004
Checked: KSD 05/28/2004

GESI

CALCULATION SHEET

Calc. No. TS-2

Prepared By: Natasha Brash Date: 5/27/2004 Reviewed By: Karen Dorman Date: 5/27/2004

Section I. General Information

Project: Polychemie, Inc. - Los Angeles, CA
2004 RMP Update

Project No.: 02512.01

Subject: RMP Alternate Case, Toxic Substance Release - Acrylamide

Section II. Scenario

A. 50% acrylamide is released from a ruptured unloading hose on a railcar during delivery. Break occurs before pump (Option 1) or after pump (Option 2). Compare quantity released from both options and use larger amount in subsequent analysis. Response time to stop release is 3 minutes.

Section III. Calculations

A. The OCA document (Ref. A) does not directly address releases for flammable liquids from a pressurized storage vessel. Therefore, the equation used for the alternate analysis for liquids in Appendix D of the OCA document will be used.

Option 1: Per OCA document, Equation D-13:

Discharge rate, m (kgs/sec) = $A_h C_d \{ \rho_l [2g\rho_l (H_L - H_h) + 2(P_0 - P_a)] \}^{0.5}$

A_h = opening area (m^2) = assume hose = 3 in = 0.0762 m = 0.005 m^2

C_d = discharge coefficient (unitless) = 0.62 From ARCHIE memo (Ref. B)

g = gravitational constant = 9.8 m/s^2

ρ_l = liquid density (kg/m^3) = 1000 kg/m^3 x 1.04 = 1040 kg/m^3

P_0 = storage pressure = 25 psig = 39.7 psia = 273,693 Pa

P_a = ambient pressure = 14.7 psia = 101,325 Pa

H_L = liquid height above bottom of container = assume top of railcar = 10 ft = 3.048 m

H_h = height of opening = 0 m (bottom loading)

m = 58.16 kg/sec = 3490 kg/min = 7,693 lbs/min

Assume response time, t = 3 minutes

Quantity release, QS = QR_L (or m) x t = 23,080 pounds Eq 3-5 of OCA Guidance

B. Option 2: Approximate quantity released as amount being pumped.

Liquid being pumped at 40-60 gpm.
Use 60 gpm and increase by 1.25 to account for increase in inflow due to loss of head.

Flow = 60 gpm x 1.25 = 75 gpm

QR = 75 gpm x 3 min = 225 gals x 8.68 lb/gal 1953 lbs

Section IV. Results

A. Evaluate Option 1 since quantity released before pump is greater.

Section V. References

A. Risk Management Program Guidance for Offsite Consequence Analysis. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, (EPA 550-B-99-009), 04/15/1999.

B. "Correction of Program Error - - New Version of MODCON.EXE" memo. Memo issued as an update to the ARCHIE model referenced in The Handbook of Chemical Hazard Analysis Procedures, Department of Transportation, the Federal Emergency Management Agency, and the Environmental Protection Agency. (http://hazmat.dot.gov/risk_tools.htm), 1989.

ALTERNATE SCENARIO FOR TOXIC LIQUIDS
Polychemie Inc. - Los Angeles, CA
GESI Project No. 02512.01

Toxic Liquid	Quantity Released[1] QS	Density Factor[2] of Liquid DF	Liquid Factor Ambient[3] LFA	Release Rate[4] QR (lb/min)	Duration of Release[5] (min)	Maximum Duration of Release[6] (min)	Toxic Endpoint[7] (mg/l)	Release Rate/ Toxic Endpoint	Reference Table to Use	Reference Table	Distance to Endpoint[8] (miles)
Acrylamide 50 % density = 8.68 lb/gal	23,080 lbs, 50% 11,540 lbs, 100% ***RAILCAR TRANSFER HOSE RUPTURE***	0.47	4.32E-06	0.11	206,811	10	0.11	1.0	- Buoyant - Urban - 10 minute release	16	0.1 (Shortest reportable distance)

