

(3128-00001)

***** CONFIDENTIAL *****
***** PREDECISIONAL DOCUMENT *****

SUMMARY SCORESHEET
FOR COMPUTING PROJECTED HRS SCORE

SITE NAME: Treasure Island Naval Station

CITY, COUNTY: San Francisco, San Francisco

EPA ID #: CA7170023330 EVALUATOR: Howard Edwards

PROGRAM ACCOUNT #: FCA1843PAA DATE: 9-26-91

Lat/Long: 37°50'N/122°22'30"W T/R/S: T1South,R5West,S 24 & 25

THIS SCORESHEET IS FOR A: PA SSI LSI

SIRE PA Redo Other (Specify) Federal Facility PA/SI Review

RCRA STATUS (check all that apply):

Generator Small Quantity Generator Transporter TSDf
 Not Listed in RCRA Database as of (date of printout) / /

STATE SUPERFUND STATUS:

BEP (date) / / WQARF (date) / /
 No State Superfund Status (date) Jan./ / 91

	S pathway	S ² pathway
Groundwater Migration Pathway Score (S _{gw})	*	
Surface Water Migration Pathway Score (S _{sw})	100	10,000
Soil Exposure Pathway Score (S _s)	11.54	133.2
Air Migration Pathway Score (S _a)	24.33	591.9
$S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$	XXXXXXXXXX	10,725.1
$(S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2)/4$	XXXXXXXXXX	2,681.3
$\sqrt{(S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2)/4}$	XXXXXXXXXX	51.78

*Pathways not assigned a score (explain):
No groundwater use within 4 miles.
he/tins/hrs

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor Categories and Factors

DRINKING WATER THREAT

	<u>Likelihood of Release</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
1.	Observed Release	550	_____	_____	_____
2.	Potential to Release by Overland Flow		_____	_____	_____
2a.	Containment	10	_____	_____	_____
2b.	Runoff	25	_____	_____	_____
2c.	Distance to Surface Water	25	_____	_____	_____
2d.	Potential to Release by Overland Flow [lines 2a x (2b+2c)]	500	_____	_____	_____
3.	Potential to Release by Flood		_____	_____	_____
3a.	Containment (Flood)	10	_____	_____	_____
3b.	Flood Frequency	50	_____	_____	_____
3c.	Potential to Release by Flood (lines 3a x 3b)	500	_____	_____	_____
4.	Potential to Release (Lines 2d+3c, subject to a maximum of 500)	500	_____	_____	_____
5.	Likelihood of Release (Higher of lines 1 or 4)	550	_____	_____	_____
<u>Waste Characteristics</u>					
6.	Toxicity/Persistence	a	_____	_____	_____
7.	Hazardous Waste Quantity	a	_____	_____	_____
8.	Waste Characteristics (lines 6 x 7, then assign a value from Table 2-7)	100	_____	_____	_____
<u>Targets</u>					
9.	Nearest Intake	50	0	SW-1	H
10.	Population ^d		_____	_____	_____
10a.	Level I Concentrations	b	0	_____	_____
10b.	Level II Concentrations	b	0	_____	_____
10c.	Potential Contamination	b	0	_____	_____
10d.	Population (lines 10a + 10b+10c)	b	0	_____	_____
11.	Resources	5	0	_____	_____
12.	Targets (lines 9+10d+11)	b	_____	_____	_____
<u>Drinking Water Threat Score</u>					
13.	Drinking Water Threat [(Lines 5 x 8 x 12)/82,500, subject to a maximum of 100]	100	0	_____	_____

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET (CONTINUED)

