CENTRAL OFFICE — 575-4040 — 104 North First Street — Yakima, Wash. 98901
SUNNYSIDE OFFICE — 837-3411 — 1319 Saul Road — P.O. Box 821 — Sunnyside, Wash. 98944

YAKIMA HEALTH DISTRICT
EST. 1911
PREVENTION IS OUR BUSINESS

July 25, 1994

Frank Paganelli
261 Douglas Lane
Wapato, WA 98951

RE: 1802 South 1st Street, Yakima.

Mr. Paganelli,

The Yakima Health District has completed the site hazard assessment (SHA) of the **Carlos Motors site**, as required under the Model Toxics Control Act. This site's hazard ranking, an estimation of the potential threat to human health and/or the environment relative to all other Washington State sites assessed at this time, has been determined to be **"1"**, where 1 represents the highest relative risk and 5 the lowest.

For your information, Ecology will be publishing the ranking of this and other recently assessed sites in the August 23, 1994 Special Issue of the Site Register. The site hazard ranking will be used in conjunction with other site-specific considerations in determining Ecology's priority for future actions.

Please contact me at (509) 575-4265 if you have any questions relating to the SHA of your site. If you have any inquiries/comments about the site scoring/ranking process, please call Michael Spencer at (206) 407-7195. For inquiries regarding any further activities at your site now that it is on Ecology's Hazardous Sites List, please call Jim Chulos at (509)454-7294.

Sincerely,

Ted Silvestri

Ted Silvestri, R.S.
Environmental Health Specialist

cc: Michael Spencer, Washington Department of Ecology
Jim Chulos, Washington Department of Ecology, Central Regional Office
Brad Tidrick, 1802 South 1st Street, Yakima

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YAKIMA HEALTH DISTRICT EST. 1911 PREVENTION IS OUR BUSINESS

WORKSHEET 1
SUMMARY SCORE SHEET

Note: This document currently has no provision for sediment route scoring.

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

Carlos Motors
1802 South 1st Street
Yakima, WA 98901

Parcel number: 191331-11012

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

This site is at the intersection of South 1st Street and Mead Avenue in Yakima, Washington. It is in a commercial and light industrial area which is near the railroad corridor through town. It has been a car dealership and/or an auto repair, maintenance, and body shop (with painting) for over 30 years under several operators. There has been documented incidents of the dumping of pollutants (petroleum products) into the drains on the lot. The site is currently an auto repair facility, specializing in transmission work (TQT Transmission). The current operator has been at this site since approximately the beginning of 1994 and is not the same operator as when the initial investigation was completed by the Washington State Department of Ecology.

During an initial site visit staining was observed on the ground around the fill spout for the waste oil tank located on the west side of the lot. There are also two dry wells on the lot that were connected to the floor drains inside the building. The dry wells do drain to ground water, which is shallow under the City of Yakima.

The staining around the waste oil tank was tested for total petroleum hydrocarbons, priority metals, VOAs, and PCBs. Chromium, copper, and lead, as well as all ranges of petroleum hydrocarbons (gasoline, diesel, and heavy oils) were found. Various organic compounds were also found including 2-methylnaphthalene, phenanthrene, pyrene, and bis(2-ethylhexyl)phthalate.

The south pavement drain was tested for total petroleum hydrocarbons, VOA, semivolatiles, and priority metals. Cadmium, chromium, copper, and lead as well as all ranges of petroleum hydrocarbons were found in this dry well. Various organic compounds were found including acetone, methylene chloride, toluene, ethylbenzene, m,p-xylenes, o-xylenes, 4-methylphenol, 2-methylnaphthalene, phenanthrene, fluoranthene, pyrene, and bis(2-ethylhexyl)phthalate.

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):

The underground waste oil tank is full of liquid which was releasing vapors that a photoionization meter detected and is not currently in use or equipped with a proper lid (it has a coffee can over the fill pipe).

ROUTE SCORES:

Surface Water/Human Health: N/A ; Surface Water/Environ.: N/A ;

Air/Human Health: 49.2 ; Air/Environmental: 14.0 ;

Ground Water/Human Health: 68.0 .

OVERALL RANK: 1 .

Rev. 4/3/92

SUPPORTING GOVERNMENTAL UNITS

1	Yakima County	Harrah	Selah	Union Gap
	Yakima City	Mabton	Sunnyside	Wapato
	Grandview	Moxee	Tieton	Zillah
	Granger	Naches	Toppenish	

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE Not applicable/not scored

2. AIR ROUTE

List substances to be considered for scoring:

1. *methylene chloride*
2. *toluene*
3. *ethylbenzene*
4. *xylenes*
5. *WTPH-diesel*

Source: 1

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

These substances where found in the area of the surface staining around the waste oil tank.

List management units to be considered in scoring:

Spill

Source: 1

Explain basis for choice of unit used in scoring.

Contaminants were found on the surface of the ground with no containment.

3. GROUND WATER ROUTE

List substances to be considered for scoring:

1. *antimoney*
2. *arsenic*
3. *cadmium*
4. *chromium*
5. *copper*
6. *lead*
7. *mercury*
8. *nickel*
9. *selenium*
10. *zinc*
11. *methylene chloride*
12. *toluene*
13. *ethylbenzene*
14. *xylenes*
15. *WTPH-diesel*
16. *phenanthrene*
17. *pyrene*

Source: 1

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

All of these contaminates exceeded either the MTCA method A clean up levels or the maximum contaminate levels for drinking water.

List management units to be considered in scoring:

Spill

Source: 1

Explain basis for choice of unit used in scoring.

Contaminants were found in a dry well and on the ground surface with no containment.

WORKSHEET 4
SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

Not applicable/not scored

WORKSHEET 5
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction (WARM Scoring Manual) - Please review before scoring

1.2 Human Toxicity

Substance	Air Standard (ug/m^3)	Val.	Acute Toxicity (mg/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1. *methylene chloride*	*2*	*9*	*88000 (LC50/30M,rat)*	*10*	*.86*	*1*	*B2=.8*	*.014*	*5*
2. *toluene*	*1248.8*	*1*	-	-	*.57*	*1*	*X*		-
3. *ethylbenzene*	*1448.6*	*1*	-	-	-	-	*X*		-
4. *xylenes*	*1448.6*	*1*	*21714 (LC50/4H,rat)*	*10*	*.085*	*1*	*X*		-
5. *WTPH-diesel*	*166.5*	*4*	-	-	-	-	*X*		-

*Potency Factor

Source: 1,2,3
Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value: 12

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility

Vapor Pressure(s): 1,2 Source: 1,2
_____ Value: 4

1.3.2 Particulate Mobility

Soil type: _____ Source:
Erodibility: _____ Value:
Climatic Factor:

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7) equals
Final Matrix Value: 24

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Acute Inhal. Toxicity (mg/m^3)	Value	Mobility Value	(Table A-7) Matrix Value
1. *methylene chloride*	*88000 (LC50/30M,rat)*	*3*	*4*	*6*
2. *toluene*	-	-	-	
3. *ethylbenzene*	-	-	-	
4. *xylenes*	*21714 (LC50/4H,rat)*	*3*	*3*	*5*
5. *WTPH-diesel*	-	-	-	

Highest Environmental Toxicity/Mobility Matrix Value (From Table A-7) equals **Final Matrix Value:** 6

1.6 Substance Quantity: ~314 sq.ft. of surface staining Source: 1,3 **Value:** 2
Explain basis: Based on area of visible staining.

2.0 MIGRATION POTENTIAL

2.1 Containment: No cover, surface spill, no vapor recovery Source: 1,3 **Value:** 10

3.0 TARGETS

3.1 Nearest Population: 40 feet Source: 1,3 **Value:** 10

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) .75 mile, Cahalan Park Source: 1,3 **Value:** 3

3.3 Population within 0.5 miles: $(1529)^{-2} = 39$ Source: 8 **Value:** 39

4.0 RELEASE

Explain basis for scoring a release to air: Source: 1,3 **Value:** 0

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1. antimoney	3	8	7(LD50,rat)	-	.0004	8		X	-
2. arsenic	50	-	763(LD50,rat)	-	.001	5	A=1	1.75	7
3. cadmium	5	8	225(LD50,rat)	-	.0005	8		X	-
4. chromium	100	-	-	-	.005?	5		X	-
5. copper	1300	-	-	-	.037	8		X	-
6. lead	5	8	-	-	-	-		X	-
7. mercury	2	-	-	-	.0003	8		X	-
8. nickel	100	-	-	-	.02	2		X	-
9. selenium	50	-	6700(LD50,rat)	-	.003	5		X	-
10. zinc	4000	-	-	-	.2	1		X	-
11. methylene chloride	5	8	1600(LD50,rat)	-	.06	1	B2=.8	.0075	3
12. toluene	2000	2	5000(LD50,rat)	3	.2	1		X	-
13. ethylbenzene	700	4	3500(LD50,rat)	3	.1	1		X	-
14. xylenes	10000	-	50(LDLo,hmn)	8	2.	1		X	-
15. WTPH-diesel	20	6	490(LD50,rat)	5?	.004	3		X	-
16. phenanthrene	.2	10	-	-	-	-		X	-
17. pyrene	.2	10	2700(LD50,rat)	3	.03	1		X	-

Source: 1,2,3

*Potency Factor

Highest Value: 10
+2 Bonus Points? 2
Final Toxicity Value: 12

1.2 Mobility (Use numbers to refer to above listed substances)
Cations/Anions 1, 2, 3, 7, 9, 10 Source: 1,3 **Value:** 3

OR

Solubility(mg/l)_____ Source:____ **Value:**

1.3 Substance Quantity Default Source: 1 **Value:** 1
Explain basis: Due to the fact that the spillage occurred prior to occupancy by the current operator, no estimate of quantity is possible.

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 1,3 **Value:** 10
Explain basis: For all spills, discharges, and contaminated soil (including dry wells, drain fields, and Leaking underground storage tanks) a default containment value of 10 is used.

2.2 Net Precipitation: 1.2 inches Source: 4 **Value:** 1

2.3 Subsurface Hydraulic Conductivity: $>10^{-3}$ Source: 5 **Value:** 4

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

3.0 TARGETS

3.1 Ground Water Usage: public supply, alternate source available
Source: 1,7 **Value:** 4

3.2 Distance to Nearest Drinking Water Well: ~1,000ft Source: 1 **Value:** 4

3.3 Population Served within 2 Miles: $(2,934)^{-2}$ = 54 Source: 8 **Value:** 54

3.4 Area Irrigated by (Groundwater) Wells
within 2 miles: $.75(2906)^{-2}$ = 40 Source: 7 **Value:** 40

4.0 RELEASE

Explain basis for scoring a release to ground water: Contamination is in the dry well and on the ground surface with no barriers between it and the ground water. Source: 1 **Value:** 5

SOURCES USED IN SCORING

1. *Yakima Health District site visit and sampling on May 11, 1994.*
2. *WDOE Toxicology Database for Use in WARM Scoring, January 1992.*
3. *WDOE Washington Ranking Method Scoring Manual.*
4. *Washington Climate for Yakima County, table 27, May 1979.*
5. *Soil Survey of Yakima County Area, Washington, USGS, May 1985*
6. *Soil log information from surrounding area, Yakima Health District Sewage Files.*
7. *WDOE Water Rights Information System.*
8. *Washington State 1990 Census Data as supplied by Region 10 EPA.*