NOTES:

- Calculations are based on U. S. EPA RMP Guidance for Offsite Consequence Analysis provided by the EPA dated April 15, 1999.
1 - Quantity Released is assumed to equal spill release amt. - see Calculation No. TS-2
2 - Density Factor of Liquid, DF = 1/ 0.033 * density of substance(lb/ft ^{3}) = 1/ 0.033 * (8.68 lb/gal * 0.7.4805 gal/ft ^{3}) [Eq. D-4]
3 - Liquid Factor Ambient (LFA) = 0.284 * MW (71.08)$^{2/3}$ * VP (0.02166 mmHg) / 82.05*298 [Eq. D-2]
4 - Unmitigated Release Rate, QR = QS * 2.4 * LFA * DF [Eq. 7-10]
5 - Duration of Release, t = Quantity Released,QS (lb) / Release Rate, QR (lb/min) [Eq. 3-5]
6 - Maximum Duration of the release is from the EPA RMP Guidance for OCA. The maximum duration for water solutions of toxic substances is 10 minutes. [Sect. 3.3]
7 - Toxic Endpoint from Appendix B of *California Accidental Release Prevention (CalARP) Program: Administering Agency Guidance* , California Governor's Office of Emergency Services (OES), August 28, 2003.
8 - Distance to endpoint is calculated using Reference Table.

By: NSB 05/27/2004
Checked: KSD 05/27/2004

Vapor Phase Concentrations of Acrylamide (ppm_v) at Various Temperatures
50% Aqueous Solution

Temperature		Vapor Concentration	Equivalent Vapor Pressure	Equivalent Vapor Pressure
(°C)	(°F)	(ppm_v)	(psia)	(mmHg)
10	50	1.3	0.000096	0.00494
20	68	3.6	0.000265	0.01368
25	77	5.7	0.000419	0.02166
30	86	9.1	0.000669	0.03458
37	98.6	17	0.001249	0.06460
50	122	54	0.003968	0.20520
70	158	225	0.016533	0.85500
80	176	431	0.031670	1.63780
90	194	769	0.056506	2.92220
100	212	1418	0.104195	5.38840

Vapor concentration - temperature data provided by Dow Chemical

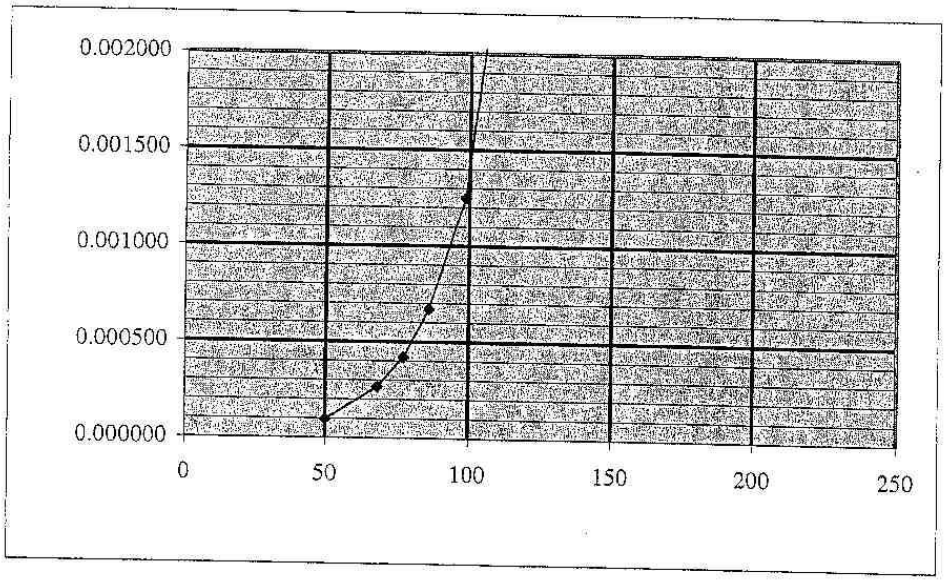
Vapor pressure estimated as follows (p_a):

