WASHINGTON RANKING METHOD

ROUTE SCORES SUMMARY AND RANKING CALCULATION SHEET

Site name: Frank West Cleaners Region: CRO

City, county: Yakima, Yakima

This site was ranked on August 12, 1991, based on quintile values from 259 assessed/scored sites.

Pathway	Route Score(s)	Quintile Group number(s)
SW-HH	5.0	1
Air-HH	48.9	5
GW-HH	47.1	4
Sed-HH	—	—
SW-En	8.0	1
Air-En	28.5	4
Sed-En	—	—

Priority scores:

$\frac{H^2 + 2M + L}{8} = \frac{25 + 8 + 1}{8} = 34/8 = 4.3 = 5$

$\frac{H^2 + 2L}{7} = \frac{16 + 2}{7} = 18/7.2.6 = 3$

Use the matrix presented to the right, along with the two priority scores, to determine the site ranking. N/A refers to where there is no applicable pathway.

Human Health	Environment 5	4	3	2	1	N/A
5	1	1	(1)	1	1	1
4	1	2	2	2	3	4
3	1	2	3	4	4	5
2	2	3	4	4	5	5
1	2	3	4	5	5	5
N/A	3	4	5	5	5	5

DRAFT / (FINAL)

Matrix ("bin") Ranking: 1, or _____ No Further Action

CONFIDENCE LEVEL: The relative position of this site within this bin is:

_____ almost into the next higher bin.
__/__ right in the middle, unlikely to ever change.
_____ almost into the next lower bin.

rev. 8/91

FRANK WEAR CLEANERS

LIST _

PARCEL 19133021034 ROLL TYPE 1 NEW PARCEL
NAME NBR 56489 NEW OWNER
AMERCO REAL ESTATE CO ATTN
2721 N CENTRAL AVE
PHEONIX AZ 85004 ALT ATTN
NAME NOTES

MANUAL PROCESS XMPT

	1992	1993			
TAX YR	1992	1993	TRANSFER	058973 D	
LEVY CODE	333	333	JRNL TYPE	N	NGHBD YK1
USE CODE	55	55	JRNL DATE	04/22/1991	CYCLE 4
AV LAND	193150	193150	DOC TYPE	EA	WORK
AV IMPR	116600	116600	DOC DATE	10/08/1990	MISC
ASMT CLASS			DOC NBR	252161	
MKT LAND	193150	193150	JRNL NOTES	SWD<U-HAUL	
MKT IMPR	116600	116600	AP NOTES		
NEW CNSTR			DESCRIPTION:	2.20 ACRES	SQFT
INSPECT DATE	06/04/1984	06/04/1984	W 397 FT OF N 80 FT OF S 207 FT OF		
INSPECT APR	17	17	SE1/4 NE1/4 NW1/4 EX R-W OF N.P.RY. &		
NOTICE DATE		05/23/1991	TH PT OF S 165 FT OF N 453 FT OF SE1/4		
ASMT NOTES			NE1/4 NW1/4 LY W OF S 1ST ST. EX N.P.		
PENALTY			EXT DATE		
CROSS REF			SITUS ADDR 1102 1ST ST S		

EXIT _ PAGE _ NAME _ LIST

_

PARCEL 18132441442 ROLL TYPE 1 NEW PARCEL
NAME NBR 52538 NEW OWNER
STOFFERS, GREGORY ET UX ATTN
106 S. 3RD AVE.
YAKIMA WA 98902 ALT ATTN
NAME NOTES

MANUAL PROCESS XMPT

	1992	1993			
TAX YR	1992	1993	TRANSFER	20249 D	
LEVY CODE	333	333	JRNL TYPE		NGHBD YK1
USE CODE	62	62	JRNL DATE		CYCLE 3
AV LAND	24500	24500	DOC TYPE		WORK
AV IMPR	43600	43600	DOC DATE		MISC
ASMT CLASS			DOC NBR		
MKT LAND	24500	24500	JRNL NOTES		
MKT IMPR	43600	43600	AP NOTES		
NEW CNSTR			DESCRIPTION:	ACRES	SQFT
INSPECT DATE	06/16/1983	06/16/1983	YAKIMA: LOT 3 BLK 252		
INSPECT APR	39	39			
NOTICE DATE		05/23/1991			
ASMT NOTES					
PENALTY			EXT DATE		
CROSS REF			SITUS ADDR 106 3RD AV S		

EXIT _ PAGE _ NAME _ LIST

MA COUNTY ASSESSOR'S PLAT

Township 13 North, Range 18 E.W.M.

18-13-24

This map is maintained only as an aid in the appraisal and assessment of real property The Yakima County Assessor's Office does not warrant accuracy.

WORKSHEET 1
SUMMARY SCORE SHEET

Site Name: Frank Wear-Cleaners

Site Location: (City, County, or Section/Township/Range)

106 South Third Avenue
Yakima, Washington (Yakima County)
SE¼ of Section 24, T. 13 N., R. 18 E.W.M.

Site Description: (Include management areas, compounds of concern, and quantities)

Frank Wear Cleaners currently operates, and has operated for approximately 35 years, a dry cleaning facility at the site. For at least a portion of the time prior to 1985 tetrachloroethene (PCE) in the form of sludge from still bottoms was dumped behind the cleaners in a gravel-covered area. PCE has been detected in soil samples in concentrations up to 10,000 ppb.