Factor Categories and Factors

HUMAN FOOD CHAIN THREAT

	<u>Likelihood of Release</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
14.	Likelihood of Release (Same value as line 5)	550	550	SW-2	E
	<u>Waste Characteristics</u>				
15.	Toxicity/Persistence/ Bioaccumulation	a	5×10^8	SW-3	E
16.	Hazardous Waste Quantity	a	100	SW-4	E
17.	Waste Characteristics (Toxicity/Persistence x Hazardous Waste Quantity x Bioaccumulation, then assign a value from Table 2-7)	1,000	320		
	<u>Targets</u>				
18.	Food Chain Individual	50	45	SW-5	E
19.	Population ^d				
	19a. Level I Concentrations	b	0	SW-6	E
	19b. Level II Concentrations	b	0		
	19c. Potential Human Food Chain Contamination	b	0.31	SW-7	H
	19d. Population (lines 19a+19b+19c)	b	0.31		
20.	Targets (lines 18+19d)	b	45.31		
	<u>Human Food Chain Threat Score</u>				
21.	Human Food Chain Threat [(Lines 14 x 17 x 20)/82,500 subject to a maximum of 100]	100	96		

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET (CONTINUED)

Factor Categories and Factors

ENVIRONMENTAL THREAT

	<u>Likelihood of Release</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
22.	Likelihood of Release (Same value as line 5)	550	<u>550</u>	<u>SW-2</u>	<u>E</u>
	<u>Waste Characteristics</u>				
23.	Ecosystem Toxicity/Persistence/ Bioaccumulation	a	<u>5 X 10⁸</u>	<u>SW-3</u>	<u>E</u>
24.	Hazardous Waste Quantity	a	<u>100</u>	<u>SW-4</u>	<u>E</u>
25.	Waste Characteristics (Ecosystem Tox./Persistence x Hazardous Waste Quantity x Bioaccumulation, then assign a value from Table 2-7)	1,000	<u>320</u>		
	<u>Targets</u>				
26.	Sensitive Environments ^d				
26a.	Level I Concentrations	b			
26b.	Level II Concentrations	b	<u>100</u>	<u>SW-8</u>	<u>E</u>
26c.	Potential Contamination	b			
26d.	Sensitive Environments (lines 26a+26b+26c)	b			
27.	Targets (Value from line 26d)	b	<u>100</u>		
	<u>Environmental Threat Score</u>				
28.	Environmental Threat Score [(lines 22 x 25 x 27)/82,500 subject to a maximum of 60]	60	<u>60</u>		

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE FOR A WATERSHED

29.	Watershed Score [(Lines 13+21+28), subject to a maximum of 100]	100	<u>100</u>	^c
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SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE

30.	Component Score (Sof) (Highest score from Line 29 for all watersheds evaluated, subject to a maximum of 100)	100	<u>100</u>	^c
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- a Maximum value applies to waste characteristics category.
- b Maximum value not applicable.
- c Do not round to the nearest integer.
- d Use additional tables

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT CALCULATIONS

12. Drinking Water Targets

Actual Contamination

Intake	Contaminant Detected	Concentration (Note Units)	Benchmark	(A) Apportioned Population Intake Serves	(B) Level* Multip.	(A x B)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
				Sum (A x B) Level I		_____
				Sum (A x B) Level II		_____

* Level Multipliers
 - Level I = 10
 - Level II = 1

Potential Contamination

Type of Surface Water Body (Dilution)	(A) Dilution-Weighted Population Value (Table 4-14)
< 10 cfs	_____
10 to 100 cfs	_____
> 100 to 1,000 cfs	_____
> 1,000 to 10,000 cfs	_____
> 10,000 to 100,000 cfs	_____
Shallow ocean zone (depth < 20 ft)	_____
Moderate ocean zone (depth 20 to 200 ft)	_____
Deep ocean zone (depth > 200 ft)	_____
3-mile mixing zone in quiet flowing river \geq 10 cfs	_____
Sum (A)	_____

Potential Contamination = $\frac{\text{Sum (A)}}{10}$ = _____

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT CALCULATIONS (CONTINUED)

20. Food Chain Targets

Actual Contamination

Fishery	Contaminant	Concentration	Benchmark	(A) Assigned Population Value (Table 4-18)	(B) Level* Multiplier	(A x B)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
				Sum (A x B) Level I		_____
				Sum (A x B) Level II		_____

