

CSID 3512

**WORKSHEET 1
SUMMARY SCORE SHEET**

Site Name/Location (Street, City, County, Section/Township/Range).

**Washington Water Power (WWP) - Service Center Garage
1411 E Mission Ave.
Spokane, WA 99252-2600
SW ¼ SW ¼ Section 9, Township 25 N, Range 43 E**

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

The Washington Water Power complex at 1411 E Mission comprises approximately 27 acres within an urban area of north east Spokane adjacent to the Spokane River. The complex is a multifunctional area for Spokane's primary electrical utility. Centrally located within the complex is the service center garage which is used for vehicle maintenance and repair.

Beginning in 1994 during the replacement of one of the garages hydraulic lifts, petroleum contamination was encountered in soils and gravel's below the lift. Initial and subsequent investigations were conducted through December of 1995 with the removal of four remaining hydraulic lifts to observe subsurface conditions and evaluate the extent of hydraulic oil contamination within the pea gravel footing material and adjacent soils. These investigations prompted the removal of approximately 164 tons of affected soils to RemTech for treatment by thermal desorption. On April 5, 1996 the Washington State Department of Ecology (Ecology) received written notification by WWP of the petroleum contamination.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site):

Due to excavation instability and potential undermining of building structural components, some of the visibly contaminated pea gravel footing material and underlying affected soils were not removed. Volumes of affected soils remaining are estimated to be at least 200 cubic yards. The extent of the remaining contaminated soil is reported to extend vertically to at least 25 feet below ground surface with limited lateral movement. Depth to groundwater in the vicinity of the contamination is estimated to be 30 feet below ground surface.

NOTE: WWP remedial action conducted at this site is feasibly extensive given the impact to the service center building. Institutional controls (monitoring wells, controlled access, and paving) are available at this time to monitor and reduce contaminant migration. This site will be scored with consideration given to these conditions.



ROUTE SCORES:

Surface Water/Human Health: NA Surface Water/Environ.: NA

Air/Human Health: NA Air/Environmental: NA

Ground Water/Human Health: 27.8

OVERALL RANK: 5

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WORKSHEET 2
ROUTE DOCUMENTATION

- 1. SURFACE WATER ROUTE Not Applicable.**
- 2. AIR ROUTE Not Applicable.**



**WORKSHEET 2 (CONTINUED)
ROUTE DOCUMENTATION**

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 1

Diesel-Range TPH

Oil-Range TPH

Explain basis for choice of substance(s) to be used in scoring.

Remaining contaminants (Diesel and Oil) exceed MTCA Method A cleanup levels for soil.

Diesel-Range TPH concentrations revealed are up to 15,400 mg/kg.