Special Considerations: (Include limitations in site file data, data which cannot be accomodated in the model, but which are important in evaluating the risk associated with the site)

ROUTE SCORES:

Ground Water/Human:	47.1	Overall Rank:	_____
Surface Water/Human:	5.0		
Air/Human:	21.9		
Air/Environmental:	28.5		
Surface Water/Environmental:	8.0		

WORKSHEET 2
ROUTE DOCUMENTATION

SURFACE WATER ROUTE

List substances to be considered for scoring. Source: 1, 2, 3

1. TETRACHLOROETHENE (PCE)
2. 1,1,1-TRICHLOROETHANE

Explain basis for choice of substances to be used in scoring.

A DRY CLEANER USING PCE OPERATES AT THE SITE, PRIOR TO 1985 PCE WAS DUMPED IN A GRAVEL-COVERED AREA. PCE HAS BEEN DETECTED IN SOIL SAMPLING AT CONCENTRATIONS UP TO 10,000 PPB. 1,1,1-TRICHLOROETHANE WAS DETECTED IN 1985 SAMPLING OF LIQUID IN DUMPING AREA.

List management units to be considered in scoring: Source: 1

1. SOIL CONTAMINATION

Explain basis for choice of unit used in scoring.

SOIL CONTAMINATION IS DOCUMENTED.

AIR ROUTE

List substances to be considered for scoring. Source: 1, 2, 3

1. TETRACHLOROETHENE (PCE)
2. 1,1,1-TRICHLOROETHANE

Explain basis for choice of substances to be used in scoring.

A DRY CLEANER USING PCE OPERATES AT THE SITE. PRIOR TO 1985 PCE WAS DUMPED IN A GRAVEL-COVERED AREA. PCE HAS BEEN DETECTED IN SOIL SAMPLING AT CONCENTRATIONS UP TO 10,000 PPB. 1,1,1-TRICHLOROETHANE WAS DETECTED IN 1985 SAMPLING OF LIQUID IN DUMPING AREA.

List management units to be considered in scoring: Source: 1

1. SOIL CONTAMINATION

Explain basis for choice of unit used in scoring.

SOIL CONTAMINATION IS DOCUMENTED.

GROUND WATER ROUTE

List substances to be considered for scoring. Source: 1, 2, 3

1. TETRACHLOROETHENE (PCE)
2. 1,1,1-TRICHLOROETHANE

Explain basis for choice of substances to be used in scoring.

A DRY CLEANER USING PCE OPERATES AT THE SITE, PRIOR TO 1985 PCE WAS DUMPED IN A GRAVEL-COVERED AREA. PCE HAS BEEN DETECTED IN SOIL SAMPLING AT CONCENTRATIONS OF 10,000 ppb. 1,1,1-TRICHLOROETHANE WAS DETECTED IN 1985 SAMPLING OF LIQUID IN DUMPING AREA.

List management units to be considered in scoring: Source: 1

1. SOIL CONTAMINATION

Explain basis for choice of unit used in scoring.

SOIL CONTAMINATION IS DOCUMENTED.

WORKSHEET 3
SUBSTANCE CHARACTERISTIC WORKSHEET
FOR MULTIPLE UNIT/SUBSTANCE SITES

	Combination 1	Combination 2	Combination 3
Unit: Substance: AIR ROUTE Human Toxicity/Mobility Value: Environmental Toxicity/ Mobility Value: Containment Value:			
Air Human Subscore: Air Environmental Score:			
SURFACE WATER ROUTE Human Toxicity Value: Environmental Toxicity Value: Containment Value:			
Surface Water Human Subscore: Surface Water Environmental Subscore:			
GROUND WATER ROUTE Human Toxicity/Mobility Value: Containment Value:			
Ground Water Subscore:			

WORKSHEET 4
SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Std. (µg/l)	Value	Chronic Toxicity mg/kg/day	Value	Acute Toxicity mg/kg-bw	Value	Carcinogencity WOE	Potency Factor	Value
1. PCE	5 PMCL	8	.01 RfD	3	800 LD_{50} ORAL RAT	5	B2	.051	4
2. 1,1,1-TRICHLOROETHANE	200 MCL	4	.09 RfD	1	10,300 LD_{50} ORAL RAT	1	D	—	—
3.									
4.									
5.									
6.									

Source: 4
Highest Value: 8
+2 Bonus Points?: 0
Value: 8

1.2 Environmental Toxicity

Source: 5 Value: 2

Substance	Acute Criteria (µg/L)	Non-human mammalian acute toxicity (mg/kg)	Value
1. PCE	5,280		2
2. 1,1,1-TRICHLOROETHANE	X	10,300 LD_{50} ORAL RAT	1
3.			
4.			
5.			
6.			

1.3 Substance Quantity

Source: 1 Value: 6

Explain basis: ESTIMATED AREA (20 FT)(30 FT) = 900 FT^2
BEST PROFESSIONAL JUDGEMENT BY SCORER.

2.0 MIGRATION POTENTIAL

2.1 Containment

Source: 2 Value: 10

Explain basis: DISCHARGE AT THE SURFACE WITH NO RUN-ON/RUNOFF CONTROLS OR UNKNOWN CONTROLS.