$ppm_v / 1 \times 10^6$ = vapor mole fraction y_a

x_a = liquid mole fraction

p_a (psia) = $y_a P / x_a$, where P = 14.696 psia

Molecular weight acrylamide =	70.07 lb/lb mole	By:	RDH
Molecular weight water =	18 lb/lb mole	Checked:	KSD
For a 50% aqueous solution, x_a =	0.2044	Date:	7/1/1998



OES CALIFORNIA

Governor's Office of Emergency Services

California Accidental Release Prevention (CalARP) Program

Administering Agency Guidance

August 28, 2003

Appendix B
CalARP Program Toxic Endpoint Table

The following Toxic Endpoint (TE) Table should be used for all toxic substances listed in Section 2770.5, Table 1 and Table 3, of the CalARP Program. Where USEPA provided a TE for the FedARP Program, that TE is listed in the Table below. All other TEs were provided by the Office of Environmental Health Hazard Assessment (OEHHA), using preexisting toxicity values.

Table of Toxic Endpoints

[to be used as described in Section 2750.2 of the CalARP Program regulations]

Chemical Name	CAS Number	Toxic Endpoint (TE)		Basis for TE
		TE in (gm/m^3 or mg/l)	TE in (ppm) [1]	
Acetone Cyanohydrin	75-86-5	0.012	3	USEPA LOC [2]
Acetone Thiosemicarbazide	1752-30-3	0.1		USEPA LOC [2]
Acrolein [2-Propenal]	107-02-8	0.0011	0.5	USEPA ARP Program [3]
Acrylamide	79-06-1	0.11		USEPA LOC [2]
Acrylonitrile [2- Propenenitrile]	107-13-1	0.076	35	USEPA ARP Program [3]
Acrylyl Chloride [2-Propenoyl Chloride]	814-68-6	0.00090	0.2	USEPA ARP Program [3]
Aldicarb	116-06-3	0.0003		USEPA LOC [2]
Aldrin	309-00-2	0.002		IDLH95/10 [2]
Allyl Alcohol [2-Propen-1-ol]	107-18-6	0.036	15	USEPA ARP Program [3]
Allylamine [2-Propen-1-amine]	107-11-9	0.0032	1	USEPA ARP Program [3]
Aluminum Phosphide	20859-73-8	0.02		USEPA LOC [2]
Aminopterin	54-62-6	0.025		USEPA LOC [2]
Amiton Oxalate	3734-97-2	0.003		USEPA LOC [2]
Ammonia (anhydrous) or (aqueous), or Ammonium Hydroxide	7664-41-7	0.14	200	USEPA ARP Program [3]
Aniline	62-53-3	0.038	10	USEPA LOC [2]
Antimycin A	1397-94-0	0.0018		USEPA LOC [2]
ANTU	86-88-4	0.01		USEPA LOC [2]
Arsenic Pentoxide	1303-28-2	0.0005 as As		IDLH95/10 [2]
Arsenous Oxide	1327-53-3	0.0005 as As		IDLH95/10 [2]
Arsenous Trichloride	7784-34-1	0.010	1	USEPA ARP Program [3]
Arsine	7784-42-1	0.0019	0.6	USEPA ARP Program [3]
Azinophos-Ethyl	2642-71-9	0.0039		USEPA LOC [2]
Azinophos-Methyl	86-50-0	0.001		IDLH95/10 [2]
Benzene, 1-(Chloromethyl)-4-Nitro-	100-14-1	0.028		USEPA LOC [2]
Benzenearsonic Acid	98-05-5	0.00027		USEPA LOC [2]
Benzimidazole, 4,5-Dichloro-2-(Trifluoromethyl)-	3615-21-2	0.013		USEPA LOC [2]
Benzotrichloride	98-07-7	0.0007	0.1	USEPA LOC [2]
Bicyclo[2.2.1] Heptane-2-Carbonitrile, 5-Chloro- 6-((((Methylamino) Carbonyl)Oxy)Imino)-, (1s-(1-alpha, 2-beta, 4-alpha, 5-alpha, 6E))-	15271-41-7	0.019		USEPA LOC [2]
Bis(Chloromethyl) Ketone	534-07-6	0.00027		USEPA LOC [2]
Bitoscanate	4044-65-9	0.02		USEPA LOC [2]
Boron Trichloride [Borane, Trichloro-]	10294-34-5	0.010	2	USEPA ARP Program [3]
Boron Trifluoride [Borane, Trifluoro-]	7637-07-2	0.028	10	USEPA ARP Program [3]
Boron Trifluoride compound w/ Methyl Ether (1:1) [Boron, Trifluoro [oxybis[methane]]]-,T-4-	353-42-4	0.023	5	USEPA ARP Program [3]
Bromadiolone	28772-56-7	0.001		USEPA LOC [2]