Reference #7 2,905.6 irrigated acres

RECORDED WATER RIGHTS OF THE DEPARTMENT OF ECOLOGY REGION 4 PAGE 327 REPORT DATE 1/23/92

CONTROL # / #OF R / PTS	SEC / P	OLD APPL	OLD PERM	OLD CERT	DATE OF PRIORITY	S T	C C	A M	CNTY	PERMIT DATE	NAME	SOURCE OF APPROPRIATION	TRIBUTARY OF	PURPOSE OF USE	USE TYPE	INST QI	C M	R U	S U	ANNUAL QA	C M	R U	S U	IRR AC	C M	S U	PRO-VISOS	TIME OF USE	R I	R A	R C
WATER RESOURCE INVENTORY AREA- 37																															
TOWNSHIP - 13 RANGE - 19 E																															
G4-30736A 1 NW4NW4	24				05/03/991				YAKI	/ /	SIEKAWRTCH	WELL		IRRIGATION	C	10.0	G	2		4.0				1.0			RK	04011031			
														DOMESTIC SINGLE	C	110.0	G	3													
														STOCK WATERING	C	110.0	G	3													
														IRRIGATION	C	110.0	G	3													
G4-24636C 1 NW4NW4	25				02/11/977				YAKI	10/13/977	YOUNG LEON	WELL		IRRIGATION	C	300.0	G			114.0				10.0							
G4-27760P 1 W2SW4SE4	25				01/23/981	C			YAKI	09/24/982	BROLOTTE HERVY	WELL		IRRIGATION	C	250.0	G			36.6			S	30.0			RW	04C11015			
296198 SW4SE4	25				02/22/988				YAKI	09/20/988	DESSERAYLT RANCH I	WELL		IRRIGATION	C	500.0	G	2		31.6			S	46.3			RK	04011031			
														FROST PROTECTION	C	500.0	G	2		8.8				102.8			$RK	04011031 00000000			
G4-24959T 1 NE4NW4	26				03/07/977	C			YAKI	04/01/977	WEIPPERT DON	WELL		IRRIGATION	C	45.0	G			19.0				5.0			R	IS			
G4-26622C 1 NW4NE4	26				04/02/980	S			YAKI	08/01/988	BLOXOM JOHN M JR	WELL		DOMESTIC SINGLE	C	40.0	G	2		1.0							$RK				
														IRRIGATION	C	40.0	G	2		37.0			S	50.0			$RK	04011031			
G4-29534P 1 NE4NE4	26				12/08/987				YAKI	06/01/988	BLOXOM JOHN M JR	WELL		IRRIGATION	C	450.0	G	2		52.0			S	65.0			$RK	04011031			
														FROST PROTECTION	C	450.0	G	2		9.9							$RK	03150601			
G4-24788A 1 NE4	27				02/22/977	R			YAKI	/ /	HILL MARVIN	WELL		IRRIGATION	C	2250.0	G							110.0				IS			
G4-29224A 1 NE4SW4	27				03/17/987	R			YAKI	/ /	DESMARAIS MARC	WELL		IRRIGATION	C	250.0	G							60.0				IS			
G4-01350P 1 NE4NE4NW4	28	01358	01319		01/10/950	C			YAKI	09/06/930	WA ST PKS & REC CO	WELL		DOMESTIC SINGLE	C	40.0	G			16.0											
G4-07417C 1 NE4SW4	28	07417	07048	06200	12/01/964				YAKI	05/21/965	REED HOWARD H	WELL		DOMESTIC MULTIPLE	C	35.0	G			10.0							A				
G4-09301C 1 NE4NE4NW4	28	09501	08850	06313	05/02/968				YAKI	12/06/938	WA ST PK&REC COMM	WELL		DOMESTIC MULTIPLE	C	40.0	G			9.0							R				
G4-01151CBL 2 NW4NW4NE4, NW4NE4NW4	28	06121B	057738		12/04/961				YAKI	02/20/962	WA ST PK&REC COMM	WELLS		DOMESTIC SINGLE	C	850.0	G	2		11.0							A		2 2 3		
														IRRIGATION	C	850.0	G	2		200.0				50.0			A	IS	2 2 3		
25719C NE4NE4	28				01/23/978				YAKI	11/27/978	RICHARDSON NORMAN	WELLS		DOMESTIC MULTIPLE	C	173.0	G			74.0	2						RK				
														IRRIGATION	C	173.0	G	2		74.0	2						RK	IS			
G4-28005A 1 NE4SW4	28				07/28/982	R			YAKI	/ /	JENSEN WILLIAM/KOA	WELL		DOMESTIC MULTIPLE	C	50.0	G														
G4-28446G 1 SE4NE4	28				04/25/984				YAKI	11/07/984	DOERING RAYLENE	WELL		IRRIGATION	C	100.0	G			36.0				9.0			RK	04011031			
G4-30219A 2 NE4NE4	28				04/05/990				YAKI	/ /	N RICHARDSON	WELLS		DOMESTIC MULTIPLE	C	300.0	G	3													
														COMMERCIAL/INDUSTRIAL	C	300.0	G	3													
														IRRIGATION	C	300.0	G	3						1.0				IS			
S4-18776C 1 NE4 SW4	28	18776	14122	10068	11/10/964				$ YAKI	01/21/966	REED H H	YAKIMA R		FISH PROPAGATION	N	2.8	C	2									QS$				COL R (WALL LK)
														REC & BEAUTIFICATION	N	2.8	C	2									QS$				
G4-04610C 3 N2NW4; SW4NW4	29	04610	04456	03065	05/17/957	S			YAKI	02/28/958	CENTRAL WA FAIR	WELL		IRRIGATION	C	240.0	G			80.0				20.0			RK	04301031			
G4-07529C 1 NW4 SE4 SE4	29	07529	07151	05511	03/15/965	S			YAKI	09/13/965	YAKIMA CITY OF	WELL		DOMESTIC GENERAL	C	172.0	G	2		202.0							R				
														IRRIGATION	C	172.0	G	2		20.0				5.0			R	IS			
G4-07592C 1 NW4NE4	29	07592	07119	05731	04/14/965				YAKI	07/26/965	WA ST HIGHWAY COMM	WELL		IRRIGATION	C	50.0	G			7.2				1.8			R	JS			

CONTROL # / #OF PTS	SEC / P	OLD APPL / LOC. OF POD/POW	OLD PERM / (CHG C#)	OLD CERT / PURPOSE OF USE	DATE OF PRIORITY	S T	C C	A M	CNTY / USE TYPE	PERMIT DATE / INST QI	C M	R U	S U	NAME / ANNUAL QA	C M	R U	S U	SOURCE OF APPROPRIATION / IRR AC	C M	S U	PRO-VISOS	TRIBUTARY OF / TIME OF USE	R I	R A	R C
WATER RESOURCE INVENTORY AREA- 37																									
TOWNSHIP - 13 RANGE - 19 E																									
G4-11478A 1	29 GOODWIN'S S ACRE TRKS L-34	11478		12/23/970 DOMESTIC MULTIPLE COMMERCIAL/INDUSTRIAL	R				YAKI C C	/ / 1000.0 1000.0	G G	2 2		MATSON ALAN L				WELL							
G4-23039C 1	29 SW4NE4NE4			06/03/974 IRRIGATION					YAKI C	05/05/976 200.0	G			YAKIMA PKS & RECR 83.0				WELL	16.0		R		04011001			
G4-23469C 1	29 SW4SE4NW4			09/10/974 ENVIRONMENTAL QUALITY IRRIGATION					YAKI C C	06/12/975 400.0 400.0	G G	2 2		YAKIMA VALLEY TURF 210.0 210.0		2 2		WELL	40.0		R R		IS			
G4-28349C 1	29 SE4NE4			11/30/983 DOMESTIC MULTIPLE DOMESTIC GENERAL COMMERCIAL/INDUSTRIAL	S				YAKI C C C	03/30/987 18.0 18.0 18.0	G G G	3 3 3		HUMANE SOCIETY 2.0 1.2 1.8				WELL			RK RK RK					
G4-29025A 1	29 SE4NE4			10/18/988 IRRIGATION					YAKI C	/ / 300.0	G			YAKIMA GREENWAY				WELL	12.2							
G4-30734A 1	29 NW4NE4			05/03/991 DOMESTIC MULTIPLE					YAKI C	/ / 75.0	G			YAKIMA ARBORETUM				WELL								
G4-00115D 1	30 NW4NW4	00115		08/01/923 COMMERCIAL/INDUSTRIAL	R				YAKI C	/ / 60.0	G			CITY ICE DELIVERY 96.0				WELL								
G4-00143S 1	30 NW4NW4	00143		00098 08/01/923 HEAT EXCHANGE					YAKI C	/ / 60.0	G			CITY ICE DELIVERY 96.0				WELL								
G4-04381C 1	30 NW4NW4	04381	04099	02922 07/19/956 IRRIGATION					YAKI C	10/09/956 82.0	G			YAKIMA METRO PRK D 10.0				WELL	2.5		AEN		IS			
G4-24200C 1	30 W2 NW4 NE4			02/17/976 COMMERCIAL/INDUSTRIAL					YAKI C	12/27/976 150.0	G			NOEL CANNING CORP 57.0				WELL			R					
G4-27558A 2	30 S2S2			07/15/981 COMMERCIAL/INDUSTRIAL	R				YAKI C	/ / 200.0	G			WA ST HOP PROD INC 				WELLS								
G4-28585C 1	30 SE4NW4			12/14/984 HEAT EXCHANGE					YAKI C	11/21/985 90.0	G			YAKIMA PRECAST 				WELL			RK					
G3-00675C 1	31 NW4NE4	11830		04/28/971 COMMERCIAL/INDUSTRIAL					YAKI C	06/07/973 40.0	G			SNOKIST GROWERS 64.0				WELL			R					
G4-01813C 1	31 NE4SE4	01813	01625	01635 02/05/951 COMMERCIAL/INDUSTRIAL					YAKI C	04/13/951 50.0	G			YAKIMA FARMERS SPP 40.0				WELL			AE					
-04834C NW4 NE4	31	04834	04572	03220 04/18/958 DOMESTIC MULTIPLE HEAT EXCHANGE COMMERCIAL/INDUSTRIAL					YAKI C C C	08/15/958 175.0 175.0 175.0	G G G	3 3 3		HANSEN FRUIT / STO 280.0 280.0 280.0		3 3 3		WELL			A A A					
G4-06401C 1	31 NE4NW4NE4	06401	06006	04376 07/31/962 COMMERCIAL/INDUSTRIAL					YAKI C	10/29/962 235.0	G			HANSEN FRUIT & STO 280.0				WELL			A					
G4-07270C 1	31 NE4 NW4 NE4	07270	06943	05263 07/22/964 COMMERCIAL/INDUSTRIAL					YAKI C	03/22/965 350.0	G			HANSEN FRUIT & STO 503.0			S	WELL			RN$					
G4-23466C 2	31 NW4NE4SW4			06/27/974 DOMESTIC SINGLE IRRIGATION					YAKI C C	02/24/976 20.0 20.0	G G	2 2		RHODES JOHN W 2.0 6.0				WELLS	1.0		R R		04011001			
G4-24887C 1	31 NW4SE4			03/02/977 IRRIGATION					YAKI C	03/06/978 90.0	G			STELZER ALFRED 52.0			S	WELL	10.0		RW		04011031			
G4-28967B 1	31 S2NW4			05/09/986 IRRIGATION					YAKI C	01/12/987 235.0	G			WHITE DONALD R 48.0				WELL	12.0		$RK		04011031			
G4-29160C 1	31 S2NW4			12/09/986 IRRIGATION					YAKI C	05/21/987 95.0	G			WHITE DONALD R 48.0			S	WELL	12.0				04011031			
G3-21197C 1	32 SW4NE4			05/24/973 IRRIGATION					YAKI C	07/11/975 30.0	G			WALTERS THOMAS G 12.0				WELL	3.0		R		04010930			
G4-00042P	32	00042	00027	11/14/945	C				YAKI	01/25/946				CRAWFORD J J				WELL								