2.2 Surface Soil Permeability: HIGH, SAND, GRAVEL.

PAGE 11 Source: 2 Value: 1

2.3 Total Annual Precipitation: 7.2 INCHES

PAGE 11 Source: 2 Value: 1

2.4 Maximum 2-Year 24-Hr Precipitation: 1.0 INCH

PAGE 11 Source: 2 Value: 1

2.5 Flood Plain: NOT IN FLOOD PLAIN

PAGE 11 Source: 2 Value: 0

2.6 Terrain Slope: LESS THAN 2 %

PAGE 11 Source: 2 Value: 1

3.0 TARGETS

3.1 Distance to Surface Water: 2 MILES YAKIMA RIVER — Source: 2 Value: 0

3.2 Population Served within 2 miles: 0 — Source: 9,10 Value: 0

3.3 Area Irrigated by Sources within 2 miles: 0 — Source: 9 Value: 0

3.4 Distance to Fishery Resource: 2 MILES YAKIMA RIVER — PAGE 13 Source: 2 Value: 0

3.5 Distance to Sensitive Environment: 1300 FEET — PAGE 13 Source: 2 Value: 9

List: LIONS PARK

4.0 RELEASE

Explain basis: NONE DOCUMENTED — Source: ___ Value: 0

WORKSHEET 5
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction - please review before scoring

1.2 Human Toxicity

Substance	Air Std. µg/m³	Value	Chronic Toxicity mg/kg/day	Value	Acute Toxicity mg/kg-bw	Value	Carcinogenicity WOE	Potency Factor	Value
1. PCE	X	—	ND	X	5200 PPM = 36,000 mg/m³	3	B2	.0033	2
2. 1,1,1-TRICHLOROETH #6	6327	1	1 (.3)	1	18,000 PPM = 100,050 mg/m³	1	D	—	—
3.									
4.									
5.									
6.									

Source: 4, 6, 8
Highest Value: 3
+2 Bonus Points?: 0
Toxicity Value: 3

1.3 Mobility

1.3.1 Gaseous Mobility

Vapor Pressure: 1.19 (25°C) 2.100 (20°C) mm Hg — Source: 4
Value: 1.4 2.4

1.3.2 Particulate Mobility

Soil Type: N.A. — Source:
Erodibility:
Climatic Factor:
Particulate Mobility Potential Value:

1.4 Final Human Health Toxicity/Mobility Matrix: TOXICITY - 3, MOBILITY - 4 — Value: 6

1.5 Environmental Toxicity/Mobility

Substance	Non-human mammalian Acute Toxicity	Value	Mobility	Value
1. PCE	LC_{50} MOUSE = 5200 PPM = 36,000 mg/m³	3	4	6
2. 1,1,1-TRICHLOROETHANE	18,000 PPM = 100,050 mg/m³	1	4	2
3.				
4.				
5.				
6.				

Environmental Toxicity Mobility Matrix: Source: 4, 6 Value: 6

1.6 Substance Quantity: ESTIMATED AREA (30 FT)(30 FT) = 900 FT².
BEST PROFESSIONAL JUDGEMENT BY SCORER — Source: 1 Value: 4

WORKSHEET 5 (CONTINUED)
AIR ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment: SPILL DIRECTLY ONTO GROUND — PAGE 10 Source: 2 Value: 10
NO VAPOR RECOVERY.

3.0 TARGETS

3.1 Nearest Population: 0. BUSINESS OPEN TO PUBLIC ONSITE. Source: 1 Value: 10

3.2 Nearest Sensitive Environment: 1300 FEET — PAGE 13 Source: 2 Value: 6
List: LIONS PARK

3.3 Population within 1/2 mile: 2110 — PAGE 13 Source: 2 Value: 46

4.0 RELEASE: NONE DOCUMENTED — Source: — Value: 0

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Std. µg/l	Value	Chronic Toxicity mg/kg/day	Value	Acute Toxicity mg/kg-bw	Value	Carcinogenicity WOE	Potency Factor	Value
1. PCE	5 PMCL	8	.01 RfD ORAL	3	800 LD_{50} ORAL RAT	5	B2	.051	4
2. 1,1,1 TRICHLOROETHANE	NG 200 MCL	4	.09 RfD ORAL	1	10,300 LD_{50} ORAL RAT	1	D	—	—
3.									
4.									
5.									
6.									

Source: 4
Highest Value: 8
+2 Bonus Points?: 0
Value: 8

1.2 Mobility

Substance: SOLUBILITY PCE = 150 mg/l VALUE = 2
1,1,1-TRICHLOROETHANE = 4400 mg/l VALUE = 3

Source: 4 Value: 3

1.3 Substance Quantity

Source: 1 Value: 2

Explain basis: ESTIMATED AREA = 900 FT^2

$(900\ FT^2)(\underset{\text{ASSUMED DEPTH}}{3\ \text{FEET}})\left(\frac{1\ YD^3}{27\ FT^3}\right) = 100\ YD^3$

2.0 MIGRATION POTENTIAL

2.1 Containment

Source: 3 Value: 10

Explain basis: CONTAMINATED SOIL = 10 CONTAINMENT VALUE.