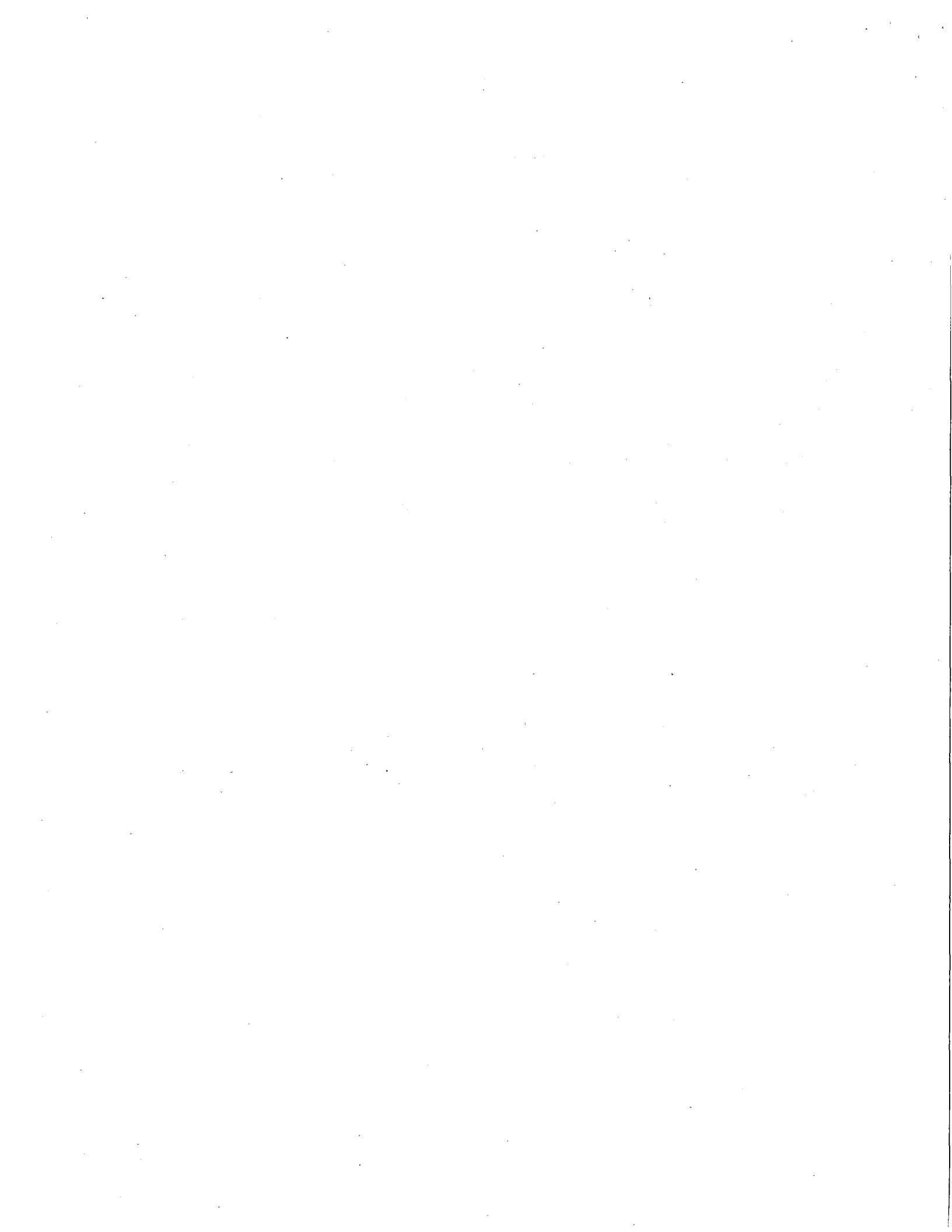
MTCA Method A is 200mg/kg

List those management units to be considered for scoring: Source: 1

Contaminated subsurface soil; groundwater pathway only

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

Contaminants exist under WWP Service Center Garage in excess of MTCA cleanup levels as reported in a WWP Summary Report - Spokane Service Center Groundwater Monitoring dated March 9, 1998.