CONTROL # / $OF R / PTS P	SEC / LOC. OF POD/POW	OLD APPL. / (CHG C#)	OLD PERM / PURPOSE OF USE	OLD CERT / DATE OF PRIORITY / S T C M	CNTY / USE TYPE	PERMIT DATE / INST QI / C M R U S U	NAME / ANNUAL QA / C M R U S U	SOURCE OF APPROPRIATION TRIBUTARY OF / IRR AC / C M S U PRO-VISOS	TIME OF USE / R I R A R C
WATER RESOURCE INVENTORY AREA- 37									
TOWNSHIP - 13 RANGE - 19 E									
1	SW4SE4NE4		IRRIGATION		C	900.0 G	120.0	35.0	IS
G4-07593C	32	07593	07120	05732 04/14/965		YAKI 07/26/965	WA ST HIGHWAY COMM	WELL	
1	SE4NE4		IRRIGATION		C	50.0 G	7.2	1.8 R	IS
G4-07594C	32	07594	07121	05733 04/14/965		YAKI 07/26/965	WA ST HIGHWAY COMM	WELL	
1	SE4SE4		IRRIGATION		C	50.0 G	7.2	1.8 R	IS
G4-10321C	32	10321	09355	07552 07/24/969		YAKI 10/20/969	LINDEMAN J G	WELL	
1	TR8 FORNEY SUBD		HEAT EXCHANGE		C	50.0 G	7.2	RR	
G4-23040C	32			06/03/974		YAKI 12/12/975	YAKIMA PKS & RECR	WELL	
	SE4SE4NW4		IRRIGATION		C	300.0 G	39.0	7.5 R	04011001
29514C	32			07/10/984		YAKI 01/31/985	WASH FRUIT & PROD	WELL	
	SW4NE4		COMMERCIAL/INDUSTRIAL		C	75.0 G		KR	05010731
G4-20812C	32			10/14/985		YAKI 03/28/986	WA FRUIT & PRODUCE	WELL	
1	SW4NE4		COMMERCIAL/INDUSTRIAL		C	75.0 G		$RK	
G4-00213P	33	00213	00153	04/12/946 C		YAKI 05/03/946	REDMON FRED G	SUMP	
1	SW4NW4		COMMERCIAL/INDUSTRIAL		C	2000.0 G	1770.0		
G4-25183B	33			05/02/977 C		YAKI 03/08/978	VANDERWEL PATTY J	WELL	
1	SE4 NE4		DOMESTIC SINGLE		C	400.0 G 2	2.0	R	
			IRRIGATION		C	400.0 G 2	204.0	39.0 R	04011031
G4-29394T	33			08/18/987		YAKI 08/27/987	YAKIMA CONCRETE CO	WELL	
1	N2NE		DOMESTIC MULTIPLE		C	500.0 G 2		$K	
			COMMERCIAL/INDUSTRIAL		C	500.0 G 2			
G3-21053C	34			04/27/973		YAKI 07/29/975	MILUM ROLAND D	WELL	
1	NE4SE4		IRRIGATION		C	80.0 G	53.0	10.0 R	04011031
G4-10996C	34	10996	10089	07327 06/23/970		YAKI 01/27/971	MAHER W D	WELL	
1	N2 SE4 NW4		DOMESTIC SINGLE		C	10.0 G	1.0	R	
			IRRIGATION		C	400.0 G	172.0 U	40.0 R	03010930
G4-24871G	34			02/28/977		YAKI 02/23/978	GOODWIN P D	WELLS	
2	SE4NE4, NE4SE4		STOCK WATERING		C	30.0 G 2	2.0	RN	
			IRRIGATION		C	30.0 G 2	24.0	11.0 RN	04011031
G4-27315G	34			02/20/981		YAKI 10/09/981	WENTZ DEWAYNE L	WELL	
1	SW4SE4		DOMESTIC SINGLE		C	56.0 G 2	1.0	RK	
			IRRIGATION		C	56.0 G 2	26.2	5.0 RK	04011031
28676B	34			04/30/985		YAKI 11/22/985	KRAUSE RICHARD C	WELLS	
	SW4SE4		DOMESTIC SINGLE		C	60.0 G 2	1.0	RK	
			IRRIGATION		C	60.0 G 2	22.5	5.0 RK	04011031
G4-06359C	35	06359	06100	04659 06/27/962		YAKI 01/08/963	YAKIMA SCH DIST #9	WELL	
1	SE4 SE4 NE4		IRRIGATION		C	145.0 G	60.0 U	15.0 AN	IS
G4-09220C	35	09220	08642	06203 02/16/968		YAKI 09/04/968	MOXEE SCH DIS #90	WELL	
1	NE4SE4NE4		DOMESTIC MULTIPLE		C	150.0 G	17.0	RN	
G4-27419P	35			04/14/981		YAKI 03/01/983	B T LOFTUS RCHS IN	WELL	
1	SE4SE4		DOMESTIC SINGLE		C	10.0 G	2.0	RK	
			IRRIGATION		C	60.0 G	5.14 S	6.0 RK	04011031
G4-24722P	36			02/17/977 C		YAKI 05/04/978	VEST JIM	WELL	
1	SE4SW4		IRRIGATION		C	100.0 G	43.0 S	9.0 RW	04011031
G4-25506C	36			10/24/977		YAKI 03/30/978	BURLEY YAKIMA RAN	WELL	
1	SE4NE4NE4		DOMESTIC SINGLE		C	185.0 G 2	2.0	R	
			IRRIGATION		C	185.0 G 2	175.0 S	46.0 R	04011031
G4-27928P	36			05/12/982		YAKI 04/07/983	DORAIS EMIL/HELEN	WELL	
1	S2NE4		DOMESTIC MULTIPLE		C	50.0 G	5.0	KR	
G4-29765A	36			08/05/988		YAKI / /	BURLEY JAMES H	WELL	
1	E2NE4		DOMESTIC SINGLE		C	180.0 G 3			
			IRRIGATION		C	180.0 G 3		42.0	IS
			FROST PROTECTION		C	180.0 G 3			
TOWNSHIP - 13 RANGE - 20 E									

CONTROL # / # OF PTS	SEC	OLD APPL	OLD PERM	OLD CERT	DATE OF PRIORITY	S T	C	A M	CNTY	PERMIT DATE	NAME	SOURCE OF APPROPRIATION	TRIBUTARY OF	USE	INST QI	C M	R U	S U	ANNUAL QA	C M	R U	S U	IRR AC	C M U	S PRO-VISOS	TIME OF USE	R I	R A	R C
WATER RESOURCE INVENTORY AREA- 37																													
TOWNSHIP - 13 RANGE - 19 E																													
G4*07587C	18	07587	07114	05726	04/14/965				YAKI	07/25/965	WA ST HIGHWAY COMM	WELL																	
1 NE4SE4				IRRIGATION					C	50.0	G								7.2				1.8		R	IS			
G4*07589C	18	07589	07116	05728	04/14/965				YAKI	07/26/965	WA ST HIGHWAY COMM	WELL																	
1 NW4NE4				IRRIGATION					C	50.0	G								6.8				1.7		R	IS			
G4-27615C	18				08/26/981				YAKI	06/14/982	L E L BUILDING	WELL																	
1 L-1/4 BL-87 YAKIMA/SE4SW4				HEAT EXCHANGE					C	140.0	G								56.5						RK				
G4-20096A	18				09/25/989				YAKI	/ /	L M COUGHLIN	WELL																	
1 NW4NW4				DOMESTIC MULTIPLE					C	30.0	G																		
S4*08335A	18	08335			04/15/948	R			YAKI	/ /	GIBSON PACKING CO	YAKIMA R	COLUMBIA R																
1 SE4SE4				COMMERCIAL/INDUSTRIAL					C	1.0	C																		
00232S	19	00232		00205	04/01/942	F			YAKI	/ /	NEWBERRY J J CO	WELL																	
L9/10/11/12 BL50 TWN YAKIMA				HEAT EXCHANGE					C	350.0	G								149.0										
G4*00244S	19	00244		00179	08/20/929				YAKI	/ /	CALIF PACKING CORP	WELL																	
1 L24 BL-D NPRY CO R OF W PLAT				COMMERCIAL/INDUSTRIAL					C	550.0	G								185.0										
G4*01417C	19	01417	01508	00921	03/16/950				YAKI	02/15/951	YAKIMA COMM HOUSE	WELLS																	
3 LI-5 BL91 CITY OF YAKIMA				HEAT EXCHANGE					C	700.0	G								99.0						A				
G4*05324C	19	05324	05111	04027	06/12/959				YAKI	02/26/960	YAKIMA SCH DIST #7	WELL																	
1 BLS 156 / 176 HOME ADDN				IRRIGATION					C	65.0	G								26.0				6.5		A	IS			
G4*05815C	19	05815	05493	03916	01/19/961				YAKI	04/21/961	YAKIMA SCH DIST #7	WELL																	
1 BL178 PARKER ADDN TO YAKIMA				IRRIGATION					C	35.0	G								14.0				3.5		A	IS			
G4-27555P	19				07/07/981				YAKI	02/23/982	YAKIMA CO COMMISS	WELLS																	
2 L-17/32 BL-9 YAKIMA NORTH				HEAT EXCHANGE					C	700.0	G														R				
G4-27921C	19				05/07/982				YAKI	03/01/983	AMER RED CROSS(YAK	WELL																	
1 N2NW4				HEAT EXCHANGE					C	110.0	G								88.0						KR				
G4-28036A	19				08/27/982	R			YAKI	/ /	AMERICAN RED CROSS	WELL																	
1 NE4SE4				HEAT EXCHANGE					C	110.0	G																		
G4-29299A	19				06/03/987	R			YAKI	/ /	EASTWOOD CLYDE	WELL																	
1 E2SW4				DOMESTIC MULTIPLE					C	60.0	G																		
G3*00303C	20	10889	09858		05/18/970				YAKI	09/03/970	WA ST HIGHWAY COMM	WELL																	
1 FAIR ST L 15&28 PL LHS YAKIM				IRRIGATION					C	120.0	G								32.0				7.4		R	04011015			
G4*04954C	20	04954	04699	04646	08/04/958				YAKI	01/23/959	YAKIMA CITY OF	WELL																	
1 SW4 NW4				DOMESTIC MUNICIPAL					C	2300.0	G								3680.0		S				A				
.06979C	20	06979	06520	04790	01/08/964				YAKI	03/13/964	VAN NOSTERN J G	WELL																	
NE4 NE4				DOMESTIC SINGLE					C	10.0	G								45.6	2					AN				
				IRRIGATION					C	100.0	G								45.6	2			10.0		ANE	IS			
G4*07590C	20	07590	07117	05729	04/14/965				YAKI	07/26/965	WA ST HIGHWAY COMM	WELL																	
1 SE4NW4				IRRIGATION					C	50.0	G								5.6				1.4		R	IS			
G4*07591C	20	07591	07118	05730	04/14/965				YAKI	07/26/965	WA ST HIGHWAY COMM	WELL																	
1 SE4SW4				IRRIGATION					C	50.0	G								6.4				1.6		R	IS			
G4*10807C	20	10807	09831	07555	04/22/970				YAKI	08/19/970	LIGHTHALL A C & W	WELL																	
1 NW4 NE4 NE4				DOMESTIC SINGLE					C	300.0	G	4							2.0						R				
				COMMERCIAL/INDUSTRIAL					C	300.0	G	4							96.0						R				
				FIRE PROTECTION					C	300.0	G	4													R				
				IRRIGATION					C	300.0	G	4							4.3				1.0		R	04011031			
G4*23081C	20				06/03/974				YAKI	12/12/975	YAKIMA PKS & RECR	INFILTRATION TR																	
1 SW4NW4				IRRIGATION					C	400.0	G								101.0				19.5			04011001			
G4-23494C	20				09/28/974				YAKI	12/26/975	CENTRAL PRE-MIX CO	WELL																	
1 NW4 SE4				DOMESTIC SINGLE					C	228.0	G	2							2.0						R				
				COMMERCIAL/INDUSTRIAL					C	228.0	G	2							3.6						R				
G4-26557C	20				02/15/980				YAKI	12/04/980	WELLS CLIFFORD	WELL																	
1 SW4NW4				IRRIGATION					C	10.0	G								2.0				.5		R	04011031			
G4-28267C	20				07/29/983				YAKI	04/24/984	YAKIMA R REG GREEN	WELL																	
1 SW4NE4				IRRIGATION					C	145.0	G								55.1				14.5		KR	04011001			

CONTROL # / # OF PTS	SEC / P	OLD APPL / LOC. OF POD/POW	OLD PERM / (CHG C#)	OLD CERT / PURPOSE OF USE	DATE OF PRIORITY	S T	C C	A M	CNTY / USE TYPE	PERMIT DATE / INST QI	C M	R U	S U	NAME / ANNUAL QA	C M	R U	S U	SOURCE OF APPROPRIATION / IRR AC	C M	S U	PRO-VISOS	TRIBUTARY OF / TIME OF USE	R I	R A	R C
WATER RESOURCE INVENTORY AREA- 37																									
TOWNSHIP - 13 RANGE - 19 E																									
G4-28530A	20				09/05/984	R			YAKI	/ /				YAKIMA R GREENWAY				WELL							
1 SW4NE4				IRRIGATION					C	95.0 G								9.5				IS			
S4-23495C	20				09/28/974				YAKI	12/26/975				CENTRAL PRE MIX CO				UNN POND				YAKIMA R			
1 NW4SE4				COMMERCIAL/INDUSTRIAL					C	1.3 C										S					
G3+00785C	21	12153			08/16/971				YAKI	07/20/973				CONRAD LYLE				WELL							
1 SW4NW4				IRRIGATION					C	90.0 G				43.0				10.0		R		04010930			
G3+20480P	21				12/29/972	C			YAKI	05/30/973				CHG INTERNATIONAL				WELL							
1 N2 SE4 NE4 NE4				DOMESTIC MULTIPLE					C	128.0 G				27.0											
00623S	21	00623		00618	00/00/924				YAKI	/ /				YAKIMA CO HORT UNI				WELL							
NW4NW4				COMMERCIAL/INDUSTRIAL					C	200.0 G 2				48.0	2										
				DOMESTIC GENERAL					C	200.0 G 2				48.0	2										
G4*00625S	21	00625		00620	00/00/924				YAKI	/ /				YAKIMA CO HORT UNI				WELL							
1 NW4NW4				COMMERCIAL/INDUSTRIAL					C	100.0 G 2				24.0	2							PS			
				DOMESTIC GENERAL					C	100.0 G 2				24.0	2										
G4*01702C	21	01702	01450	00684	10/16/950				YAKI	12/15/950				YAKIMA CO HORT UNI				WELL							
1 W2NW4				COMMERCIAL/INDUSTRIAL					C	600.0 G				300.0							EA	IS			
G4*04587C	21	04587	04293	02915	04/25/957				YAKI	06/25/957				BLUE RIBBON GROWER				WELL							
1 NW4 NW4				COMMERCIAL/INDUSTRIAL					C	750.0 G 2				372.0			S				A				
				COMMERCIAL/INDUSTRIAL					C	750.0 G 2				828.0							A				
G4*07755C	21	07755	07279	05295	08/24/965				YAKI	12/02/965				CONRAD L				WELL							
1 SW4SW4NW4/NE4NW4SW4				IRRIGATION					C	135.0 G 2				72.0	2		S	13.0			AE	IS			
				IRRIGATION					C	135.0 G 2				72.0	2			5.0			AE	IS			
G4*08718C	21	08718	08104	06608	05/05/967				YAKI	09/06/967				SNOKIST GROWERS				WELL							
1 N2 NW4 NW4				COMMERCIAL/INDUSTRIAL					C	1500.0 G 2				1572.0			S				RK	07010501			
G4*09198C	21	09198	08679	06219	02/02/968				YAKI	10/02/968				SNOKIST GROWERS				WELL							
1 N2 NW4 NW4				COMMERCIAL/INDUSTRIAL					C	1000.0 G				1438.0			S				RN	07010430			
G4-01151CAL	21	06121A	05773A		12/04/961				YAKI	02/20/962				WA ST PK&REC COMM				WELL							
1 SW4SE4SW4				DOMESTIC SINGLE					C	850.0 G 2				11.0							A			2 2 0	
				IRRIGATION					C	850.0 G 2				200.0				50.0			A	IS		2 2 2	
G4-23191C	21				06/22/974				YAKI	07/29/975				LEWIS ALLEN H				WELL							
1 S2NW4NW4SW4				IRRIGATION					C	28.0 G				21.0				5.0		R		04011031			
*09353C	21	09353	06898	03955	01/10/950				YAKI	01/15/951				WA ST PK&REC COMM				UNN STR				YAKIMA R			
1 SE4SW4				IRRIGATION					C	.3 C								20.0				IS			
G3+00952C	22	11738	10737		03/30/971				YAKI	03/31/972				YAKIMA COUNTRY CLU				WELL							
1 L11 PL COUNTRY CLUB ESTATES				DOMESTIC MULTIPLE					C	480.0 G				22.0							RH				
G3+20079C	22				03/06/972				YAKI	06/25/973				DITONMASO ANTHONY				WELL							
1 L-252 TERRACE HGTS SUB #2				DOMESTIC SINGLE					C	40.0 G 3				2.0							R				
				FIRE PROTECTION					C	40.0 G 3											R				
				IRRIGATION					C	40.0 G 3				8.5				2.0			R	04011001			
G3+22031C	22				11/07/973				YAKI	11/22/976				YAKIMA COUNTRY CLU				WELL							
1 SE4NW4				IRRIGATION					C	500.0 G				397.0				120.0			R	02011201			
G4*00238S	22	00238		00891	06/01/926		K		YAKI	/ /				COUNTRY CLB DIST W				WELL							
1 L14 CTRY CLB SUB TR				DOMESTIC MULTIPLE					C	165.0 G 2				162.0	2	U									
				IRRIGATION					C	165.0 G 2				162.0	2	U						IS			
G4*00282C	22	00282	00931	00886	06/21/946		K		YAKI	03/17/949				COUNTRY CLUB DIST				WELLS							
2 N2NE4				DOMESTIC MULTIPLE					C	1500.0 G 2				1210.0	2	U									
				IRRIGATION					C	1500.0 G 2				1210.0	2	U		700.0							
*G4*05574C	22	05574	05235	04243	04/19/960				YAKI	07/08/960				ROBERTS R R ET AL				WELL							
1 L28 SUNSET POINT ADDN 2				DOMESTIC SINGLE					C	12.0 G 2				11.2		U					A				
				IRRIGATION					C	12.0 G 2				6.0		U		1.5			A	IS			
G4-24324C	22				06/15/976				YAKI	06/10/977				PORTER MARY E				WELL							