2.2 Net Precipitation: 1.7 INCH

Source: 7 Value: 1

2.3 Subsurface Hydraulic Conductivity: GREATER THAN 10^{-3} CM/SEC

PAGE 11 Source: 2 Value: 4

2.4 Vertical Depth to Ground Water: 18 TO 20 FEET

PAGE 7 Source: 1 Value: 8

3.0 TARGETS

3.1 Ground Water Usage: PUBLIC, NO ALTERNATE, JAY R. CRABB WELL

Source: 10 Value: 9

3.2 Distance to Nearest Drinking Water Well: ESTIMATED .25 MILE

Source: 10 Value: 3

3.3 Population Served with 2 miles: √2596 PUBLIC + 24 DOMESTIC

Source: 9, 10 Value: 51

3.4 Area Irrigated by Wells within 2 miles: 2732 ACRES .75 √2732

Source: 9 Value: 39

4.0 RELEASE

Explain basis: NOT DOCUMENTED. REGION WIDE GROUNDWATER CONTAMINATION DOCUMENTED AND SOIL CONTAMINATION, BUT NOT RELEASE

Source: ___ Value: 0

WORKSHEET 7
SOURCES USED IN SCORING

1. PRELIMINARY ASSESSMENT REPORT FRANK WEAR CLEANERS, SAIC, APRIL, 1989.
2. SITE HAZARD ASSESSMENT DATA COLLECTION SUMMARY SHEETS FOR WASHINGTON RANKING METHOD, SAIC, FEBRUARY, 1991.
3. CORRESPONDENCE, ELAINE PETERSON TO G.A. STOFFERS, 2/5/90.
4. WASHINGTON DEPARTMENT OF HEALTH GUIDE TO PHYSICO-CHEMICAL, TOXICOLOGICAL, AND REGULATORY VALUES FOR PRIORITY POLLUTANTS, MONA KIMBELL ET AL, DRAFT, JULY, 1990.
5. QUALITY CRITERIA FOR WATER, 1986, US EPA.
6. RTECS, NIOSH, APRIL 1987.
7. WASHINGTON CLIMATE, COOPERATIVE EXTENSION SERVICE, WASHINGTON STATE UNIVERSITY.
8. CHAPTER 173-460 WAC, DEPT. OF ECOLOGY, DRAFT, AUGUST, 1990
9. RECORDED WATER RIGHTS OF THE DEPT. OF ECOLOGY, REGION 4, 6/8/90.
10. STATE OF WASHINGTON PUBLIC WATER SUPPLY SYSTEM LISTING, WASHINGTON DEPT. OF HEALTH, 2/16/89.

8/30/90

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
TOXICS CLEANUP PROGRAM

SITE HAZARD ASSESSMENT DATA COLLECTION SUMMARY SHEETS
FOR
WASHINGTON RANKING METHOD

Site Name: Frank Maar Cleaners

Location: NE¼ SE¼ SECTION 24 T13N R18E

Site owner/operator: _____

Address: _____

Any other known PLP(s): _____

Address: _____

Site Number: _____

Date(s) of field site hazard assessment: _____

Samples or field measurements: _____soil
_____surface water
_____air _____ground water

(Attach copies of pertinent sampling and analytical data, as well as all other supporting documentation.)

Photographs: _____

Weather: _____

Lead inspector: _____

Other inspectors: _____

Signature: _____

PART I: Hazardous Substances

NOTE: Page numbers, or worksheet numbers, shown in parentheses refer to the WARM Scoring Manual.

A. LIST

List hazardous substances, known or suspected (check k or s), currently at the property, or that have been previously(check c or p) at the property:

Hazardous Substance	K	S	C	P	Quantity	Units
1. Tetrachloroethylene					100 lbs/week for at least 10 yrs.	
2. 1,1,1-trichloroethane						
3. GASOLINE					500 gal tank	
4. HEATING OIL					1,000 gal tank	
5.						
6.						
7.						
8.						
9.						
10.						

Additional?_____(list on attachment)

By which routes are these available?

Number(from above)	Surface Water	Air	Groundwater
1. #1		✓	✓
2. #2			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

B. SOURCES

Check those known or observed:

_____ drums or other containers
_____ electrical transformers
_____ above ground tanks
__✓__ below ground tanks - Have been pulled
_____ ponds, pits, or other impoundments
_____ pipelines (other than water, sewer, or gas)
_____ floor drains
_____ exterior drains for rainwater, surface waters, spills, etc.
_____other?Identify:_____

C. INDICATORS

Check those known or observed:

_____ discolored soils
_____ disturbed soils
_____ discolored standing water
_____ unusual or noxious odors
_____ sick or dead vegetation
_____ groundwater monitoring wells
_____other?Identify:_____

If any are checked in B or C, explain details including exact locations (identify location in a map or drawing).

Additional information:_____

PART II: Releases

A. KNOWN OR SUSPECTED RELEASES

List those hazardous substances identified (by number) in I.A. which are known or suspected to have been released:

Substance (#)	Quantity Released	Units	When	Location
PERC (#1)	2-5 lbs/week (2-5% of 100 lbs of sludge)		1980-1986	See PA Report p.5

Additional information/reference? "Preliminary Assessment Report Frank Wear Cleaners," SAIC, 1989

B. SOURCES AND IMPACTS (Pages A-9, 10)

List those hazardous substances identified (by number) in II.A. and identify the source and impact:

Substance No.	Source	Impacts/affects To	Area
1	Improper Dumping	Groundwater	

III. Migration Potential

A. CONTAINMENT--LANDFILLS (SW-7; A-12; GW-8,9)

Present?_____ How many?_____

Check those that apply:

1. _____An engineered, maintained run-on/run-off control system
2. _____An engineered/maintained cover without ponding
3. _____Unmaintained run-on/runoff control system or cover
4. _____No run-on/runoff control or no cover
5. _____Uncontaminated soil cover greater than 6" thick
6. _____Uncontaminated soil cover less than 6" thick
7. _____Contaminated soil used as cover
8. _____A functioning vapor collection system
9. _____Mixing or agitation used
10. _____No liner
11. _____Single clay or compacted soil liner (permeability_____cm/sec)
12. _____Single synthetic liner (permeability_____cm/sec)
13. _____Double liner system (permeability_____cm/sec)
14. _____Leachate collection system, maintained and functioning
15. _____Leachate collection system, unknown condition or not functioning
16. _____Liquid wastes may have been disposed of
17. _____Liquid wastes were disposed of in landfill
18. _____Reliable evidence no liquid wastes were disposed

Additional comments:_____

_____

_____

B. CONTAINMENT--SURFACE IMPOUNDMENTS (SW-7, 8; A-13; GW-10,11)

Present_____ How many?_____

Check those that apply:

1. _____The dike is apparently sound

2. _____The dike is regularly inspected and maintained

3. _____There is evidence of failure, erosion, slumping, or release of contents

4. _____Two feet of freeboard maintained automatically

5. _____The freeboard is manually controlled so that there is at least 2 feet of freeboard

6. _____Evidence of insufficient freeboard (<2 ft.)