**WORKSHEET 6
GROUND WATER ROUTE**

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

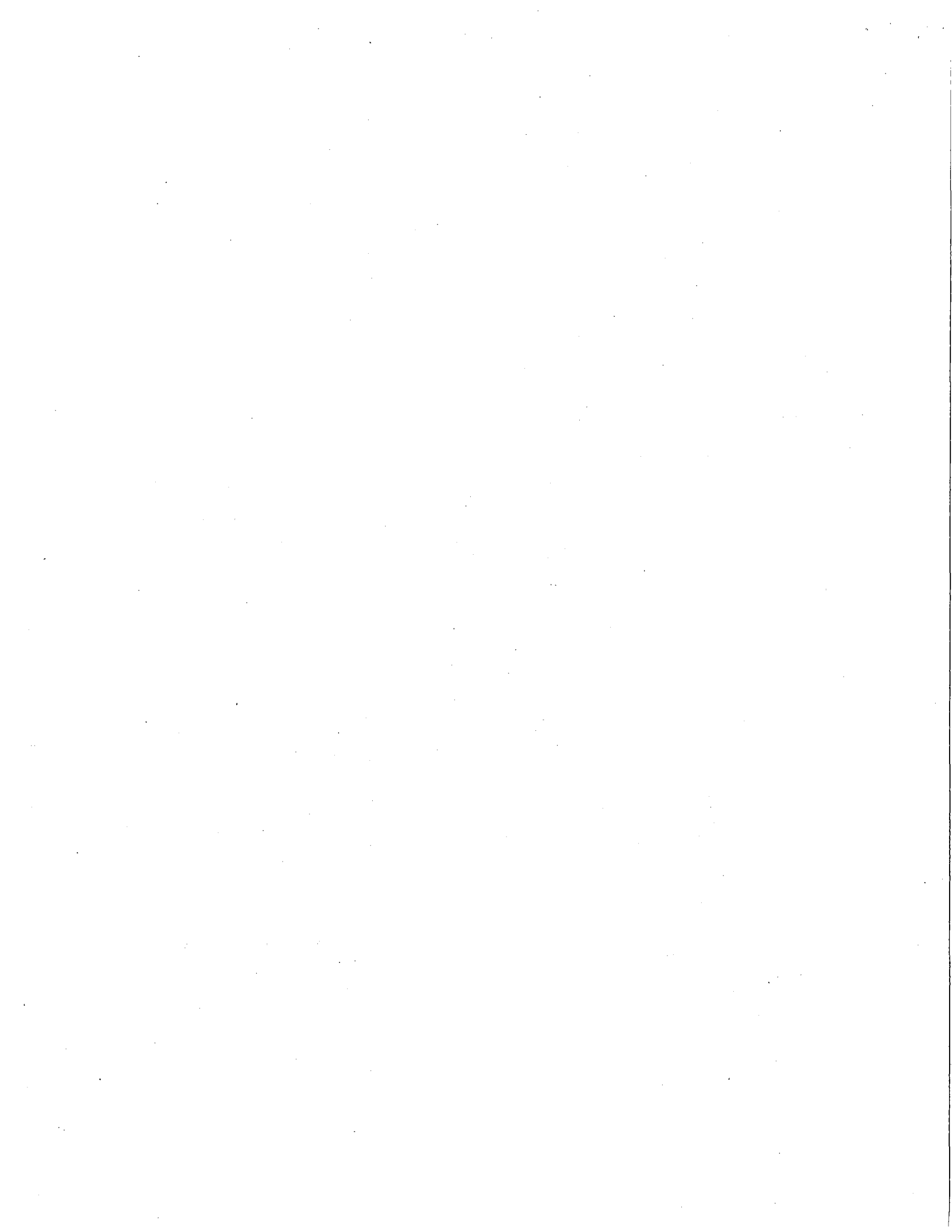
Substance	Drinking Water Standard		Acute Toxicity		Chronic Toxicity		Carcinogenicity		
	(ug/l)	Val.	(mg/kg-bw)	Val.	(mg/kg/day)	Val.	WOE	PF*	Val.
1. Diesel	20	6	490	5	0.004	3	**	**	ND
2.									
3.									
4.									
5.									
6.									

*Potency Factor Source: 2, 3
Highest Value: 6
 +2 Bonus Points? NA
Final Toxicity Value: 6

1.2 Mobility (Use numbers to refer to above listed substances)
 Cations/Anions: 1= 3.0E + 01 Source: 2, 3 Value: 1

OR
 Solubility(mg/l): NA

1.3 Substance Quantity Source: 1, 3 Value: 3
 Explain basis: Estimated 200 cubic yards; Table GW-7A



2.0 MIGRATION POTENTIAL

2.1 Containment

Source: 1, 3 Value: 7

Explain basis: Capped-Spills, Discharges and Contaminated Soils

To be scored as a landfill with a cover and no liner or leachate collection

Score: liner 3; cover 0; leachate 2, liquids 2. Total 7

2.2 Net Precipitation: 7.2 inches Source: 4 Value: 1

2.3 Subsurface Hydraulic Conductivity: Garrison gravelly loam Source: 5 Value: 4

2.4 Vertical Depth to Ground Water: < 25 feet Source: 1, 6 Value: 8

3.0 TARGETS

3.1 Ground Water Usage: Fed. Sole-Source Aquifer Source: 7 Value: 10

(Max.=10)

3.2 Distance to Nearest Drinking Water Well: ~4,100 ft Source: 8 Value: 2

(Max.=5)

3.3 Population Served within 2 Miles: √pop. =√182,000=MAX. Source: 8 Value: 100

(Max.=100)

