

WORKSHEET FOR RANKING DISPOSAL SITES

Name of Base: Naval Training Center, San Diego, Calif.

Name of Site: 13-089, Site 3, Exchange Gas Station

Prepared by: SCS Engineers

Date:

Years of site use: 1950's-present, leak detected in 1973

Map Coordinates: N-18 to M-18 (1984 Master Plan map)

Location: beneath Building 344; corner Rosecrans and Nimitz, SW
corner of NTC

Approximate size:

Shops that may have used the site: Navy Exchange, but contamination
may be from off-site

Description of site: During construction of hotel across street,
gasoline found in excavation. Tanks at Exchange tested tight.
groundwater gradient toward bay.

Comments:

I. RECEPTORS

<u>Factor</u>	<u>Measurement, Observation</u>	<u>Information Obtained from:</u>
Working population w/in 1000 ft:	>100	estimate
Distance to nearest well in aquifer of concern:	6 miles	RWQCB
Land use/zoning w/in 1 mile radius:	residential	street map
Distance to reservation boundary:	50 ft	GDM
Critical environments w/in 1 mile radius:	possible least tern habitat	
Water quality of nearest surface water body:	boating/swimming	
Ground water use of the aquifer of concern:	not used	
Population served by surface water supply w/in 3 miles downstream:	0	
Population served by the aquifer of concern supply w/in 3 miles of site:	0	

II. PATHWAYS

Factor

Distance to nearest surface water:	100 ft	GDM
Net precipitation:	-20 in	Calif Dept Water Resources
Surface erosion:	none	USDA Soil Cons Service
Surface permeability:	est 30-50% clay	USDA SCS
1 yr-24 hr rainfall (or mean annual no. of thndrstrms):	1.6 in	NOAA
In which flood plain:	100-year	FIMA
Depth to ground water:	5-10 ft	
Subsurface flows:	<5 ft	
Direct access to ground water:	high risk	
Lab evidence of contaminant migration (attach results)		

III. WASTE CHARACTERISTICS *

<u>Factor</u>	<u>Measurements, Observations</u>	<u>Information Obtained from:</u>
Waste types:	leaded gasoline	
Waste quantity:	unknown	
Toxicity - Acute:	high	Sax
Chronic:	high	Sax
Persistency:	persistent (lead)	
Flammability:	3	NFPA
Reactivity:	0	NFPA
Incompatible wastes present:	none	
Corrosiveness:	NA	
Solubility at 20 C:	insoluble	
Bioaccumulative:	yes	
Physical State:	liquid	

* NOTE: May be more than one of these pages per site

IV. WASTE MANAGEMENT

<u>Factor</u>	<u>Measurement, Observation</u>	<u>Information Obtained from:</u>
Site containment	none (some product recovery off-base)	
Confidence level of information on site	confirmed	

FIGURE 2

NAME OF SITE 13-089 Site 3, Exchange Gas Station
 LOCATION Naval Training Center, San Diego, Calif.
 DATE OF OPERATION OR OCCURENCE 1973
 OWNER/OPERATOR above
 COMMENTS/DESCRIPTION contamination may be from off-base
 SITE RATED BY SCS Engineers

I. RECEPTORS (see also table 1-1)

	Rating Factor	Factor Rating (0-3)	Multiplier	Factor Score	Maximum Possible Score
A. Population within 1,000 feet of site	3	4	12	12	12
B. Distance to nearest well	0	10	0	30	30
C. Land use/zoning w/in 1 mile radius	3	3	9	9	9
D. Distance to reservation boundary	3	6	18	18	18
E. Critical environments w/in 1 mile radius of site	1	10	10	30	30
F. Water quality of nearest surface water body	2	6	12	18	18
G. Ground water use of the aquifer of concern	0	9	0	27	27
H. Population served by surface water supply w/in 3 miles downstream of site	0	6	0	18	18
I. Population served by ground water supply w/in 3 miles of site	0	6	0	18	18

Subtotals 61 180

Receptors subscore = (factor score subtotal / 0.339)

FIGURE 2 (continued)