7. _____A maintained cover

8. _____Unmaintained cover, no cover

9. _____No liner

10. _____Single synthetic liner

11. _____Single clay or compacted soil liner

12. _____Double liner

13. _____Working leak detection system

14. _____Evidence of loss of fluid (other than by evaporation)

Additional comments:_____

C. CONTAINMENT--DRUMS AND SMALL CONTAINERS (SW-9; A-11; GW-11)

Present_____ How many?_____

Check those that apply:

1. _____No functional containment

2. _____There is secondary containment capacity for the total volume ofcontainers

3. _____There is secondary containment with capacity for at least 110% ofvolume of the largest container

4. _____The secondary containment is less than 110% of the volume of thelargest container

5. _____The containers are stored in single, or double layers on pallets,or in racks

6. _____The containers are stored in an unstable manner

7. _____Some containers are open or have visible liquid

8. _____Some containers are leaking

9. _____Containers are protected from weather

10. _____Containers showing deterioration

11. _____Containment surface is impervious

12. _____Containment surface has cracks or semi-permeable

13. _____No base material/permeable base such as gravel/base materials unknown

13. _____Containment is regularly inspected and maintained

14. _____Evidence of containment failure

Additional comments:_____

D. CONTAINMENT--STORAGE TANKS (SW-9; A-11; GW-11)

Present?_____ How many?_____

Check those that apply:

1. _____Secondary containment with a capacity of 110% of the volume of the tanks

2. _____Secondary containment at least 50% of the volume of all tanks

3. _____Containment system with capacity for at least 10% of volume of containers or tanks

4. _____No containment, or less than 10% capacity

5. _____Tank volumes maintained

6. _____Automatic controls used for volume maintenance

7. _____Tanks are covered

8. _____Uncovered tanks have aeration, mixing, or heating of tank contents

9. _____Containers sealed, protected

10. _____Containers sealed, not protected

11. _____Containers deteriorated

12 _____Containers leaking

13. Record the #s of above which apply only to above ground tank_____

14. Record the #s of above which apply only to below ground tanks _____

15. Record the #s of above which apply to both above and below ground tanks: _____

Additional comments_____

E. CONTAINMENT--WASTE PILES (SW-10; A-13; GW-12,13)

Present?_____ How many?_____

Check those that apply:

1. _____Waste pile is outside, no protecting structure

2. _____Waste pile is outside, in open structure with roof

3. _____Waste pile is outside, with partial or unmaintained cover

4. _____Waste pile is outdoors, with maintained cover

5. _____No cover is present

6. _____Waste pile is fully enclosed, intact building

7. _____There is an engineered run-on/run-off control

8. _____The run-on/run-off is maintained

9. _____Run-on/runoff control present, unknown condition

10. _____No run-on/runoff control system present, or unknown if present

11. _____Liner or base present; _____Not present.

12. _____Single clay or compacted soil liner

13. _____Single synthetic liner

14. _____Double liner

15. _____Maintained, functioning leachate collection system

16. _____Leachate collection system;____Unknown condition; or _____Not functioning.

Additional comments_____

_____

_____

_____

_____

_____

F. CONTAINMENT--SPILLS, DISCHARGES, AND CONTAMINATED SOIL (SW-10, 11; A-13, 145; GW-13)

Check those that apply:

1. _____Spill, discharge, or contaminated soil only in the subsurface at the site--including dry wells, drain fields, leaking underground storage tanks

2. _____Soil contamination that has been covered partially excavated and filled with at least 6 inches of clean soil

3. _____Soil contamination that has been covered or partially excavated and filled with less than 6 inches of clean soil

4. _____Uncontaminated soil cover >2 feet thick

5. _____No cover; or _____Cover <2 inches but >6 inches thick

6. _____Spill, discharge, or contaminated soil present at the surface in an area with maintained run-on/runoff controls

7. _____Spill, discharge, or contaminated soil present at the surface in an area with unmaintained run-on/runoff controls

8. ___✓___Spill, discharge, or contaminated soil present at the surface with no run-on/runoff controls or unknown controls

9. _____Contaminated soil has been disturbed or excavated and stored above grade

10. _____A functioning vapor recovery system

11. _____No vapor recovery system

Additional comments:_____

G. CONTAINMENT--SITE CHARACTERISTICS

(SW-11,12; A-6; Worksheet 5)

1. How would you evaluate the site soils? Circle predominant textural class.

✓	Sand, gravel, sandy gravel, well-graded sand, well-graded gravel, gravelly sand, gravelly sand loam, silty sandy loam?
_____	Poorly-graded sands with fines, silt-sand mixtures, loam, silt loam, sandy silt loam, clayey sand, clay sand loam?
_____	Clayey sands, sand-clay mixtures, clayey gravels, clay-sand-gravel mixtures, inorganic silts, clayey silt loam, silty clay loam, porous rock outcrop, sandy silty clay, sandy clay loam?
_____	Clay (organic and inorganic), clay loam, rock outcrop, peat, peaty clay?