3.4 Area Irrigated by (Groundwater) Wells

within 2 miles: $0.75\sqrt{\text{no. acres}} = \text{est. } 300$

Source: 9 Value: 13

$0.75\sqrt{300} = 0.75(17.3) = 13$

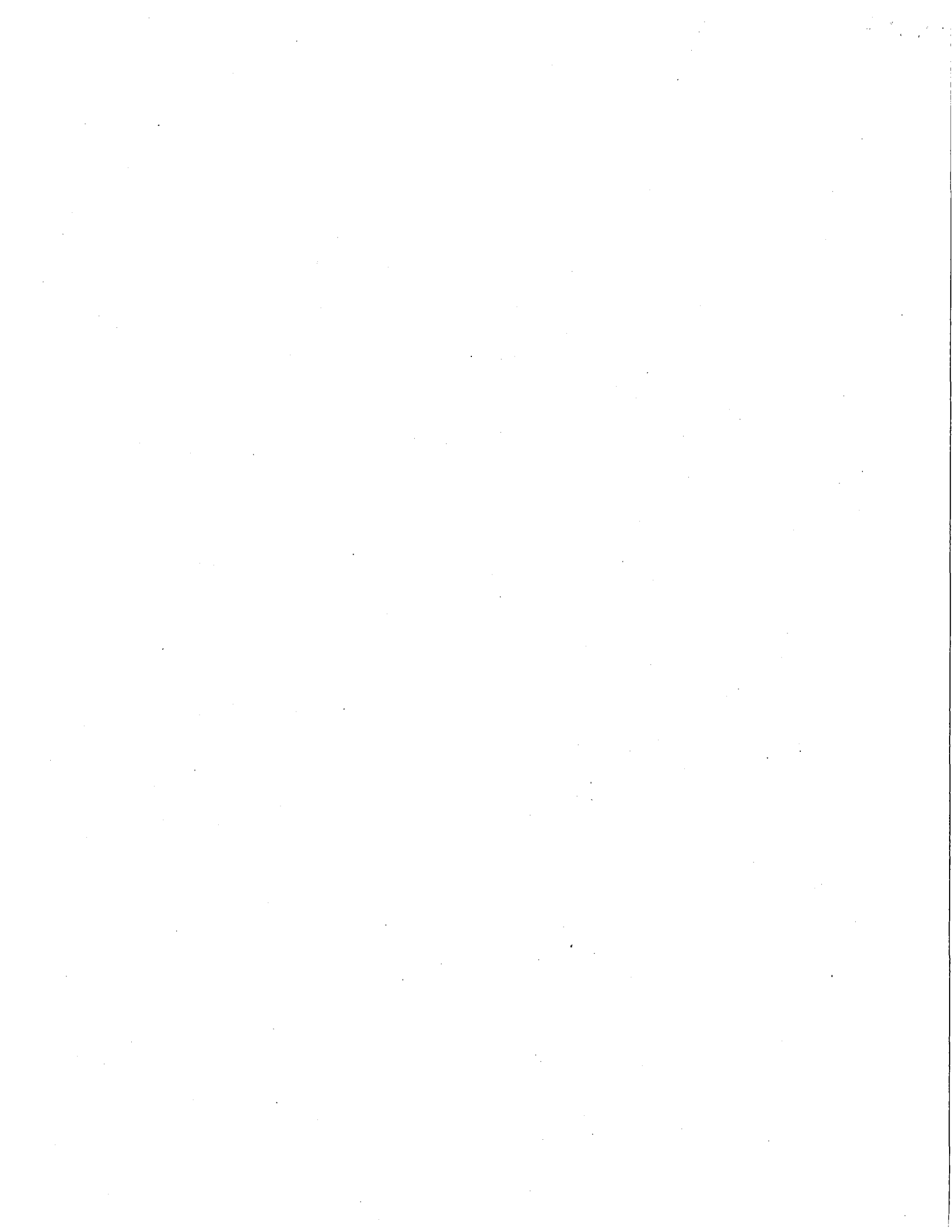
(Max.=50)

4.0 RELEASE

Explain basis for scoring a release to ground
water: NONE

Source: 1 Value: 0

(Max.=5)



SOURCES USED IN SCORING

1. Washington Water Power Summary Report
Spokane Service Center Groundwater Monitoring
Sheila Pachernegg, P.E. March 9, 1998
2. Toxicology Database - Washington Ranking Method Scoring (WARM)
3. WARM Scoring Manual
4. Washington Climate, Spokane Co. WSU Dept. of Agriculture
5. Soil Survey of Spokane Co. Washington, USDA Soil Conservation Svc.
6. Washington Department of Ecology, Well Logs.
7. Aquifer Sensitive Area Overlay Zone Map, Spokane Co. Washington
8. Washington Dept. of Health Drinking Water Information Network (DWIN)
9. Water Resource Information System (WRIS) Washington Dept. of Ecology