KCQT Extremes
Highest Maximum Temp
JAN 1 - DEC 31 1921 - 2002

Los Angeles Civic Center

	INDIVIDUAL DAYS degrees	date		365/366 DAY PERIOD degrees	year
1.	112	6-26-1990	1.	77.7	1981
2.	110	9-04-1988	2.	77.6	1984
3.	110	9-01-1955	3.	77.5	1986
4.	109	6-27-1990	4.	77.3	1997
5.	109	9-26-1963	5.	77.0	1992
6.	108	10-04-1987	6.	76.9	1980
7.	108	10-03-1987	7.	76.9	1994
8.	108	9-02-1955	8.	76.8	1990
9.	107	10-10-1991	9.	76.8	1995
10.	107	7-01-1985	10.	76.7	1959
11.	107	9-25-1978	11.	76.7	1983
12.	107	9-25-1963	12.	76.7	1996
13.	107	9-20-1939	13.	76.6	1958
14.	106	4-06-1989	14.	76.3	1972
15.	106	9-24-1978	15.	76.3	1985
16.	106	6-20-1973	16.	76.1	1989
17.	106	9-13-1971	17.	76.1	1993
18.	106	9-28-1963	18.	75.6	1967
19.	106	9-27-1963	19.	75.5	1987
20.	106	9-21-1939	20.	75.4	1966

Total Years = 82
Missing days = 336

APPENDIX B

Impacted Population and Environmental Receptor Data

GESI

CALCULATION SHEET

Calc. No.
Pop-1

Prepared By: Natasha Brash Date: 6/3/2004 Reviewed By: Karen Dorman Date: 6/3/2004

Section I. General Information

Project: Polychemie Inc. - Los Angeles, CA
2004 RMP Update

Project No.: 02512.01

Subject: Impacted Residential Population Estimates

Section II. Background

A. From off-site consequence analysis, impacted areas are at 0.1, 0.2, and 0.32 mile radii. Total population within these impacted radii are estimted using aerial photographs, U.S. Census data, and general knowledge of the area. Aerial photographs and U.S. Census data showing total residential population per block are attached.

Section III. Estimates

0.1 mile radius: From general knowledge of the area, only industries are located within a 0.1 mile radius. Therefore, residential population is estimted to be 0.

0.2 mile radius: Beyond the immediate industrial area, there are residential areas to the southwest and north at the 0.2 mile radius. From the U.S. Census data showing total residential population per block, there are apporximately 2 blocks with a population of of 100-250 persons/block. Using 250 as a conservative estimate, total residential population is equal to 2 x 250 = 500 persons.