Is the above based on personal observation, lab analysis, or professional judgement by a soil expert? (circle)

2. What is the total annual precipitation?
7.2 inches/yr (SW-12; W/S 5)

3. What is the maximum 2-year, 24 hour precipitation? 1.0 inches ((SW-14; W/S 5)

4. Is the site not in a flood plain? X (SW-14; W/S 5)
Is the site in a 500 year flood plain? _____
Is the site in a 100 year flood plain? _____
CF No 650 311 2006

5. What is the terrain slope to the nearest surface water?
<2 % (SW-14,15; W/S 5)

6. What is the subsurface hydraulic conductivity?
$\geq 10^{-3}$ cm/sec (GW-14; W/S 6)

7. What is the vertical depth from the deepest point of known contamination to ground water? 10 feet (GW-15; W/S 7)
groundwater is contaminated

Additional comments:

IV. Targets

A. DISTANCE TO SURFACE WATER (SW-16)

1. What surface water(s) (lake, stream, river, pond, bay, etc.) is/are within 10,000 feet (downgradient) of the site?

Name	Dist.-ft.	Obs.	Meas.

None?_____.Comments_____

2. What drinking water intakes are within 2 miles of the site? (all lake intakes, river intakes downstream only) (SW-12; W/S 5)

None?_____

Source	Location	Pop. Served

3. How much acreage (anywhere) is irrigated by surface water intakes (downstream only) or wells(anywhere) within 2 miles of the site? (SW-16; GW-18; W/S 5; W/S 7)

None?_____

SURFACE WATER: Acres_____ (1600 acres max.)

Source(s)_____;

GROUNDWATER: Acres_____ (4500 acres max.)

Source(s)_____

4. What is the distance to the nearest fishery resource (total of overland distance plus downgradient distance)? (SW-17; W/S 5) Yakima River 2 mile

Over 10,000 feet?____ Distance if less than 10,000 feet?_____ft.

5. What is the distance to the nearest sensitive environment (total of overland distance plus downgradient distance)? (SW-18; A-15; W/S 5) Lions Park (City Park) ¼ mile south

Over 10,000 feet?____ Distance if less than 10,000 feet?≈1300 ft.

6. Is the aquifer a federally-designated sole source aquifer? No (GW-16; W/S 7)

7. Is the ground water used for: (GW-16; W/S 7)

- ✓ private supply
- ✓ public supply
- ✓ irrigation of human food crops or livestock
- ✓ non-food (human) vegetation
- _____ not used due to natural contaminants
- _____ ground water not used, but usable

8. Distance to nearest drinking water well?_____feet (GW-17; W/S 7)

9. Is there an alternate source available to groundwater for private or public water supply?_____

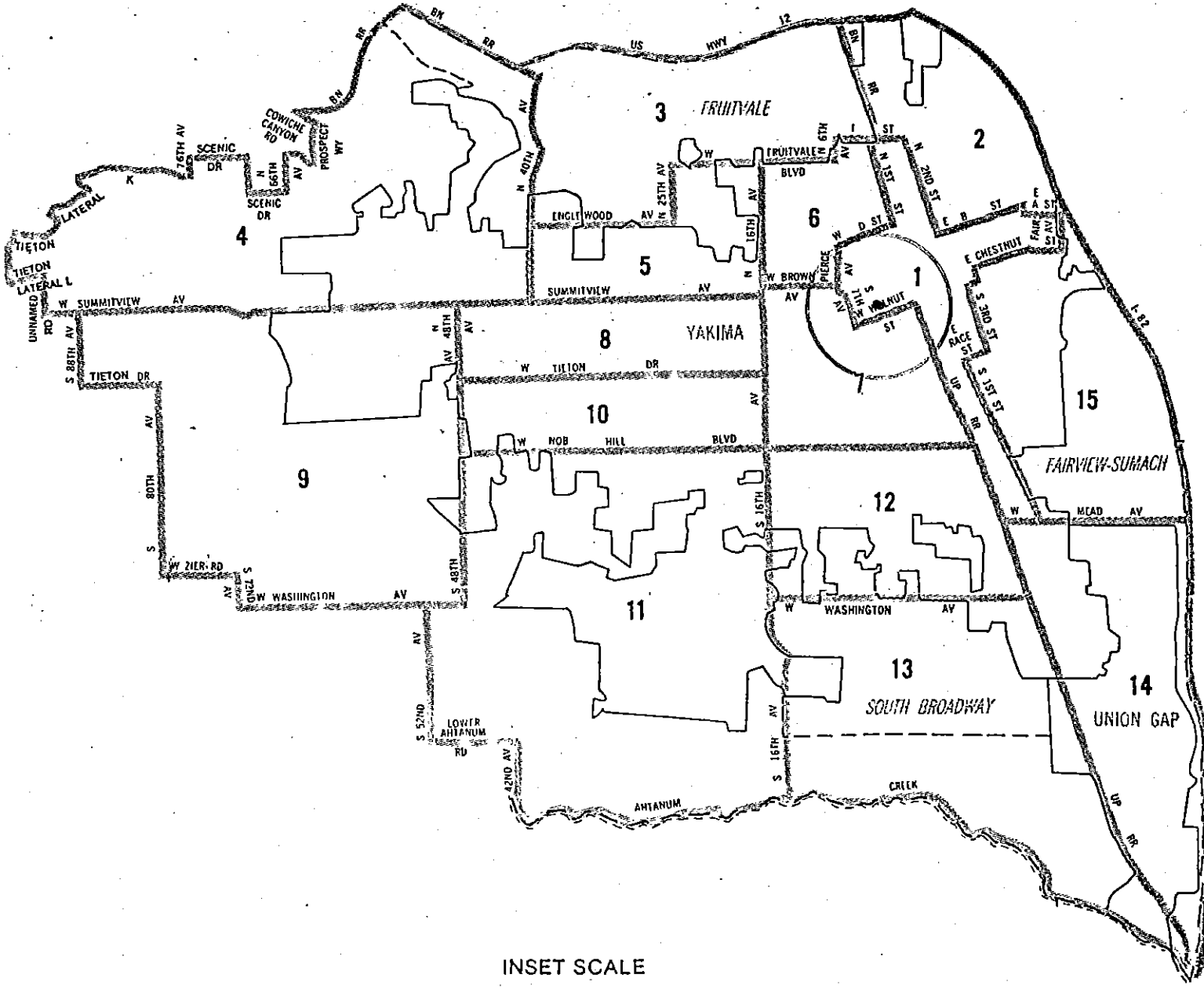
10. Population served by drinking water wells within 2 miles? 3,675 (GW-17; W/S 7)