* Level Multipliers

- Level I = 10
- Level II = 1

Potential Contamination

Fishery	Production (lb/yr)	(P) Assigned Population Value (Table 4-18)	Average Stream Flow at Fishery (cfs)	(DW) Dilution Weighting Factor (Table 4-13)	(P x DW)
S F BAY	11,000,000	31,000	bay	.0001	3.1
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
				Sum (P x DW)	3.1

Fisheries Subject to Potential Contamination = $\frac{\text{Sum (P x DW)}}{10} = \frac{3.1}{10} = 0.31$

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT CALCULATIONS (CONTINUED)

27. Environmental Targets

Actual Contamination

Sensitive Environment or Wetland Length (miles)	Contaminant	Concentration Benchmark	(A) Assigned Value (Table 4-23 and/or 4-24)	(B) Level Multiplier*	(A x B)	
Least tern or Brown pelican or Perigrin Falcon	unknown	level2	unknown	100	1	100
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
Sum (A x B) Level I					_____	
Sum (A x B) Level II					100	

- * Level Multipliers
 - Level I = 10
 - Level II = 1

Potential Contamination

Sensitive Environment or Wetland Length (miles)	(A) Assigned Value (Table 4-23 and/or 4-24)	Average Stream Flow (cfs)	(DW) Dilution Weighting Factor (Table 4-13)	(A x DW)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Sum of (A x DW)				_____

Potential contamination = $\frac{\text{Sum (A x DW)}}{10}$ = _____

SOIL EXPOSURE PATHWAY SCORESHEET

Factor Categories and Factors

RESIDENT POPULATION THREAT

	<u>Likelihood of Exposure</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
1.	Likelihood of Exposure	550	<u>550</u>	<u>SE-1</u>	<u>E</u>
	<u>Waste Characteristics</u>				
2.	Toxicity	a	<u>10,000</u>	<u>SE-2</u>	<u>E</u>
3.	Hazardous Waste Quantity	a	<u>10</u>	<u>SE-3</u>	<u>H</u>
4.	Waste Characteristics	100	<u>18</u>		
	<u>Targets</u>				
5.	Resident Individual	50	<u>45</u>	<u>SE-4</u>	<u>E</u>
6.	Resident Population				
6a.	Level I Concentrations	b			
6b.	Level II Concentrations	b	<u>10</u>	<u>SE-5</u>	<u>E</u>
6c.	Resident Population (lines 6a+6b)	b	<u>10</u>		
7.	Workers	15	<u>10</u>	<u>SE-6</u>	<u>E</u>
8.	Resources	5	<u>0</u>	<u>SE-7</u>	<u>E</u>
9.	Terrestrial Sensitive Environments	c	<u>0</u>	<u>SE-8</u>	<u>E</u>
10.	Targets (lines 5+6c+7+8+9)	b	<u>65</u>		
	<u>Resident Population Threat Score</u>				
11.	Resident Population Score (lines 1 x 4 x 10)	b	<u>940,500</u>		

NEARBY POPULATION THREAT

	<u>Likelihood of Exposure</u>				
12.	Attractiveness/Accessibility	100	<u>25</u>	<u>SE-9</u>	
13.	Area of Contamination	100	<u>60</u>	<u>SE-10</u>	
14.	Likelihood of Exposure	500	<u>50</u>		
	<u>Waste Characteristics</u>				
15.	Toxicity	a	<u>10,000</u>	<u>SE-2</u>	
16.	Hazardous Waste Quantity	a	<u>10</u>	<u>SE-3</u>	
17.	Waste Characteristics	100	<u>18</u>		
	<u>Targets</u>				
18.	Nearby Individual	1	<u>0</u>	<u>SE-4</u>	
19.	Population Within 1-Mile ^e	b	<u>13.0</u>	<u>SE-11</u>	
20.	Targets (lines 18+19)	b	<u>13.0</u>		

SOIL EXPOSURE PATHWAY SCORESHEET (CONTINUED)

Factor Categories and Factors

<u>Nearby Population Threat Score</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
21. Nearby Population Threat (lines 14 x 17 x 20)	b	<u>11,700</u>	_____	_____

SOIL EXPOSURE PATHWAY SCORE

22. Soil Exposure Pathway Score (Ss), [lines (11+21)/82,500 subject to a maximum of 100]	100	<div style="border: 1px solid black; padding: 2px; display: inline-block;">11.54</div> ^d		
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- a Maximum value applies to waste characteristics category.
- b Maximum value not applicable.
- c No specific maximum value applies to this factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.
- d Do not round to the nearest integer.
- e Use additional tables.