CONTROL # / # OF PTS	SEC / P	OLD APPL / LOC. OF POD/POW	OLD PERM / (CHG C#)	OLD CERT / PURPOSE OF USE	DATE OF PRIORITY	S C A T C M	CNTY / USE TYPE	PERMIT DATE / INST QI	NAME	C R S M U U	ANNUAL QA	C R S M U U	IRR AC	C S M U	PRO-VISOS	TIME OF USE	R R R I A C	SOURCE OF APPROPRIATION / TRIBUTARY OF
WATER RESOURCE INVENTORY AREA- 37																		
TOWNSHIP - 13 RANGE - 18 E																		
1	N2NW4			IRRIGATION			C	1.6	C 3				80.0		Q	04011015		
				DOMESTIC SINGLE			C	1.6	C 3						Q			
				STOCK WATERING			C	1.6	C 3						Q			
G4-011592C		34 01159	01106	01684	07/01/949	E	YAKI	11/28/949	PEARSON EDGAR A		WELL/INFILTRATION TR							
2	N2 SW4			IRRIGATION			C	400.0 G			180.0		U 45.0		A	IS		
G4-023879P		34 02387	02640		03/13/952	C	YAKI	03/13/953	DECOTO R A		WELL							
1	SW4SW4SW4			IRRIGATION			C	600.0 G			240.0		60.0		VE	IS		
G4-058686C		34 05886	05563	05974	03/24/961		YAKI	06/27/961	MCCOY R A		WELL							
1	SW4 NE4 SE4			DOMESTIC SINGLE			C	50.0 G 2			21.6	2						
				IRRIGATION			C	50.0 G 2			21.6	2	4.0			IS		
	06609C	34 06609	06243	04883	02/13/963		YAKI	06/07/963	SHELTON C L		INFILTRATION TR							
	N2 SW4			IRRIGATION			C	120.0 G			68.0		S 17.0			IS		
G4-24465C		34			12/02/976		YAKI	08/08/977	CONGDON ORCHARDS I		WELL							
1	SE4SE4			IRRIGATION			C	400.0 G			323.0		S 101.0		RK	04011031		
G4-24528C		34			02/02/977		YAKI	03/08/978	DECOTO WILLIS		WELL							
1	SE4 SW4			DOMESTIC SINGLE			C	800.0 G 2			2.0				RNW			
				IRRIGATION			C	800.0 G 2	S		570.0		S 150.0		RNW	04011031		
G4-27445G		34			04/27/981		YAKI	04/23/982	GITCHEL RALPH L		WELL							
1	NE4SW4			DOMESTIC SINGLE			C	10.0 G 2			1.0				RK			
				IRRIGATION			C	10.0 G 2			6.0		1.5		RK	IS		
S4-20283J		34			00/00/879	E 15	YAKI	/ /	SORENSON C / S C		UNN STR					SPRING CR		
1	32 SW4			IRRIGATION			C	2.1	C 3				105.0		Q	04011015		
				DOMESTIC SINGLE			C	2.1	C 3						Q			
				STOCK WATERING			C	2.1	C 3						Q			
G4-01049C		35 01049	00967	00829	01/03/949		YAKI	04/28/949	CALVARY CEMETERY.		WELL							
1	NW4NE4			IRRIGATION			C	200.0 G			32.0		16.0			IS		
G4-04933C		35 04933	04698	05318	07/24/958		YAKI	01/23/959	YAKIMA CITY OF		WELL							
1	NE4 NW4 SE4			DOMESTIC MUNICIPAL			C	2800.0 G			3200.0		S		A			
G4-09364C		35 09364	08562	07486	04/05/968		YAKI	07/05/968	TRONTECH CORP		WELL							
1	NE4 SE4 NW4			COMMERCIAL/INDUSTRIAL			C	100.0 G 2			32.0				RNK			
				IRRIGATION			C	100.0 G 2			25.0		10.0		RNK	03010930		
G4-10415C		35 10415	09807	07325	09/18/969		YAKI	08/11/970	WA ST DEPT OF GAME		WELL							
1	SE4SE4			FISH PROPAGATION			C	900.0 G			600.0				RP	04013631		
	01132C	35 07792	07333		09/16/965		YAKI	01/18/966	DAHLKE K W		WELL							
	N2SE4NW4NW4			DOMESTIC MULTIPLE			C	10.0 G			5.0				HA			
G4-26348C		35			08/21/979		YAKI	04/21/980	DAVIS HUGH E		WELL							
1	NE4NW4			IRRIGATION			C	35.0 G			16.0		3.0		R	04011031		
G4-29043B		35			08/13/986		YAKI	02/24/987	DOWTY DECOTO INC		WELL							
1	SE4NW4			IRRIGATION			C	100.0 G			30.0				RK	04011031		
G4-29864P		35			12/08/988		YAKI	06/13/991	YAKIMA CITY OF		WELL							
1	NW4NW4NW4			DOMESTIC MUNICIPAL			C	2000.0 G			3200.0				$RK			
S4-00699A		35 00699			12/05/921	R	YAKI	/ /	BRDWY IRRI CO		WIDE HOLLOW CR					YAKIMA R		
1	NE4SE4			DOMESTIC SINGLE			C	5.0	C 2									
				IRRIGATION			C	5.0	C 2				480.0			IS		
S4-04222C		35 04222	02291	01856	05/01/936		YAKI	07/30/936	WA ST DEPT OF GAME		SPRING CR					BACHELOR CR		
1	SE4SW4			FISH PROPAGATION			N	7.0 C										
S4-09492C		35 09492	06745	03871	03/29/950		YAKI	10/21/950	WA ST DEPT OF GAME		SPRING CR					BACHELOR CR		
1	SE4SE4			FISH PROPAGATION			N	10.0 C										
S4-29217A		35			03/06/987	R	YAKI	/ /	MACKENZIE ROBERT E		WIDE HOLLOW CR					YAKIMA R		
1	SW4NW4NW4			IRRIGATION			C	.05 C								IS		
S4-29252A		35			04/14/987	R	YAKI	/ /	GRAHAM ESTHER A		WIDE HOLLOW CR					YAKIMA R		
1	W2NW4			IRRIGATION			C	.15 C										
G4-04804C		36 04804	04540	03210	03/12/958		YAKI	07/18/958	METRO PK DIV YAKIM		WELL							

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WATER RESOURCE INVENTORY AREA- 37																					
TOWNSHIP - 13 RANGE - 18 E																					
1	BL18 STATE ADDN TO YAKIMA			IRRIGATION			C	240.0 G				34.0			8.6			A	IS			
G4-07952P	36	07952	07512		02/09/966	C		YAKI	06/24/966	YAKIMA CO SCH DI 7				WELL							
1	L16 BL2 MOREAU BROTHERS ADDN			IRRIGATION			C	240.0 G				45.0		U	24.0			AE	IS		
G4-28188G	36				04/25/983			YAKI	02/27/984	RFB INC				WELL							
1	SW4NW4			IRRIGATION			C	92.0 G				28.0			7.0			R	04011031		
G4-29420C	36				09/18/987			YAKI	10/31/988	WILLIAMS FRED C				WELL							
1	NE4SE4			DOMESTIC MULTIPLE			C	60.0 G				6.0						RK			
G4x00511A	36	00511			11/01/920	R		YAKI	/ /	SNEAD R F				WIDE HALLOW CR				AHTANUM CR			
	SE4SW4SE4			IRRIGATION			C	.37 C						18.67				IS			
	20907A	36			06/24/986	R		YAKI	/ /	PERKINS PAUL E				WIDE HOLLOW CR							
1	NW4SW4SE4 BROOKVIEW ADD #2			IRRIGATION			C	2 C						25				IS			
TOWNSHIP - 13 RANGE - 19 E																					
G4-26244B	01				05/11/979	C		YAKI	09/24/979	KOKENGE ROY				WELL							
1	NE4SW4			DOMESTIC MULTIPLE			C	300.0 G 2				5.0						R			
				IRRIGATION			C	300.0 G 2				172.0			40.0			R	04011031		
G4x07508C	07	07588	07115	05727	04/14/965			YAKI	07/26/965	WA ST HIGHWAY COMM				WELL							
1	SE4SW4			IRRIGATION			C	50.0 G				9.6			2.4			R	IS		
G4-01142C	07	11925	10599		05/17/971			YAKI	12/08/971	WA ST HIGHWAY COMM				WELL							
1	NW4SW4			IRRIGATION			C	180.0 G				47.2			9.0			R$	04011031		
G4-26150C	07				03/02/979			YAKI	08/09/979	KLINGELE JAMES				WELL							
1	SW4SW4			IRRIGATION			C	60.0 G				27.0			7.0			R	04011031		
G4-30014B	07				06/12/989			YAKI	06/15/990	KENNETH KNIGHT				WELL							
1	SW4SW4			IRRIGATION			C	40.0 G				11.0			2.5			$RK	04011031		
G4-28578B	09				12/10/984			YAKI	04/25/985	OSTRANDER TERRY L				WELL							
1	SW4SW4			DOMESTIC SINGLE			C	65.0 G 2				1.0						RK			
				IRRIGATION			C	65.0 G 2				38.0			9.5			RK	04011031		
G4-25728B	10				11/09/977			YAKI	05/19/978	YAKIMA SHEEP CO				WELL							
1	SE4 NE4			DOMESTIC MULTIPLE			C	800.0 G 2				348.0						R			
				IRRIGATION			C	800.0 G 2				393.0			131.0			R	04011031		
G4-25771B	10				03/14/978			YAKI	05/19/978	YAKIMA SHEEP CO				WELL							
1	SE4 NE4			DOMESTIC MULTIPLE			C	400.0 G 2				348.0						R			
				IRRIGATION			C	400.0 G 2				23.0			131.0			R	04011031		
	-26519AAL	10			01/08/980	R		YAKI	/ /	TERRACED ESTATES W				WELL							
1	SE4NE4			DOMESTIC MULTIPLE			C	1800.0 G													
G4-28650P	10				03/27/985			YAKI	07/02/985	YAKIMA RANCHES INC				WELL							
1	SE4SE4			DOMESTIC MULTIPLE			C	150.0 G				19.0						RK			
G4-28651P	10				03/27/985			YAKI	07/01/985	YAKIMA RANCHES LTD				WELL							
1	SW4SE4			DOMESTIC MULTIPLE			C	150.0 G				18.0						RK			
G4-28708G	10				06/06/985			YAKI	11/22/985	ROCKSTEAD D & L				WELL							
1	NW4NE4			DOMESTIC MULTIPLE			C	30.0 G				2.0						RK			
G4-30697A	10				04/03/991			YAKI	/ /	ROSS STACY				WELL							
1	SW4NE4			DOMESTIC MULTIPLE			C	60.0 G													
G4-28872B	11				02/19/986			YAKI	10/16/986	COOK HAROLD L				WELL							
1	SE4SE4			DOMESTIC SINGLE			C	10.0 G 3				2.0						RK			
															10.0				IS		
G4-30419A	11				10/12/990			YAKI	/ /	FERNALD D A				WELL							
1	SW4NW4			DOMESTIC SINGLE			C	150.0 G 2													
				IRRIGATION			C	150.0 G 2							10.0						
G4-26091G	12				01/11/979			YAKI	04/06/979	TAYLOR LAVERN				WELL							
1	SE4SW4			DOMESTIC MULTIPLE			C	93.0 G 2				2.0						R			
				IRRIGATION			C	93.0 G 2				65.0			15.0			R	04011031		