11. Distance to the nearest population?_____feet (A-15, 16; W/S 6)

12. Population within one-half mile radius? 2110 (A-16; W/S 6)

Additional comments:_____

FRANK WEAR CLEANERS



INSET SCALE

0 1 2 Kilometers

0 1 2 Miles

CENSUS DATA:

TRACT 1 = $\frac{1}{4}$(2121) = 530

TRACT 6 = $\frac{1}{50}$(3856) = 77

TRACT 7 = $\frac{1}{4}$(5995) = 1499

2106

(Staff photo by Kirk Hirota)

Gregory and Sonia Stoffers of Frank Wear Cleaners: Solving the issue of solvents.

Clean fabric, environment

Dry cleaners get new equipment that cuts air and water pollution

By DUANE DOZIER
Of the Herald-Republic

While others may be just thinking or talking about doing something about pollution and hazardous waste, the dry cleaning industry is doing something about it.

And none any more so than Gregory and Sonia Stoffers.

They own and operate Frank Wear Cleaners in Yakima. Earlier this year they spent about $40,000 on a new piece of equipment to drastically reduce the amount of waste generated in the dry cleaning process.

"We're all trying to clean up our act," Gregory Stoffers said, "because part of some of the problems in our atmosphere, or in our ecology, is some of the chemicals that are being dumped into the atmosphere and into the ground," Stoffers said. "The dry cleaners have become a little bit of a target throughout the state.

"We're years and years ahead of most people as far as meeting and exceeding all these things at the state and federal level want. The International Fabric Care, which is an association we all belong to, is working night and day, desperately, on this thing to get it cleaned up so it makes both the customers and the employees a safe workplace."

The association was formed about 1½ years ago and Stoffers became a board member for a two-year term this year.

"It's tough to think a dry cleaning shop could be hazardous to your health, but the solvent that rejuvenates a wool blazer or a silk dress also fouls the water and air," Stoffers said.

Perchloroethylene, a synthetic solvent used by most dry cleaners is a possible cancer-causing agent, according to the Environmental Protection Agency, he said, but pointed out the operative word is "possible."

"The verdict is still out on this issue," he said.

In the meantime, because of the possible danger from "perc," the Stoffers have had installed in their plant the only dry cleaning machine of its kind in Yakima and the first in Eastern Washington.

The switch from the older equipment also was made, Stoffers said, "Because the Department of Ecology, the Clean Air Act, says you cannot vent out into the atmosphere and you can't have a chemical such as perchloroethylene to dissipate into the ground soil and into our drinking water."

There are other cleaners which use different kind of solvents not regulated by government, "but they'll be a thing of the past because 'perk' is the only dry cleaning solution on the market that is worth dry cleaning with," accord to Stoffers. "There is another chemical out . . . with a petroleum base and they vent that into the atmosphere all the time but, eventually, they'll quit that . . . They'll have to clean up their act,

(See CLEAN, Page 2F)

Profile

Name: Gregory and Sonia Stoffers.

Occupation: Owners/operators of Frank Wear Cleaners, 106 S. Third Ave. in Yakima, laundry and dry cleaning. It includes drapes, carpets and furniture, and has a Coit franchise, with commercial clients as well as individuals.

Residence: Lives on Naches River, a few miles west of Rimrock Wye, which they built about 1½ years ago.

Born: Gregory is from San Francisco; Sonia from Riverside, Calif.

Education: Gregory has degrees in marketing and biology from San Francisco State College.

Family: Two sons and a daughter, "all grown and doing their own thing," and a grandson.

Organizations: West Side Merchants Association, Greater Yakima Chamber of Commerce, Better Business Bureau and Gregory is on board of Washington State Dry Cleaning Association, a member of Rotary and a former board member of People For People.

Business philosophy: "To give as much for the dollar as is humanly possible," Stoffers said. "To provide a service above and beyond anybody that is in this business and to guarantee our service. Honesty and integrity are the bywords."

removed. Many of the more droughty and nonproductive areas in fields are the result of leveling.

Naches soils (0 to 2 percent slopes) (Nd).—This mapping unit consists of undifferentiated areas of Naches soils of various textures and depths to loose gravel. From place to place the areas included vary so much in the texture of the surface layer, development of the subsoil, and thickness of the surface soil and subsoil that it was impractical to show these differences on a map of the scale used (pl. 4*B*).

The principal soils in the mapping unit are Naches loam and Naches sandy loam, each of which is described elsewhere in this part of the report. Areas of Naches loam are the most extensive by far, but the sandy loam soils are important in some areas. The soil in many areas contains some gravel. Areas that contain enough gravel to affect the workability and fertility of the soil materially are indicated on the soil map by symbols. The subsoils in these gravelly areas generally are more rapidly permeable to water and have a lower water-holding capacity than in other areas. The soil in some small areas is so gravelly and loose that it resembles Yakima very gravelly sandy loam.

In many places these various soil types are associated closely in a pattern that evidently was formed by winding streams as they dropped sediments of various textures. The channels of those streams still remain. In most places the profiles of the soils have been so changed by deep plowing and leveling that it is not possible to identify the texture of the original surface soil. Depth to gravel varies within short distances, and areas of gravelly and shallow soil are common.