II. PATHWAYS (see also table 1-II)

Rating Factor	Factor Rating (0-3)	Multiplier	Factor Score	Maximum Factor Possible Score
A. If there is documented laboratory evidence of migration of hazardous contaminants away from the site in question, assign maximum factor subscore of 1 point for direct evidence. If direct evidence exists then proceed to C. If no evidence exists, proceed to B.				
				Subscore <u>0</u>
B. Rate the migration potential for 3 potential pathways: surface water migration, flooding, and ground water migration. Select the highest rating, and proceed to C.				
1. Surface water migration				
Distance to nearest down gradient surface water	3	8	24	24
Net precipitation	0	6	0	18
Surface erosion	0	8	0	24
Soil permeability	2	6	12	18
Rainfall intensity	1	8	8	24
		Subtotals	44	108
				Subscore=(factor score subtotal/max score subtotal) <u>0.41</u>
2. Flooding				
	1	1	1	3
				Subscore = (factor score/3) <u>0.33</u>
3. Ground water migration				
Depth to ground water	3	8	24	24
Net precipitation	0	6	0	18
Soil permeability	1	8	8	24
Subsurface flows	1	8	8	24
Direct access to ground water	3	8	24	24
		Subtotals	64	114
				Subscore=(factor score subtotal/max score subtotal) <u>0.56</u>
C. Highest pathway subscore.				
Enter the highest subscore value from A, B-1, B-2, or B-3 above.				
				Pathways Subscore <u>0.56</u>

FIGURE 2 (Continued)

III. WASTE CHARACTERISTICS (see also table 1-III)

A.

Rating Factor	Factor Rating (0-3)	Multiplier	Weighted Factor
Waste Quantity	3	1	3 = Q
Acute Toxicity	3	8	24 = AT
Chronic Toxicity	3	8	24 = CT
Persistency	3	6	18 = P
Flammability	3	4	12 = F
Reactivity	0	4	0 = R
Incompatibility	0	5	0 = I
Corrosiveness	0	3	0 = C
Solubility	0	5	0 = S
Bioaccumulation	3	6	18 = B
Physical State	3	3	9 = PS
Years site was in use	1	1	1 = t
Years since site closed	2	1	2 = dt

Weighted Factor = Factor Rating x Multiplier

FIGURE 2 (Continued)

III. WASTE CHARACTERISTICS (continued)

B. Take the weighted factors and multiply together as indicated below, then add the results together, and add PS from figure 2-IIIA.

	<u>Score</u>	<u>Maximum Score</u>
ATxQ =	72	72
CTxQ =	72	72
PxQxdt =	108	162
FxQ =	36	36
RxQ =	0	36
IxQ =	0	45
CxQ =	0	27
SxQ =	0	45
Bx(dt+t) =	54	108
PS =	<u>9</u>	<u>9</u>
Subtotal =	351	612

Waste Characteristics Subscore = subtotal/maximum subtotal

$$= \underline{0.57}$$

General Note:

If data are not available or are known to be incomplete under items I-A through I, II-B-1 or II-B-3, or III-A, then leave blank for calculation of factor score and maximum subscore (i.e. for calculation of the subscore divide the factor score by the maximum subscore minus the unknown item's maximum score).

FIGURE 2 (continued)

IV. WASTE MANAGEMENT AND FINAL SCORE (see also table 1-IV)

- A. Receptors Subscore = 0.339 = U_R
 Pathways Subscore = 0.56 = U_P
 Waste Characteristics Subscore = 0.57 = U_W

Enter the above subscores in the equation:

$$\begin{aligned} \text{Site Subscore} = U_{\text{site}} &= 100 (U_R) (U_P) (U_W) \\ &= \underline{10.82} \end{aligned}$$

- B. Apply factor for waste containment from waste management (table 1-IV)

$$\begin{aligned} \text{Site Subscore} \times \text{Waste Management} &= \text{Final Score} \\ \underline{10.82} \times \underline{1} &= \underline{10.82} \end{aligned}$$

Note: If Final Scores are tied for sites on one base, rate the sites according to the confidence level of the information.

Confirmed Criteria

At least 2 verbal reports from interviews or written information from records.

Knowledge of types and quantities of wastes generated by shops and other areas on base.

Based on the above, a determination of the types and quantities of waste disposed of at the site.

Suspected Criteria

One or no verbal reports or conflicting verbal reports, and no written information from records.

Logic based on a knowledge of types and quantities of wastes generated at the base, and a history of past waste disposal practices indicate that these wastes were disposed of at the site.

Confirmed sites would be above suspected sites in the ranking.