SOIL EXPOSURE CALCULATIONS

20. Nearby Population Targets

Distance (miles)	Total Population Within Distance Ring	(P) Distance- Weighted Population Values (Table 5-10)
0 to 1/4	<u>3,001</u>	<u>130</u>
>1/4 to 1/2	_____	_____
>1/2 to 1	_____	_____
	Sum (P)	_____

Nearby Population Threat factor value $\frac{\text{Sum (P)}}{10} = \underline{13.0}$

AIR MIGRATION PATHWAY SCORESHEET

Factor Categories and Factors

<u>Likelihood of Release</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
1. Observed Release	550	0	A-1	H
2. Potential to Release ^e				
2a. Gas Potential	500	500	A-2	E
2b. Particulate Potential	500	390	A-3	E
2c. Potential to Release (higher of lines 2a and 2b)	500	500		
3. Likelihood of Release (higher of Lines 1 or 2c)	550	500		
<u>Waste Characteristics</u>				
4. Toxicity/Mobility	a	10,000	A-4	E
5. Hazardous Waste Quantity	a	10	A-5	H
6. Waste Characteristics (lines 4 x 5, then use Table 2-7)	100	18		
<u>Targets</u>				
7. Nearest Individual	50	20	A-6	H
8. Population ^e				
8a. Level I Concentrations	b			
8b. Level II Concentrations	b			
8c. Potential Contamination ^e	b	192	A-7	H
8d. Population (8a+8b+8c)	b	192		
9. Resources	5	5	A-8	E
10. Sensitive Environments ^e				
10a. Actual Contamination	c			
10b. Potential Contamination	c	6	A-9	
10c. Sensitive Environments (lines 10a+10b)	c	6		
11. Targets (Lines 7+8d+9+10c)	b	223		

Air Pathway Migration Score

12. Air Pathway Score (Sa) [(lines 3 x 6 x 11)/82,500]	100	24.33	^d
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a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c No specific maximum value applies to factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.

d Do not round to nearest integer.

e Use additional tables.

AIR PATHWAY CALCULATIONS

2. Potential to Release

Gas Potential to Release

Source Type (Name)	Gas Containment Factor Value (Table 6-3)	Gas Source Type Factor Value (Table 6-4)	Gas Migration Potential Factor Value (Table 6-7)	Sum	Gas Source Value
	(A)	(B)	(C)	(B+C)	A x (B+C)
1. <u>soil</u>	<u>10</u>	<u> </u>	<u>17</u>	<u>17</u>	<u>170</u>
2. <u>drum</u>	<u>10</u>	<u> </u>	<u>17</u>	<u>17</u>	<u>170</u>
3. <u>sludge</u>	<u>10</u>	<u>28</u>	<u>6</u>	<u>34</u>	<u>340</u>
4. <u>landfill</u>	<u>10</u>	<u>33*</u>	<u>17</u>	<u>50</u>	<u>500</u>
Gas Potential to Release Factor Value (Select the highest Gas Source Value)					<u> </u>

Particulate Potential to Release

Source Type (Name)	Particulate Containment Factor Value (Table 6-9)	Particulate Source Type Factor Value (Table 6-4)	Particulate Migration Potential Factor Value (Figure 6-2)	Sum	Particulate Source Value
	(A)	(B)	(C)	(B+C)	A x (B+C)
1. <u>soil</u>	<u>10</u>	<u>0</u>	<u>17</u>	<u>17</u>	<u>170</u>
2. <u>drums</u>	<u>10</u>	<u>0</u>	<u>17</u>	<u>17</u>	<u>170</u>
3. <u>sledy depot</u>	<u>10</u>	<u>22</u>	<u>17</u>	<u>39</u>	<u>390</u>
4. <u>landfill</u>	<u>10</u>	<u>22</u>	<u>17</u>	<u>39</u>	<u>390</u>
Particulate Potential to Release Factor Value (Select the highest Particulate Source Value)					<u> </u>