These soils are normally not affected by salts or alkali. Small somewhat saline areas near Parker are included, however, and also some soils affected more or less by salts or alkali that do not belong to the Naches series. These alkali soils commonly occur as small patches in complex association with typical Naches soils. They actually are a complex made up of Naches soils and varying, but minor, areas of Fiander soil or other saline-alkali soils. Such areas are located south of Parker. They are small and infrequent in the northern part of the Naches soils areas but are more extensive in the southern extension of the Naches soils, or in other words, where Naches soils grade into the Fiander fine sandy loam southwest of Toppenish.

Where the surface soil is finer textured, the alkali-affected soils commonly form slick spots or areas of deflocculated soil. Such spots range from a few feet across to several acres. Generally they are barren and intractable. They are easily seen on fall-plowed fields after the surface has become dry in the spring. These slick spots appear to have developed where the soil material once contained salts that have been partially leached away. Deflocculation and some solonization resulted. In the leaching process, considerable exchangeable sodium was released in the soil. It caused the fine clay particles to become dispersed and separated into grains. It formed a gluey mass that puddles when wet and tends to bake hard when dry. Slick spots are designated on the soil map by a symbol shown in the map legend.

Use and management.—The use, suitability for crops, and management needs of the various Naches soils in this mapping unit are discussed in the descriptions of Naches loam and Naches sandy loam.

The use and management needs of the slick spots are discussed under the description of the Fiander fine sandy loam and in the section, Soluble Salts and Alkali.

Onyx loam (0 to 3 percent slopes) (Oa).—This is one of the more productive soils for most crops, but its total acreage is small. Most areas are in the Stony and shallow soils-Simcoe-Onyx soil association (fig. 2). The soil mainly occurs on nearly level to gently sloping alluvial fans. Some areas, however, occur on the level floors of coulees or on small flood plains along creeks or rivers. Natural drainage is good.

The soil developed under an annual precipitation that on most areas is between 9 and 14 inches. The natural vegetation on Onyx loam consisted mainly of sagebrush and grass.

Onyx loam was formed from recent or young alluvium that was derived chiefly from basaltic and loessial materials and soils formed thereon. Typically there is very little or no difference in texture and structure among the layers below the surface soil. Much of the alluvial material was washed from areas where precipitation was greater and where the material was mainly basaltic. This alluvium is fertile soil material, not yet changed appreciably by its environment. The soil contrasts strikingly with the older Naches soils that have finer textured subsoils, and with the solonized and somewhat infertile Fiander, Scowlale, and Giffin soils, and the alkaline and infertile Umapine and Ahtanum soils. All of these latter soils are older soils that have developed from alluvial sediments. Onyx loam differs from Esquatzel silt loam in being principally noncalcareous, in having a darker colored surface soil, and in occurring under a higher precipitation.

Profile description:

1. Grayish-brown, soft to slightly hard, very fine granular loam; very dark grayish brown and very friable when moist; where undisturbed, upper 2 or 3 inches normally is platy; 6 to 8 inches thick.
2. Soft to slightly hard, massive loam of a color similar to, or slightly lighter, than the layer above; when disturbed, breaks into single grains and soft granules; very friable when moist; 20 to 40 inches thick.
3. Brown, light yellowish-brown, or grayish-brown, slightly hard to soft fine sandy loam, or other stratified, moderately coarse alluvium.

Generally the entire profile is noncalcareous and neutral to mildly alkaline. In small areas, however, the lower part of the soil is slightly calcareous. The supply of organic matter in the surface soil is low to moderate. Except on the upper part of the fans and along coulee channels, the soil ordinarily contains little or no gravel. The soil material is deep, or more than 4 feet on the average. Underdrainage is favorable except in level coulee bottoms that receive seepage from higher irrigated land. The soil is moderately permeable to water and roots and has moderate capacity for holding water available to plants.

In some areas a clay loam subsoil is slightly more prominent than is normal for Onyx loam. A small acreage mapped with this soil has a fine sandy loam surface texture but is similar in other respects.

Use and management.—Many kinds of crops are grown under irrigation on Onyx loam. Some areas are in orchards, and a few are used for dry-farmed wheat.

The irrigated soil is well suited
ductive under good management.
tilth under continued cropping an
Most areas are very easy to work.
is negligible.

Prosser fine sandy loam (0 to 5
minor agricultural importance occu
the Yakima Valley rests upon ba
enters a channel entrenched in the
tually deepens to a canyon. The
precipitation of 6 to 7 inches.

This soil is arable but occurs in a
It appears to have been derived
posited by water over basalt bedroc
was modified later by windblown m
is derived from, or influenced by,
basalt fragments. Solid rock und
inches to 3 feet or more. Stones
strewn over the surface or in some
The areas that have bedrock near
scabland.

Relief is varied; many places ar
lating or gently rolling and have c
gation. The lower parts of a few sm
are poorly drained. The natural d
but some areas become poorly drai
tation consisted principally of sage

Profile description:

1. Pale-brown, soft, nearly structur
grains and indistinct fine granu
when moist; where undisturbed,
7 to 12 inches thick.
2. Pale-brown to light yellowish-bro
or loam contains many small
structureless and breaks into
brown and friable to very friab
3. Basalt bedrock.

In most places the entire soil is
alkaline; the lower part may be
matter content is low to very low.
but the bedrock prevents free unde
areas that result from excessive irr
irrigated land may have an accum

In places the subsoil appears to h
material weathered from the basal
brown, yellowish-brown, or pale-
that breaks into weakly developed

In slightly depressed areas, the
loam; the lower part of the soil i
lighter in color; bedrock occurs at

Use and management.—Prosser
farms where crops are generally g
crops are grown under irrigation