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WATER RESOURCE INVENTORY AREA- 37																									
TOWNSHIP - 13 RANGE - 18 E																									
1	SE4 NE4 SW4			DOMESTIC MULTIPLE					C	100.0 G				12.6			U				RN				
G4*09359C	19 09359		08652	07097	04/04/960					YAKI 09/18/968 OILLINGER J								WELL							
1	NE4SE4			DOMESTIC SINGLE					C	25.0 G				2.0							RN				
G4-27375P	19				03/17/981		C			YAKI 09/22/982 STURM WM W								WELL							
1	SW4SW4			DOMESTIC SINGLE					C	100.0 G 2				1.0							RK				
				IRRIGATION					C	100.0 G 2				4.8			S	8.0			RK	04011031			
G4-30485A	19				12/05/990		R			YAKI / /				HANNON J K				WELL							
1	SW4SW4			DOMESTIC MULTIPLE					C	10.0 G															
G4*05435C	20 05435		05108	05300	11/12/959					YAKI 01/26/960 NOB HILL WTR CO								WELL							
1	L6 BL2 VIEWMONT PK SUBDV			DOMESTIC MULTIPLE					C	1400.0 G				1120.0							A				
24682C	20				02/16/977					YAKI 10/11/977 BERGEN HAROLD G								WELL							
	SE4NW4			IRRIGATION					C	100.0 G				38.0				10.0			R	04011031			
G4-25006P	20				03/17/977		C			YAKI 06/26/978 BURNHAM LARRY D								WELL							
1	NE4 SW4			DOMESTIC SINGLE					C	25.0 G 2				2.0							RN				
				IRRIGATION					C	25.0 G 2				11.0			S	2.5			RN	04011001			
G4-29230C	20				03/20/987					YAKI 07/24/987 HILER LLOYD M								WELL							
1	NE4SW4			IRRIGATION					C	20.0 G				8.0				2.0			RK	04011031			
S4-28546P	20				09/28/984					YAKI 02/25/985 WESTSIDE BAPTIST C								WELL							
1	SW4NE4			HEAT EXCHANGE					N	.45 C											RK				
G4*00530C	21 00530		00611	02819	07/07/947					YAKI 01/30/948 NOB HILL WTR CO								WELL							
1	SW4SW4			DOMESTIC MULTIPLE					C	1600.0 G				980.0											
G4*00620C	21 00620		00541	00144	09/03/947					YAKI 10/29/947 MANERS DHU L								WELL							
1	SE4SE4			DOMESTIC SINGLE					C	100.0 G 2				18.0	2	U									
				IRRIGATION					C	100.0 G 2				18.0	2	U		5.0				IS			
G4*02084C	21 02084		02086	01071	08/20/951					YAKI 03/20/952 JOSEPH G F								WELL							
1	SW4SE4			COMMERCIAL/INDUSTRIAL					C	50.0 G				10.0							AE	PS			
G4*05861C	21 05861		05551	04289	03/06/961					YAKI 06/22/961 CATHOLIC CORP BISH								WELL							
1	SW4 SE4			DOMESTIC SINGLE					C	30.0 G				17.0							AN				
				IRRIGATION					C	200.0 G				80.0			U	20.0			AN	IS			
G4*10739C	21 10739		09826	07282	03/30/970		S			YAKI 08/14/970 G F JOSEPH ORCH SI								WELL							
1	NE4 SW4 SE4			COMMERCIAL/INDUSTRIAL					C	200.0 G				61.7							R				
27557C	21				07/14/981					YAKI 12/29/982 G F JOSEPH ORCH SI								WELL							
	SE4SE4			COMMERCIAL/INDUSTRIAL					C	340.0 G				71.7							RKM				
G4*07540C	22 07540		07200	05523	03/19/965					YAKI 10/19/965 ENGLEWOOD CHRISTIA								WELL							
1	NW4NE4NW4			HEAT EXCHANGE					C	100.0 G				3.5							RES				
G4*00307S	24 00307			00294	00/00/922					YAKI / /				PERRY J M INSTITUT				WELL							
1	L1 BL B CITY OF YAKIMA			COMMERCIAL/INDUSTRIAL					C	250.0 G				300.0											
G4*00309S	24 00309			00292	00/00/926					YAKI / /				PERRY J M INSTITUT				WELL							
1	L2 BL B CITY OF YAKIMA			HEAT EXCHANGE					C	400.0 G				650.0											
G4*00624S	24 00624			00619	00/00/924					YAKI / /				YAKIMA CO HORT UNI				WELL							
1	L1 BL A PLAT OF YAKIMA			COMMERCIAL/INDUSTRIAL					C	350.0 G 2				567.0	2										
				HEAT EXCHANGE					C	350.0 G 2				567.0	2										
G4*00759S	24 00759			00613	06/01/936					YAKI / /				PRENTICE PACK / ST				WELL							
1	L1-4 BL208 UPRR			COMMERCIAL/INDUSTRIAL					C	200.0 G				240.0											
G4*00820S	24 00820			00879	07/00/944					YAKI / /				RICHEY / GILBERT C				WELL							
1	L6 BL209 CITY OF YAKIMA			HEAT EXCHANGE					C	400.0 G 2				640.0	2										
				COMMERCIAL/INDUSTRIAL					C	400.0 G 2				640.0	2										
G4*00992S	24 00992			00940	00/00/930					YAKI / /				YAKIMA CITY OF				WELL/INFILTRATION TR							
2	W MAPLE ST / S 5 AVE SO			IRRIGATION					C	2000.0 G				1190.0				1050.0				IS			
G4*00993S	24 00993			00941	08/00/940		W			YAKI / /				YAKIMA CITY OF				WELL							
1	L1 B44 NEW NON ADD			IRRIGATION					C	1500.0 G				893.0				700.0				IS			

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WATER RESOURCE INVENTORY AREA- 37																									
TOWNSHIP - 13 RANGE - 18 E																									
G4*04807C 1	24 NE CORNER BL287 SYN SUBDIV	04807	04516	03105 IRRIGATION	03/03/958				YAKI C	06/09/958 1200.0	G			YAKIMA CITY OF 960.0				INFILTRATION TR S	700.0			IS			
G4*05505C 1	24 L10 BL272 KERR ADD TO YAKIMA	05505	05185	03618 HEAT EXCHANGE	02/18/960				YAKI P	05/16/960 50.0	G			AIKEN C S / S 80.0				WELL							
G4*06025C 1	24 L3 COTTAGE HILL ADDITION	06025	05741	04540 DOMESTIC SINGLE IRRIGATION	08/16/961	E			YAKI C C	01/12/962 50.0 50.0	G G	2 2		BAUR F H 14.5 14.5	2 2	U U		WELL 2.0			A A	IS			
G4*06966C 1	24 BL207 TOWN OF N YAKIMA	06966	06522	04839 HEAT EXCHANGE	12/13/963				YAKI C	03/13/964 140.0	G			HOPS EXTRACT CORP 224.0				WELL			AN				
07844C 1	24 LS BL293 CAPITOL & KER ADDN	07844	07324	05976 HEAT EXCHANGE	10/29/965				YAKI C	01/11/966 300.0	G			YAKIMA CITY CREAME 160.0				WELL P			R				
G4-22912C 2	24 NE4 NE4			04/29/974 HEAT EXCHANGE COMMERCIAL/INDUSTRIAL					YAKI C C	07/29/975 550.0 550.0	G G	2 2		WASHINGTON FRUIT&P 474.0 474.0	2 2			WELLS			R R				
G4-27112C 1	24 SE4NW4SE4			10/01/980 COMMERCIAL/INDUSTRIAL					YAKI C	04/28/982 25.0	G			YAKIMA CITY CREAME 40.3				WELL							
G4-20312C 2	24 SW4SW4			10/12/983 HEAT EXCHANGE					YAKI C	04/13/984 35.0	G			DENTAN ASSOCIATES 				WELLS			R				
G4-29904A 1	24 SE4NE4			05/10/989 HEAT EXCHANGE					YAKI C	/ / 600.0	G			YAK UN GOSPEN MISN 				WELL							
G4*00896C 1	25 W2S2SW4NW4	00896	00785	00452 IRRIGATION	06/05/948				YAKI C	08/16/948 50.0	G			YAKIMA VALLEY JR C 24.0				WELL 	6.0			IS			
G4*00991S 1	25 N2SW4NW4	00991		00939 IRRIGATION	04/00/945				YAKI C	/ / 500.0	G			YAKIMA CITY OF 80.0				WELL 	20.0			IS			
G4*01128C 1	25 SE4SW4NW4	01128	01028	00710 IRRIGATION	05/20/949				YAKI C	08/16/949 100.0	G			YAKIMA SCH DIST #7 28.0				WELL 	7.0			IS			
G4*07582C 2	25 L2&3 HATTERSON AC TR	07582	07205	05268 HEAT EXCHANGE	04/22/965				YAKI P	10/19/965 150.0	G			OOMS B C ET AL 240.0				WELLS 			RES				
G4*10733C 1	25 L4 JOHNSON ORCH HOME TR	10733	09870	07030 DOMESTIC SINGLE	03/27/970				YAKI C	09/10/970 10.0	G			HUNTZINGER J N 2.0				WELL							
G4*05325C 1	26 NW4 SE4	05325	05033	03703 IRRIGATION	06/12/959				YAKI C	11/20/959 86.0	G			YAKIMA SCH DIST #7 34.0		U		WELL 	8.65		A	IS			
G4*20651C 1	27 SW4SW4			12/06/972 IRRIGATION					YAKI C	07/17/973 380.0	G			YAKIMA CITY OF 163.8				WELL 	38.0		R	03151015			
G4*01037C 1	27 L13 PADDOCK GARDEN	01037	00979	00856 DOMESTIC SINGLE IRRIGATION	11/26/948				YAKI C C	05/16/949 15.0 15.0	G G	2 2		WIKSTROM W O 2.0 1.0		U		WELL 	.25			IS			
G4-26177P 1	27 SW4NE4			03/29/979 IRRIGATION		C			YAKI C	06/19/979 15.0	G			MAGGARD HOWARD E 8.0				WELL 	1.5		R	04011031			
G4*21397A 1	27 SE4SW4	21397		01713/969 FISH PROPAGATION					YAKI P	/ / 3.0	C			WA ST DEPT OF GAME 				WIDE HOLLOW CR				YAKIMA R			
G3*20861P 1	28 SW4 NE4 PL YAKIMA VLY ORCH			02/23/973 DOMESTIC SINGLE		C			YAKI C	06/30/975 25.0	G			HUNT WESLEY A 2.0				WELL 			R				
G4*00249C 1	28 W2W2SE4NE4	00249	00202	00020 DOMESTIC MULTIPLE COMMERCIAL/INDUSTRIAL HEAT EXCHANGE IRRIGATION	05/15/946				YAKI C C C C	07/15/946 400.0 400.0 400.0 400.0	G G G G	4 4 4 4		BANNISTER ELIZABET 350.0 350.0 350.0 350.0	4 4 4 4			WELL 	80.0			IS			
G4*00447S 1	28 NE4SW4	00447		00377 DOMESTIC GENERAL IRRIGATION	01/18/913				YAKI C C	/ / 450.0 450.0	G G	2 2		CONGDON ORCH INC 360.0 360.0	2 2			WELL 	913.0			IS			
G4*00465S	28	00465		00375	00/00/920				YAKI	/ /				CONGDON ORCH INC				WELL							