AIR PATHWAY CALCULATIONS (CONTINUED)

8. Potential Contamination

Distance (miles)	Total Population Within Distance Ring	(A) Distance-Weighted Population Value (Table 6-17)
On a source (0)	0	_____
>0 to 0.25	>3,000	1,304
>0.25 to 0.5	_____	_____
>0.5 to 1	_____	_____
>1 to 2	35,178	266
>2 to 3	96,688	120
>3 to 4	126,843	229
	Sum of (A) =	1,919

Air Potential Contamination Factor Value = $\frac{\text{Sum of (A)}}{10} = \underline{192}$

10. Sensitive Environments

Actual Contamination			
Wetland or Type of Sensitive Environment	(A) Sensitive Environment Rating Value (Table 4-23)	(B) Wetland Rating Value (Table 6-18)	(A + B)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
	Actual Contamination Factor Value [sum (A + B)]		75

AIR PATHWAY CALCULATIONS (CONTINUED)

Potential Contamination					
Wetland or Type of Sensitive Environment	(A) Sensitive Environment Rating Value (Table 4-23)	(B) Wetland* Rating Value (Table 6-18)	Distance (miles)	(DW) Distance Weights (Table 6-15)	DW x (A + B)
Falcon	75		0.25	.25	18.75
Tern	75		0.25	.25	18.75
Pelican	75		0.25	.25	18.75
Sum DW x (A + B)					56.25

Potential Contamination
 Sensitive Environments Factor Value = $\frac{\text{Sum DW x (A + B)}}{10} = \underline{\underline{6}}$

* Only assign a Wetland Rating Value once for each wetland within a distance category.

HRS SCORESHEET
RATIONALE: Treasure Island Naval Station
EPA ID # CA7170023330

GROUNDWATER

- * There is no utilization of groundwater within 4 miles of the site. Groundwater underlying the site is brackish due to intrusion of bay water and is generally considered non-potable. (ref. NEESA-PA)

SURFACE WATER

- SW-1 There are no surface water bodies on either of the two islands that make up the site. The San Francisco Bay with surrounds the site is not utilized as a drinking water source. (ref. NEESA-PA)
- SW-2 There has not been any sampling of surface water bodies to determine whether a release has occurred. A release was projected based on the lack of containment, distance to surface water, and runoff characteristics. Documentation exists, that indicates that some wastes were directly deposited into the San Francisco Bay through storm drains from the site. (ref. NEESA-PA)
- SW-3 The types of wastes and contaminants deposited on site are mostly unknown. The value was determined based on a worst case situation using PCBs, and mercury as contaminants of concern. (ref. NEESA-PA)
- SW-4 The quantity of waste deposited is unknown. It does not appear likely that the waste quantity factor value would exceed 100 since the quantity value is so much less then 10,000. (ref. NEESA-PA)

WASTE	Quantity Value
1,440 cubic yards of sludge as waste steam:	576
16,000 cubic yards landfill	6.4
44,200 square feet contaminated soil	1.3
Total	583.7

Surface water (continued)

- SW-5 The site is situated in the midst of San Francisco Bay. The San Francisco Bay is a source of recreational and commercial fishing. Since sampling has not been done to determine whether the fishery is contaminated, Level II contamination to the Food Chain Individual is projected. (ref. NEESA-PA)
- SW-6 Since sampling of the fishery has not been done, the extent of the contamination has not been determined. (ref. NEESA-PA)
- SW-7 Potential contamination is based on the following fish that are caught in the San Francisco Bay: herring, perch, sharks, jack smelt, white croger, striped bass, and other species. In addition, clams are also harvested in the San Francisco Bay. Approximately, 11,000,000 pounds of fish/shellfish are caught annually in the bay. This results in an assigned population value of 31,000. Multiplying this by a dilution factor for coastal tidal waters of .0001 and divided the product by 10 to determine the HRS potential contamination human food chain contamination factor value of 0.31. (ref. NEESA-PA and fish catch data)
- SW-8 The San Francisco Bay provides a habitat for federally listed endangered species. It has also been reported that three federally endangered species have been seen at TINS. FIT assumed that one of these endangered species' designated habitat areas may be on or adjacent to the waste sources on TINS. Since sampling has not been done to determine whether these environments are contaminated, Level II contamination to the habitat is projected. (ref. NEESA-PA)