0.32 mile radius: At 0.32 mile radius, the residential population expands to the northeast in addition to the sothwest and north. Using U.S. Census data showing total residential population per block, total residential population is estimated as follows:

1 block x 50 persons =	50
2½ blocks x 100 persons =	250
3½ blocks x 250 persons =	875
1½ blocks at >250 persons	
(Use 3 blocks x 250 as conservative estimate)	
3 blocks x 250 persons =	750
Total residential population	1925

Section IV. Results

Radius (miles)	Total Population
0.1	0
0.2	500
0.32	1925

U.S. Environmental Protection Agency

Toxics Release Inventory (TRI) Program

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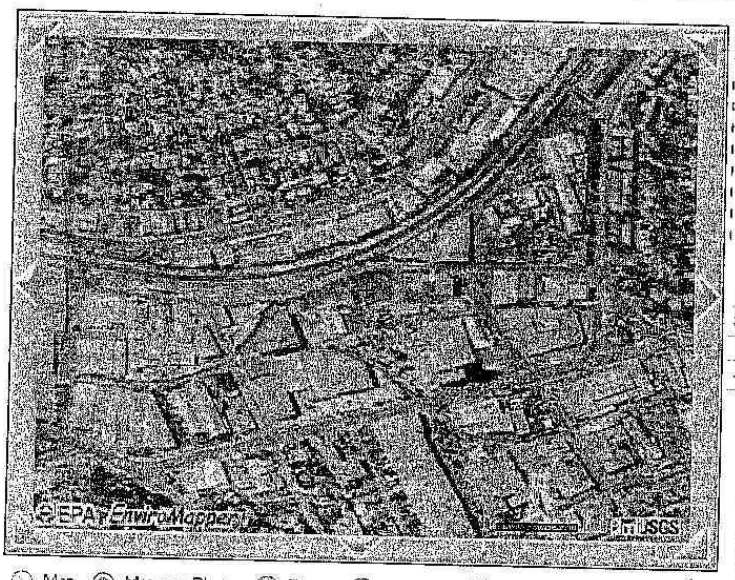
- Browse TRI Topics
- Get TRI Data
- Reporting Materials
- TRI Chemicals
- TRI PBT Chemicals
- Laws, Regulations and Executive Order
- Guidance Documents
- State TRI Programs
- International TRI



Find Another Location

Zoom In

Zoom Out

Latitude: 34°03'43"

Longitude: -118°10'56"

LEGEND

- Toxic releases
- Cities
- Railroads
- Streets
- Major roads
- Local streets
- Water bodies
- Streams
- States
- Counties

Map | Map over Photo | Photo | Topo Map | Locator Map

0.08 Miles

Your goal: Get the center of you facility's production area centered in the map/photo window at the maximum zoom level. This will allow you to get the most precise coordinates.
Zoom-in/out: Select Zoom In, Zoom Out Bar on the right side.
Recenter: When you are not at the maximum zoom-in level, click on the map/photo to center.
Move map/photo: Click the arrow controls around the map/photo window to move in the direction you choose (North, South, East or West or NW, NE, SW, SE).
Mark location: Once you are at the maximum zoom-in level, click the center of the facility production area on the photo. This will mark the coordinates in the Latitude and Longitude fields.