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WATER RESOURCE INVENTORY AREA- 37														
TOWNSHIP - 12 RANGE - 19 E														
G4-23036C 1 GL 4	03			06/03/974 IRRIGATION			YAKI C	10/31/975 47.0 G	POWELL GEORGE W 26.0	WELL	6.0	R	04011001	
G4-24991C 1 NW4 NW4	03			03/15/977 DOMESTIC SINGLE IRRIGATION			YAKI C C	02/22/978 25.0 G 2 25.0 G 2	EICKEL MONROE 2.0 11.0	WELL	2.6	RW RW	04011031	
G4-26165C 1 SW4SW4	03			03/26/979 DOMESTIC SINGLE IRRIGATION			YAKI C C	09/21/979 50.0 G 2 50.0 G 2	HATZENBIHLER MATT 1.0 21.0	WELL S	4.0	R R	04011031	
S4-23608C 1 SE4NW4	04			10/31/974 FISH PROPAGATION			YAKI N	03/19/975 .5 C	MORRIS CLIFFORD F	UNN SPR		S	YAKIMA R	
00526S L12 BL2	05 00526 ORIGINAL TOWN			00518 00/00/936 DOMESTIC MUNICIPAL			YAKI C	/ / 220.0 G	UNION GAP TOWN OF 103.0	WELL				
G4-00527S 1 L12 BL2	05 00527 ORIGINAL TOWN			00519 08/01/936 Q DOMESTIC MUNICIPAL			YAKI C	/ / 120.0 G	UNION GAP TOWN OF 56.0	WELL				
G4-00916C 1 L12 BL2	05 00916 ORIG TOWNSITE	00935		00295 06/11/948 Q DOMESTIC MUNICIPAL			YAKI C	03/17/949 350.0 G	UNION GAP TOWN OF 500.0	WELL				
G4-01112C 1 SW4SW4	05 01112	01045		00431 04/30/949 DOMESTIC MUNICIPAL			YAKI C	09/21/949 500.0 G	UNION GAP TOWN OF 534.0	WELL				
G4-05294C 2 SW4 SW4 / L12 BL2	05 05294 ORIG TWNST	05042		03526 06/02/959 DOMESTIC MUNICIPAL			YAKI C	12/04/959 280.0 G	UNION GAP TOWN OF 448.0	WELLS				
G4-05076C 1 SW4 SE4 NE4	06 05076	04859		03497 11/25/958 DOMESTIC MUNICIPAL DOMESTIC MUNICIPAL			YAKI C C	06/23/959 1385.0 G 2 1385.0 G 2	UNION GAP CITY OF 637.0 1579.0	WELL S		A A		
G4-08206C 1 NW4SW4	06 08206	07719		05621 07/20/966 COMMERCIAL/INDUSTRIAL			YAKI C	12/23/966 350.0 G	VALLEY FEED CO 466.0	WELL		R		
G4-08207C 1 NW4SW4	06 08207	07723		05624 07/20/966 COMMERCIAL/INDUSTRIAL			YAKI C	12/23/966 150.0 G	VALLEY FEED CO 240.0	WELL		R		
G4-08208C 1 NW4SW4	06 08208	07718		05623 07/20/966 COMMERCIAL/INDUSTRIAL			YAKI C	12/23/966 150.0 G 2	VALLEY FEED CO 240.0	WELL		R		
G4-08209C 1 NW4SW4	06 08209	07717		05625 07/20/966 COMMERCIAL/INDUSTRIAL			YAKI C	12/23/966 570.0 G	VALLEY FEED CO 684.0	WELL		R		
08502C NW4SW4	06 08502	07938		05766 03/15/967 COMMERCIAL/INDUSTRIAL			YAKI C	06/28/967 100.0 G	VALLEY FEED CO 160.0	WELL				
G4-08603C 1 NW4SW4	06 08603	07989		05767 03/15/967 COMMERCIAL/INDUSTRIAL HEAT EXCHANGE			YAKI C C	06/28/967 200.0 G 2 200.0 G 2	VALLEY FEED CO 320.0 320.0	WELL 2 2				
G4-28695T 1 SE4SE4	06			05/22/985 C IRRIGATION			YAKI C	05/24/985 100.0 G	RENFRO JAMES F 12.0	WELL	3.0		04011031	
G4-28972B 1 SE4SE4	06			06/12/986 IRRIGATION			YAKI C	09/24/986 100.0 G	RENFRO JAMES F 12.0	WELL	3.0	RK$	04011031	
G4-29699B 1 GL-7	06			03/24/988 IRRIGATION IRRIGATION			YAKI C C	12/28/988 1150.0 G 2 1150.0 G 2	LANGELL LEWIS 296.4 163.6	WELL S	74.1 40.9	$RK $RK	IS IS	
G3-20435C 1 GL12	07			08/08/972 DOMESTIC MULTIPLE			YAKI C	11/05/973 55.0 G	THORTON PERRY R 23.2	WELL		HTR		
S4-03908P 1 L-5	07 03908	02365		11/10/933 C MINING			YAKI C	03/26/937 13.0 C	REESE JAMES O	AHTANUM CR			YAKIMA R	
G4-08001CAL 1 E09E4	08 08001A	07478A		05781A 03/10/966 IRRIGATION			YAKI C	05/31/966 910.0 G	TULLY C G ET AL 440.0	WELL P	110.0	AE	IS	2 2 2
G4-25720C 1 NE4SW4	08			01/10/978 IRRIGATION			YAKI C	05/10/978 50.0 G	WA ST D O T 4.0	WELL	11.0	R	04011031	
S4-00263A	08 00263			07/19/919 R			YAKI	/ /	LATIMER JOHN W	WIDE HOLLOW CR			YAKIMA R	

CONTROL # / # OF PTS	SEC / R / P	OLD APPL / OLD PERM / OLD CERT	DATE OF PRIORITY	S T	C C	A M	CNTY / LOC. OF POD/POW	PERMIT DATE / (CHG C#)	NAME / PURPOSE OF USE	USE TYPE	INST QI	C M	R U	S U	ANNUAL QA	C M	R U	S U	SOURCE OF APPROPRIATION / IRR AC	C M	S U	PRO-VISOS	TRIBUTARY OF / TIME OF USE	R I	R A	R C
WATER RESOURCE INVENTORY AREA- 37																										
TOWNSHIP - 12 RANGE - 18 E																										
S4*20092J 1	08 NW4 NW4		00/00/868			05	YAKI	/ /	WILCOX SELIM F										HATTON CR				AHTANUM CR			
			IRRIGATION		C			.96	C 3										48.0		Q		04011015			
			DOMESTIC SINGLE		C			.96	C 3												Q					
			STOCK WATERING		C			.96	C 3												Q					
S4*20220JBBB 1	08 NE4NW4		00/00/872			009	YAKI	/ /	SEWARD S										HATTON CR				AHTANUM CR			
			IRRIGATION		C			1.2	C 3										60.0		Q		04011015	3	0	3
			DOMESTIC SINGLE		C			1.2	C 3												Q			3	0	0
			STOCK WATERING		C			1.2	C 3												Q			3	0	0
S4*20278J 1	08 NE4 NW4		00/00/879			15	YAKI	/ /	SEWARD O A										HATTON CR				AHTANUM CR			
			IRRIGATION		C			.46	C 3										23.25		Q		04011015			
			DOMESTIC SINGLE		C			.46	C 3												Q					
			STOCK WATERING		C			.46	C 3												Q					
20300J 1	08 NW4 NE4		00/00/802			18	YAKI	/ /	SEWARD O A										HATTON CR				AHTANUM CR			
			IRRIGATION		C			.17	C 3										8.5		Q		04011015			
			DOMESTIC SINGLE		C			.17	C 3												Q					
			STOCK WATERING		C			.17	C 3												Q					
G3+00230P 1	10 11960 NE4 NE4		06/10/971	C			YAKI	10/23/972	REESMANS DAIRY										WELL							
			DOMESTIC SINGLE		C			200.0	G 3					1.0												
			IRRIGATION		C			200.0	G 3					89.1					17.0							
			COMMERCIAL/INDUSTRIAL		C			200.0	G 3					23.4												
G3+21032B 1	10 SE4NE4		04/18/973	C			YAKI	02/06/984	CORPMAN HAROLD C										WELL							
			DOMESTIC SINGLE		C			50.0	G 2					2.0								KR$				
			IRRIGATION		C			50.0	G 2					16.0					4.0			KR$	04011031			
G3+21963E 1	10 NE4SE4		10/17/973				YAKI	06/04/984	WILKINSON STANLEY										WELL							
			DOMESTIC SINGLE		C			350.0	G 2					2.0								KR$				
			IRRIGATION		C			350.0	G 2					32.0			S		40.0			KR$	04011031			
G4-23180G 1	10 NE4NE4		06/21/974				YAKI	06/04/984	MCDOUGALL R L										WELL							
			IRRIGATION		C			50.0	G					3.0			S		5.0			RK$	04011031			
G3+00686C 1	11 11832 IND ALLOT NO 2779 IN SW4 NW4		04/28/971				YAKI	06/07/973	WESTBERG FRED H										WELL							
			DOMESTIC SINGLE		C			30.0	G 2					1.0								R				
			IRRIGATION		C			30.0	G 2					8.6					2.0			R	05011031			
G4*07254C 1	11 07254 06931 NW4 SE4		05116 07/08/964				YAKI	03/05/965	ALLAN BROS INC										WELL							
			IRRIGATION		C			450.0	G					92.4			P		70.0			AE$	07010920			
G4-23133G 1	11 SW4NW4		06/15/974				YAKI	09/12/984	HANNA ROGER C										WELL							
			DOMESTIC SINGLE		C			19.0	G 2					2.0								R$				
			IRRIGATION		C			19.0	G 2					1.2			S		1.45			R$	04011031			
25272A 1	11 NE4 SE4		05/20/977	R			YAKI	/ /	WILSON JAMES ET UX										WELL							
			DOMESTIC SINGLE		C			360.0	G 2																	
			IRRIGATION		C			360.0	G 2										35.0				IS			
G4-28072G 1	11 SW4SW4		10/26/982				YAKI	10/04/982	BROETJE RALPH										WELL							
			IRRIGATION		C			350.0	G					240.0					60.0			R$	03151031			
G4-29818A 1	11 SW4NW4		10/10/988				YAKI	/ /	KINDER RICH & J										WELL							
			DOMESTIC MULTIPLE		C			50.0	G 2																	
			IRRIGATION		C			50.0	G 2																	
G4-30212A 1	11 SE4NW4		03/15/990				YAKI	/ /	J M CAMPBELL										WELL							
			FROST PROTECTION		C			800.0	G																	
G4-30922A 1	11 NW4NW4		08/23/991				YAKI	/ /	NINER G & D										WELL							
			IRRIGATION		C			80.0	G										9.0							
S4*20163J 1	11 SE4 SE4		00/00/870	E		07	YAKI	/ /	BELL ELSIE M										AHTANUM CANAL				AHTANUM CR			
			IRRIGATION		C			.1	C 3										5.0		Q		04011015			
			DOMESTIC SINGLE		C			.1	C 3												Q					
			STOCK WATERING		C			.1	C 3												Q					
G3+21239G 1	12 NE4SE4		06/04/973				YAKI	06/04/984	LAYMAN W STANLEY										WELL							
			DOMESTIC SINGLE		C			30.0	G 2					2.0								KR$				
			IRRIGATION		C			30.0	G 2					8.0					2.0			KR$	04011031			
G3+22436G 1	12 SE4NW4		01/29/974				YAKI	06/14/984	SMITH J M										WELL							
			DOMESTIC SINGLE		C			30.0	G 2					2.0								KR$				
			IRRIGATION		C			30.0	G 2					6.0					1.5			KR$	04011031			