SOIL-EXPOSURE

- SE-1 Since work and residential areas were not identified, FIT projected that areas of contamination were likely located within 200 feet of a site work or residential areas. (ref. NEESA-PA)
- SE-2 The types of wastes and contaminants deposited on site is mostly unknown. The value was determined based on a worst-case situation using PCBs, and mercury as contaminants of concern. (ref. NEESA-PA)

Soil exposure (continued)

- SE-3 Value was based on the projected Hazardous Waste Quantity of all identified areas of contamination from the NEESA-PA available to the soil-exposure pathway. The areas include the PCB storage area, fire training area, pesticide storage area, the old bunker area, refuse transference area, auto hobby shop, seaplane maintenance area, army point sludge disposal area, and YBI landfill. Each of these areas have or potentially have uncontained contaminated soils within 2 feet of the surface. (ref. NEESA-PA)
- SE-4 Since work and residential areas were not identified, FIT projected that areas of concern with Level II contamination were likely located within 200 feet of residential areas. Level I soil contamination does not appear to have yet been documented. Level II contamination has been documented. (ref. SSI and NEESA-PA)
- SE-5 Since work and residential areas were not identified FIT projected that 10 individuals reside within 200 feet of areas of Level II contamination. (ref. NEESA-PA)
- SE-6 FIT projects that between 100 and 500 individuals work within 200 feet of an area of contamination. This projection is based on the assumption that there is uniform worker distribution throughout TINS (ref. NEESA-PA)
- SE-7 There does not appear to be any commercial agriculture, silviculture, or livestock production on the site. (ref. NEESA-PA)
- SE-8 There does not appear to be a terrestrial sensitive environment on the site, although three endangered species are known to occasionally use the site. (ref. NEESA-PA)
- SE-9 Waste source areas on TINS may be slightly accessible to residents and employees who do not live or work within 200 feet of sources. Waste source area may have some public recreation use particularly the hobby shop/transportation center area and the landfill areas. (ref. NEESA-PA)
- SE-10 FIT estimated 300,000 square feet of contamination. (ref. NEESA-PA)
- SE-11 Population is based on assumption that projected on-site residents are within 0.25 miles of contamination. (ref. NEESA-PA and facility contact)

AIR

- A-1 Air sampling does not appear to have been performed and therefore an observed release has not been documented. FIT does not consider the possibility of documenting an observed release to air to be likely. (ref. NEESA-PA)
- A-2 The potential for gas release was calculated using the former landfill as the primary source for a potential release to air. Since landfills have not been sampled to determine what contaminants are of concern or if biogas is being released, the value is a projection. (ref. NEESA-PA)
- A-3 The potential for particulate release was calculated using the former landfill and former sludge disposal areas as the primary sources for a potential release to air. Sludge disposal areas are documented to be contaminated (ref. NEESA-PA)
- A-4 The types of wastes and contaminants deposited on site are mostly unknown. The value was determined based on a worst-case situation. (ref. NEESA-PA)
- A-5 Value was based on the projected Hazardous Waste Quantity of all identified areas of contamination from the NEESA-PA available to air pathway. (ref. NEESA-PA)

Waste	Quantity Value
16,000 cubic yards landfill	6.4
44,200 square feet contaminated soil	1.3
Total	7.7

- A-6 The nearest residents are assumed to be located within 0.125 miles. (ref. NEESA-PA)
- A-7 Population of surrounding areas. (ref. GEMS)
- A-8 Designated recreation areas are located within 0.5 miles of areas of contamination. The recreation areas include a playground and parks. (ref. NEESA-PA)
- A-9 Three endangered species are known to occasionally use the site. (ref. NEESA-PA)