MAD Code Information

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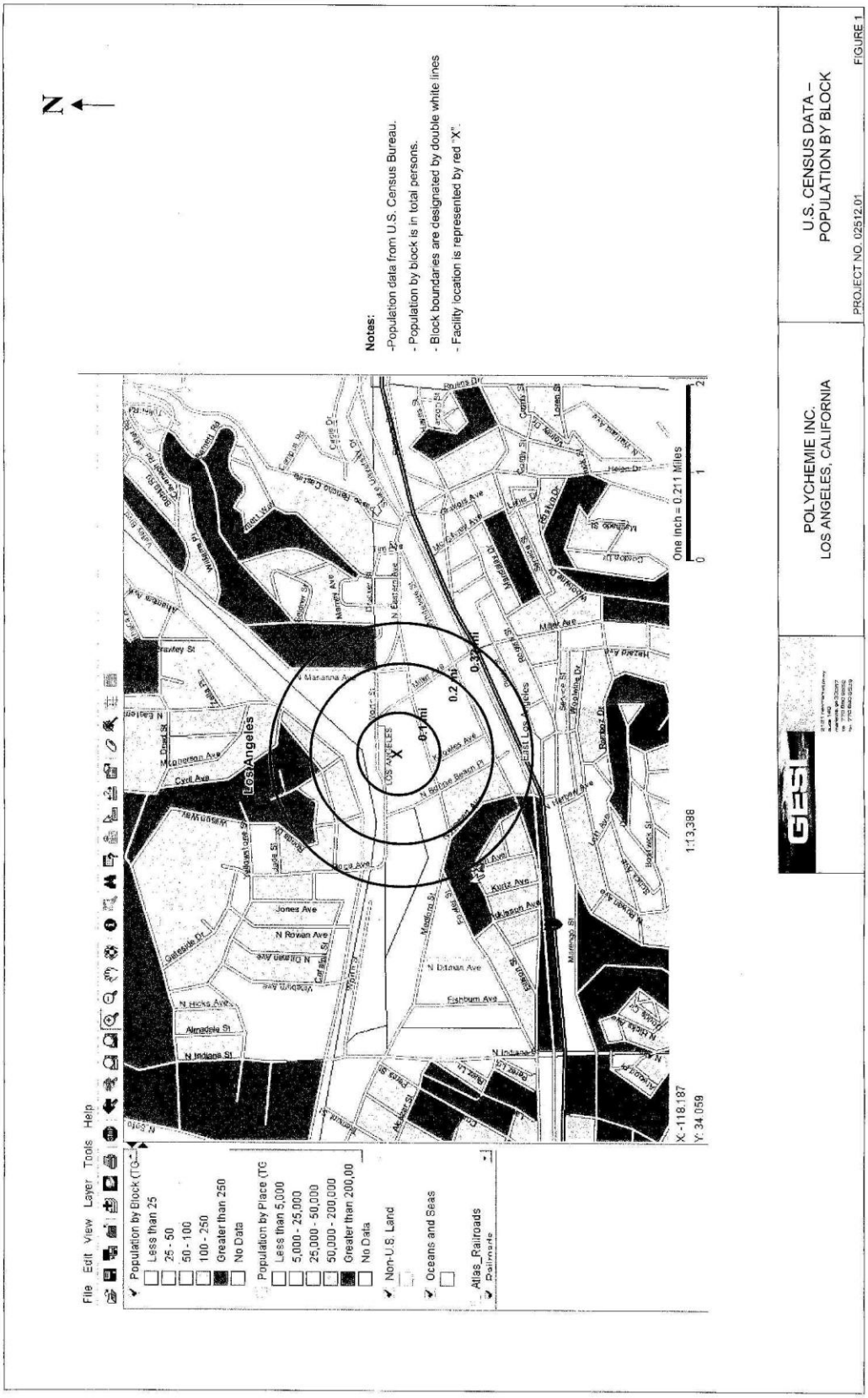
Last updated on Tuesday, March 02, 2004
URL: http://epamap20.epa.gov/tri/emtrl.asp


N
Notes:
-Population data from U.S. Census Bureau.
- Population by block is in total persons.
- Block boundaries are designated by double white lines
- Facility location is represented by red "X".
POLYCHEMIE INC.
LOS ANGELES, CALIFORNIA
U.S. CENSUS DATA –
POPULATION BY BLOCK
PROJECT NO. 02512.01
FIGURE 1
GSI
0.1 mi
0.2 mi
0.3 mi
One Inch = 0.211 Miles
1:13,398
X: -118.187
Y: 34.059
Los Angeles
File Edit View Layer Tools Help
Population by Block (TG
Less than 25
25 - 50
50 - 100
100 - 250
Greater than 250
No Data
Population by Place (TG
Less than 5,000
5,000 - 25,000
25,000 - 50,000
50,000 - 200,000
Greater than 200,00
No Data
Non-U.S. Land
Oceans and Seas
Atlas_Railroads
Railroads