CONTROL # / #OF PTS	SEC / P	OLD APPL / LOC. OF POD/POW (CHG C#)	OLD PERM / PURPOSE OF USE	OLD CERT	DATE OF PRIORITY	S T	C C	A M	CNTY / USE TYPE	PERMIT DATE / INST QI	NAME	ANNUAL C R S QA M U U	IRR AC	C S PRO- M U VISOS	TIME OF USE	R R R I A C	SOURCE OF APPROPRIATION TRIBUTARY OF
WATER RESOURCE INVENTORY AREA- 37																	
TOWNSHIP - 12 RANGE - 18 E																	
G4-28451G 1	12 NW4SW4		04/25/984 IRRIGATION				C		YAKI 40.0	11/07/984 G	MCMECHAN M H S	WELL 11.6	14.5	$	04011031		
G4-28452C 1	12 NW4SW4		04/25/984 DOMESTIC MULTIPLE				C		YAKI 38.0	08/20/984 G	MCMECHAN M H	WELL 9.0		R$			
G4-29721A 1	12 NW4SW4		04/18/988 DOMESTIC SINGLE IRRIGATION			R	C C		YAKI 20.0 20.0	/ / G 2 G 2	REICH GARY	WELL	1.0		00000000 IS		
G4-25627A 1	15 SE4NW4		04/07/980 DOMESTIC MULTIPLE IRRIGATION			R	C C		YAKI 570.0 570.0	/ / G 2 G 2	NYSSEN BING	WELL	48.0		IS		
28791A 1	23 SW4SW4		09/12/985 FROST PROTECTION IRRIGATION				C C		YAKI 2800.0 2800.0	/ / G 2 G 2	VALLEY ROZ ORCH IN	WELL	720.0		IS		
G4-24728A 1	25 NE4NE4		02/17/977 IRRIGATION				C		YAKI 300.0	/ / G	CARNEVALI JOE	WELL	40.0		IS		
G4-23050A 3	27 EZ		06/18/974 IRRIGATION				C		YAKI 5040.0	/ / G	VALLEY ROZ ORCHARD	WELLS					
G4-23821G 1	27 SW4SW4		06/26/974 IRRIGATION				C		YAKI 800.0	07/11/984 G	KELLER FRUIT STORA	WELL 320.0	80.0	R$	04011015		
G4-24172A 1	33 NE4NE4		01/28/976 IRRIGATION				C		YAKI 900.0	/ / G	LACAILLE GERARD	WELL	80.0		IS		
G4-24207A 1	33 NW4NW4		02/24/976 FROST PROTECTION IRRIGATION				C C		YAKI 300.0 300.0	/ / G 2 G 2	NYBERG HERBERT P	WELL	40.0		IS		
G4-29614A 1	36 NW4NW4		02/19/988 IRRIGATION FROST PROTECTION				C C		YAKI 700.0 700.0	/ / G 2 G 2	COWIN RICHARD E	WELL	40.0		IS 00000000		
TOWNSHIP - 12 RANGE - 19 E																	
G4-00614S 1	01 00614 W2SE4		00499 01/007942 DOMESTIC MUNICIPAL				C		YAKI 150.0	/ / G	MOXEE CITY TOWN OF	WELL 84.0					
G4-00526C 1	01 00626 MOXEE CITY	00727	00297 09/11/947 REC & BEAUTIFICATION			E	C		YAKI 300.0	06/21/948 G	MOXEE CITY TOWN OF	WELL 149.0					
05064C L1 BL3	01 05064 MOXEE PARK ADDN	04759	03379 11/14/958 IRRIGATION				C		YAKI 170.0	03/16/959 G	YAKIMA CO SCH DI 9	WELL 40.0	10.0	AEN	IS		
G4-29747A 2	01 SW4NW4		06/06/988 COMMERCIAL/INDUSTRIAL				C		YAKI 3.5	/ / G	BAY ZINC COMPANY	WELLS					
G3-20165P 1	02 NE4 SE4 SE4		05/02/972 DOMESTIC SINGLE IRRIGATION			C	C C		YAKI 50.0 50.0	06/25/973 G 2 G 2	NEWELL R G	WELL 2.0 17.1	4.0	R R	03151101		
G4-05823C 1	02 05823 GL4	05512	04504 02/02/961 DOMESTIC SINGLE IRRIGATION				C C		YAKI 125.0 125.0	05/08/961 G 2 G 2	STAPLETON J R	WELL 69.6 2 69.6 2	16.0	A A	IS		
G4-24447C 1	02 W2SW4NE4		10/11/976 DOMESTIC MULTIPLE				C		YAKI 200.0	08/05/977 G	COUNTRY MOBILE EST	WELL 27.0		R			
G4-24885T 1	02 SW4NE4		03/03/977 IRRIGATION			C	C		YAKI 100.0	04/19/977 G	NORTON CHARLES	WELL 43.0	10.0	R	IS		
G4-25450C 2	02 SW4NW4		08/09/977 DOMESTIC MULTIPLE				C		YAKI 225.0	02/22/978 G	COUNTRY MOBILE EST	WELLS 32.0		R			
G4-25617C 1	02 NW4NW4NE4		10/26/977 DOMESTIC SINGLE IRRIGATION				C C		YAKI 20.0 20.0	03/30/978 G 2 G 2	ZIMMER GEORGE	WELL 2.0 9.0	2.0	R R S	04011031		
G4-27953G 1	02 SW4NE4		05/26/982 DOMESTIC SINGLE IRRIGATION				C C		YAKI 30.0 30.0	12/29/982 G 2 G 2	CYR MICHAEL ET UX	WELL 1.0 8.4	2.0	M M	04011031		

CONTROL # / # OF PTS	SEC	OLD APPL	OLD PERM	OLD CERT	DATE OF PRIORITY	S T	C	A M	CNTY / USE TYPE	PERMIT DATE / INST QI	NAME	ANNUAL QA	C M	R U	S U	IRR AC	C M	S U	PRO-VISOS	TIME OF USE	R I	R A	R C
P LOC. OF POD/POW (CHG C#)					PURPOSE OF USE																		
WATER RESOURCE INVENTORY AREA- 37																							
TOWNSHIP - 12 RANGE - 17 E																							
G4-29257A	23				04/17/987	R			YAKI	/ /	HELLUMS RICHARD D	UNN STR											
1 NE4SE4					COMMERCIAL/INDUSTRIAL			C		.25 C													
TOWNSHIP - 12 RANGE - 18 E																							
G4-23900P	01				04/07/975	C			YAKI	08/15/975	GRAVES ELDON								WELL				
1 N2 NE4					COMMERCIAL/INDUSTRIAL			C		60.0 G		2.0							R				
G4-28792A	01				09/16/985	R			YAKI	/ /	BURROWS TRACTOR CO	WELL											
1 NW4SE4					IRRIGATION			C		100.0 G						10.0				IS			
G4-30065A	01				09/06/989				YAKI	/ /	CLASEN FRUIT CO	WELL											
NE4SE4					HEAT EXCHANGE			C		100.0 G													
20171J	01				00/00/870	N	07		YAKI	/ /	TITTLE E	BACHELOR CR								AHTANUM CR			
NW4					IRRIGATION			C		.8 C 3						40.0			Q	04011015			
					DOMESTIC SINGLE			C		.8 C 3									Q				
					STOCK WATERING			C		.8 C 3									Q				
S4-20226J	01				00/00/872		09		YAKI	/ /	COPE W C	BACHELOR CR								AHTANUM CR			
1 SE4 NW4					IRRIGATION			C		.4 C 3						20.0			Q	04011015			
					DOMESTIC SINGLE			C		.4 C 3									Q				
					STOCK WATERING			C		.4 C 3									Q				
S4-20234J	01				00/00/872		09		YAKI	/ /	GOODMAN D C	BACHELOR CR								AHTANUM CR			
1 W2 SE4 NW4					IRRIGATION			C		.8 C 3						40.0			Q	04011015			
					DOMESTIC SINGLE			C		.8 C 3									Q				
					STOCK WATERING			C		.8 C 3									Q				
S4-20233J	01				00/00/872		09		YAKI	/ /	GOODMAN D G	BACHELOR CR								AHTANUM CR			
1 W2 SE4 NW4					IRRIGATION			C		.818 C 3						40.9			Q	04011015			
					DOMESTIC SINGLE			C		.818 C 3									Q				
					STOCK WATERING			C		.818 C 3									Q				
S4-20236J	01				00/00/872		09		YAKI	/ /	KAGY M L	BACHELOR CR								AHTANUM CR			
1 SE4 NW4					IRRIGATION			C		.64 C 3						32.0			Q	04011015			
					DOMESTIC SINGLE			C		.64 C 3									Q				
					STOCK WATERING			C		.64 C 3									Q				
S4-20252J	01				00/00/875		12		YAKI	/ /	GOODMAN D G	BACHELOR CR								AHTANUM CR			
1 W2 SE4 NW4					IRRIGATION			C		.87 C 3						43.5			Q	04011015			
					DOMESTIC SINGLE			C		.87 C 3									Q				
					STOCK WATERING			C		.87 C 3									Q				
G4-00362C	02	00362	00334	00957	09/12/946				YAKI	12/30/946	SCHREINER L	WELL											
SW4NW4					IRRIGATION			C		800.0 G		296.0				83.0			$%	IS			
02277P	02	02277	02092		12/31/951	C			YAKI	03/20/952	DETLOFF H C	WELL											
1 GL-7					IRRIGATION			C		100.0 G		70.0				20.0				IS			
G4-03007C	02	03007	02716	01463	02/17/953				YAKI	04/24/953	KELLY R	WELL											
1 NE4SW4					STOCK WATERING			C		200.0 G 2		136.0	2						V				
					IRRIGATION			C		200.0 G 2		136.0	2	U		39.0			VE	IS			
G4-06111P	02	06111	05780		11/20/961	C			YAKI	03/07/962	KELLY R	WELL											
1 NW4 SW4					IRRIGATION			C		227.0 C		156.0		U		39.0			A	IS			
G4-06733C	02	06733	06282	04782	05/27/963	E			YAKI	08/09/963	KELLY R	WELL											
1 NE4 SW4					STOCK WATERING			C		227.0 G 2		6.6							AN				
					IRRIGATION			C		227.0 G 2		156.0		U		39.0			AEN	IS			
G4-01171C	02	10619			01/28/970				YAKI	04/22/975	KWIK LOK CORP	INFILTRATION TR											
1 GL 7					FIRE PROTECTION			C		250.0 G 2									R$				
					IRRIGATION			C		250.0 G 2		202.0				60.0			R$	IS			
G4-250158	02				03/18/977				YAKI	11/07/979	GLASPEY & SONS INC	WELL											
1 NE4 SE4					COMMERCIAL/INDUSTRIAL			C		800.0 G 3		38.0							R				
					FIRE PROTECTION			C		800.0 G 3									R				
					IRRIGATION			C		800.0 G 3		300.0				70.0			R	04011031			
G4-23913C	02				07/29/977				YAKI	05/03/978	PRINE OVID/RUBY	WELL											
1 SE4NE4					DOMESTIC SINGLE			C		60.0 G 3		1.0	2						R				
					STOCK WATERING			C		60.0 G 3		1.0	2						R				
					IRRIGATION			C		60.0 G 3		21.0				5.0			R	05010930			
G4-26273C	02				06/18/979				YAKI	10/05/979	HARTSHORN JOHN	WELL											

CONTROL # / #OF PTS	SEC / P LOC. OF POD/POW	OLD APPL / (CHG C#)	OLD PERM / PURPOSE OF USE	OLD CERT	DATE OF PRIORITY	S T	C C	A M	CNTY USE TYPE	PERMIT DATE INST QI	NAME	ANNUAL QA	C M	R U	S U	IRR AC	C M	S U	PRO-VISOS	TIME OF USE	R I	R A	R C
WATER RESOURCE INVENTORY AREA- 37																							
TOWNSHIP - 12 RANGE - 18 E																							
1	SE4NE4		IRRIGATION				C		300.0	G		195.0		S		38.0		R		04011031			
G4-28991DAT	02				06/26/986				YAKI	03/28/989	MRS RILEY KELLEY				WELL								
1	NW4SW4		IRRIGATION				C		200.0	G		77.4				40.0		$RK		07101031	2		2
G4-28991BET	02				06/26/986				YAKI	03/28/989	MRS RILEY KELLEY				WELL								
1	NW4SW4		IRRIGATION				C		200.0	G		82.6			S	40.0		$RK		04010710	2		2
G4-290588	02				08/29/986				YAKI	12/30/986	KWIK LOK CORP				WELL								
1	NW4SE4		STOCK WATERING				C		800.0	G	2	1.8						$RK					
			IRRIGATION				C		800.0	G	2	320.0				80.0		$RK		04011031			
G4-298068	02				09/12/988				YAKI	04/30/991	MOOREHEAD MEL				WELL								
	GL-5 SW4SW4		IRRIGATION				C		300.0	G	3	38.0				10.0		$RK		04101031			
			DOMESTIC SINGLE				C		300.0	G	3	1.0						$RK					
			IRRIGATION				C		300.0	G	3	44.0			S	20.0	S	$RK		04011015			
G4-30182A	02				02/16/990				YAKI	/ /	B BOHANNON				WELL								
1	NW4SW4		IRRIGATION				C		300.0	G						34.0				IS			
S4*20118J	02				00/00/868		05		YAKI	/ /	CARPENTER G W				BACHELOR CR					AHTANUM CR			
1	L1		IRRIGATION				C		1.04	C	3					72.0		Q		04011015			
			DOMESTIC SINGLE				C		1.04	C	3							QQ					
			STOCK WATERING				C		1.04	C	3							Q					
S4*20172J	02				00/00/870		07		YAKI	/ /	SCHROEDER C / E				BACHELOR CR					AHTANUM CR			
1	L2		IRRIGATION				C		.8	C	3					40.0		Q		04011015			
			DOMESTIC SINGLE				C		.8	C	3							QQ					
			STOCK WATERING				C		.8	C	3							Q					
S4*20173J	02				00/00/870		07		YAKI	/ /	SNIVELY H J				BACHELOR CR					AHTANUM CR			
1	NW4 NE4		IRRIGATION				C		.406	C	3					20.3		Q		04011015			
			DOMESTIC SINGLE				C		.406	C	3							QQ					
			STOCK WATERING				C		.406	C	3							Q					
S4*20194JBL	02				00/00/871		08		YAKI	/ /	SCHREINER J F				AHTANUM CR					YAKIMA R			
1	L3		IRRIGATION				C		1.0	C	3					50.0		Q		04011015	3		3
			DOMESTIC SINGLE				C		1.0	C	3							QQ			3		
			STOCK WATERING				C		1.0	C	3							Q			3		
S4*20233JBL	02				00/00/872		09		YAKI	/ /	MOOREHEAD L C				AHTANUM CR					YAKIMA R			
1	L5		IRRIGATION				C		.4	C	3					20.0		Q		04011015	2		2
			DOMESTIC SINGLE				C		.4	C	3							QQ			2		
			STOCK WATERING				C		.4	C	3							Q			2		
S4*20237J	02				00/00/872		09		YAKI	/ /	HARVEY J				BACHELOR CR					AHTANUM CR			
	L2		IRRIGATION				C		.2	C	3					10.0		Q		04011015			
			DOMESTIC SINGLE				C		.2	C	3							QQ					
			STOCK WATERING				C		.2	C	3							Q					
S4*20238J	02				00/00/872		09		YAKI	/ /	SAVAGE D L				BACHELOR CR					AHTANUM CR			
1	L2		IRRIGATION				C		1.27	C	3					63.6		Q		04011015			
			DOMESTIC SINGLE				C		1.27	C	3							QQ					
			STOCK WATERING				C		1.27	C	3							Q					
S4*20302J	02				00/00/802		18		YAKI	/ /	HARVEY J ESTATE				BACHELOR CR					AHTANUM CR			
1	L2		IRRIGATION				C		.2	C	3					10.0		Q		04011015			
			DOMESTIC SINGLE				C		.2	C	3							QQ					
			STOCK WATERING				C		.2	C	3							Q					
S4*20320J	02				00/00/884		20		YAKI	/ /	HARVEY J ESTATE				BACHELOR CR					AHTANUM CR			
1	L2		IRRIGATION				C		1.28	C	3					51.4		Q		04011015			
			DOMESTIC SINGLE				C		1.28	C	3							QQ					
			STOCK WATERING				C		1.28	C	3							Q					
S4-29552A	02				12/22/987	R			YAKI	/ /	AHTANUM ORCHARDS				AHTANUM CR					YAKIMA R			
1	SW4SW4		FROST PROTECTION				C		9.0	C										IS			
G3*00402P	03	12123			08/24/971	C			YAKI	06/25/973	RASMUSSEN FRANK G				WELL								
1	NW4 SW4		DOMESTIC SINGLE				C		10.0	G		1.0											
			IRRIGATION				C		90.0	G		43.0				10.0		K		04251015			
G3*20232C	03				05/30/972				YAKI	05/20/975	HEADLEY JOE R				WELL								
1	GOVT LS		DOMESTIC SINGLE				C		35.0	G	2	1.0						R$					
			IRRIGATION				C		35.0	G	2	9.0				2.0		R$		04151015			

Reference #4

TABLE 27 - ESTIMATED EVAPOTRANSPIRATION (Inches of Water)

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN.
GRANT COUNTY						Ephrata							
Precip.	1.0	.7	.6	.6	.7	1.0	.2	.3	.4	.7	1.0	1.2	8.4
PET		.1	.8	2.0	3.7	5.0	6.5	5.7	3.6	1.7	.3		29.4
Ea(6)		.1	.8	1.7	2.0	1.6	.4	.4	.4	.7	.3		8.3
						Hartline							
Precip.	1.1	.9	.7	.8	1.1	1.3	.4	.3	.5	1.0	1.3	1.6	11.0
PET			.7	1.8	3.4	4.4	5.9	5.0	3.3	1.6	.2		26.3
Ea(6)			.7	1.6	2.4	2.4	1.4	.7	.6	1.0	.2		11.0
						Ruff 3SW							
Precip.	1.2	.9	.8	.5	.9	1.1	.4	.2	.4	1.0	1.1	1.6	10.1
PET			.8	2.0	3.3	4.4	5.7	5.0	3.3	1.6	.3		26.4
Ea(6)			.8	1.9	2.2	2.1	1.0	.4	.4	1.0	.3		10.1
KITTITAS COUNTY						Ellensburg Airport							
Precip.	1.2	.8	.6	.4	.5	.7	.1	.2	.5	.7	1.3	1.5	8.5
PET			.8	1.8	3.1	4.2	5.4	4.8	3.0	1.6	.3		25.0
Ea(6)			.8	1.3	1.7	1.7	.9	.5	.6	.7	.3		8.5
						Lake CleElum							
Precip.	6.0	4.4	3.7	1.5	1.4	1.1	.4	.4	1.2	3.4	5.7	7.0	36.2
PET			.5	1.5	2.7	3.7	4.8	4.4	3.0	1.6	.3		22.5
Ea(6)			.5	1.5	2.7	2.7	2.0	1.1	1.4	1.6	.3		13.8
						Lake Kachess							
Precip.	8.7	6.9	5.8	2.7	2.2	1.9	.7	.7	1.9	5.1	7.9	10.4	54.9
PET			.4	1.4	2.6	3.6	4.7	4.3	2.9	1.6	.3		21.8
Ea(6)			.4	1.4	2.6	3.3	2.8	1.7	2.1	1.6	.3		16.2
KLICKITAT COUNTY						Bickleton							
Precip.	1.4	1.6	1.0	.7	.7	1.0	.2	.2	.3	1.1	1.6	2.2	12.0
PET		.3	.6	1.6	2.9	3.9	5.1	4.6	3.2	1.7	.4		24.3
Ea(6)		.3	.6	1.6	2.3	2.4	1.4	.7	.5	1.1	.4		11.3
						Goldendale							
Precip.	2.9	2.0	1.6	.8	.8	1.0	.2	.2	.6	1.7	2.6	3.2	17.6
PET		.2	.9	1.8	3.0	3.9	4.9	4.4	3.0	1.7	.5		24.3
Ea(6)		.2	.9	1.8	2.4	2.3	1.4	.7	.7	1.7	.5		12.6
						Mt. Adams R.S.							
Precip.	8.8	6.5	5.0	2.3	1.6	1.4	.2	.4	1.3	4.3	7.6	10.0	49.4
PET		.3	.7	1.7	2.9	3.2	4.8	4.2	2.9	1.6	.7		23.0
Ea(6)		.3	.7	1.7	2.9	2.6	2.1	1.2	1.5	1.6	.7		15.3
YAKIMA COUNTY						Bumping Lake							
Precip.	7.7	6.2	4.6	2.2	1.8	1.6	.5	.6	1.4	4.2	7.0	9.6	47.4
PET				1.0	2.3	3.1	4.1	3.8	2.7	1.4	.3		18.7
Ea(6)				1.0	2.3	2.9	.	1.6	1.7	1.4	.3		13.6
						Rimrock Tieton Dam							
Precip.	4.3	2.9	2.4	1.1	1.0	1.1	.3	.5	.7	2.3	4.2	5.5	26.3
PET			.4	1.3	2.6	3.5	4.6	4.0	2.8	1.6	.3		21.1
Ea(6)			.4	1.3	2.4	2.6	1.8	1.1	.9	1.6	.3		12.4
						Wapato							
Precip.	1.0	.7	.5	.4	.5	.8	.2	.2	.3	.6	.9		7.2
PET		.2	1.0	2.1	3.7	4.8	6.1	5.3	3.4	1.7	.4	.1	28.8
Ea(6)		.2	1.0	1.5	1.4	1.2	.3	.2	.3	.6	.4	.1	7.2
						Yakima							
Precip.	.9	.8	.5	.4	.5	.8	.2	.2	.4	.6	1.0	1.1	7.2
PET		.1	1.0	2.0	3.6	4.6	5.7	4.9	3.0	1.6	.4		26.9
Ea(6)		.1	1.0	1.5	1.5	1.1	.4	.2	.4	.6	.4		7.2

* Precip.- Average precipitation. PET - Potential Evapotranspiration
Ea(6) - Actual evapotranspiration for soil water capacity of 6 inches.

Reference #1

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Chemistry, Microbiology, and Technical Services

CLIENT: Yakima Health District
104 N. 1st St.
Yakima, WA 98901

ATTN : Ted Silvestri or Art

Work ID : Carlos Motors
Taken By : Client
Transported by: Pony Exp 14953326
Type : Soil/Sludge

Certificate of Analysis

Work Order# : 94-05-548
DATE RECEIVED : 05/12/94
DATE OF REPORT: 06/07/94

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	CM2V	05/11/94 10:30
02	CM2	05/11/94 10:35
03	CM3	05/11/94 10:45

GENERAL COMMENTS ON ANTIMONY DETERMINATIONS:

The long-term trend at Laucks has consistently demonstrated antimony recoveries in soil matrix spikes and matrix spike duplicates hovering near 20%. Substantial efforts have been made to investigate the cause of these poor recoveries. We have concluded that laboratory performance is not the central issue, but that the lack of recovery is in fact inherent to the digestion method. As there are no other accepted methods for the preparation of soils for antimony, we are limited in what steps we can take to correct the situation.

When evaluating antimony data, please be aware that because antimony MS/MSD recoveries are consistently biased low in soils and sediments, it is likely that soil sample results are similarly biased.

COMMENTS ON SEMI-VOLATILE (METHOD 8270) ANALYSIS:

Samples 9405548-02 and -03 were extracted at the medium level of 1g instead of the low level of 30g due to the high level of hydrocarbons in the samples. The hydrocarbon patterns produced resemble motor oil.

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Chemistry, Microbiology, and Technical Services

CLIENT : Yakima Health District

Certificate of Analysis

Work Order# : 94-05-548

COMMENTS ON VOLATILE (METHOD 8240) ANALYSIS:

The method blank (B051894MVOS01) associated with sample -01 yielded low level amounts of two common laboratory solvents; acetone and methylene chloride. These amounts are well within the laboratory control limits for an acceptable method blank, but due to the dilution factor (1:50) they appear to have been detected at much higher levels.

COMMENTS ON MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS:

The RPD of mercury was out on control because of sample inhomogeneity. Since all other indicators were within control, no further action was taken.

MS/MSD recoveries of selenium was attributed to matrix interference. Presence of unknown constituents in the sample will occasionally interfere with our ability to detect target compounds at a more sensitive level, or will mask or ehance the measurement of spiking compound concentrations.

ATTACHMENTS:

Following presentation of sample results, the following appendices are attached to this report:

Appendix A: Method Blank and Surrogate Recoveries Report
Appendix B: MS/MSD and Duplicate Report
Appendix C: Blank Spike Recovery Report
Appendix D: Chain-of-Custody

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CLIENT : Yakima Health District

Certificate of Analysis

Work Order# : 94-05-548

Unless otherwise instructed all samples will be discarded on 07/10/94

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root

Tamis Root
Director

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Chemistry, Microbiology, and Technical Services

USING OUR REPORTS

Laucks uses an electronic Laboratory Information Management System that produces both our reports and invoices. The following information and definitions will help you understand our reports, and we encourage you to call us if your questions are not answered here.

SAMPLE IDENTIFICATION - Sample IDs are recorded as they appear on your sample containers or chain-of-custody documents.

TEST RESULTS - Analyses that result in a single data point are shown in alphabetical order in the body of the report. Tests that yield multiple results are generally reported on separate pages, on a sample-by-sample basis.

MEASUREMENT UNITS - The reporting units are shown to the right of the analyte name. In the event that a different unit was more appropriate to a specific sample, that exception is shown immediately beneath the test result. Units commonly employed are mg/kg (solids) or mg/L (liquids), comparable to parts per million; ug/kg (solids) or ug/L (liquids), comparable to parts per billion; and percent (%).

METHODS OF ANALYSIS - The EPA or Standard Methods method number is shown in parentheses after the analyte name when field size allows; or, for analyses that yield multiple data points, in the header information on the individual report page.

ABBREVIATIONS - Several abbreviations can appear in our reports. The most commonly employed abbreviations are:

U : The analyte of interest was not detected, to the limit of detection indicated.

B : The analyte of interest was detected in the method blank associated with the sample, as well as in the sample itself. The B flag is applied without regard to the relative concentrations detected in the blank and sample.

J : The analyte of interest was detected below the routine reporting limit. This value should be regarded as an estimate.

T : The flagged values represent the SUM of two co-eluting compounds. The SUM of these two values is shown as though it were a result for each of them. The two figures should not be added together.

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E : The flagged value was reported from an analysis which exceeded the linear range of the instrument. See additional comments for further discussion of the circumstances. Values so flagged should be considered estimates.

D : The value reported derives from analysis of a diluted sample or sample extract.

P : When a dual column GC technique is employed, this flag indicates that test results from the two columns differ by more than 25%. Generally, we report the lower value.

C : The flagged analyte has been confirmed by GC/MS analysis. The value reported may be derived from either the initial or confirmatory (GC/MS) analysis. See specific report comments for details.

SDL : Sample Detection Limit. The SDL can vary from sample to sample, depending on sample size, matrix interferences, moisture content and other sample-specific conditions.

PQL : Practical Quantitation Limit. This limit is drawn from the test method and usually represents the SDL multiplied by a matrix-specific factor.

CRQL : Client Requested Quantitation Limit, usually the limit of detection specified at your request. Might also be referred to as Contract Required Quantitation Limit.

DB : Dry Basis. The value reported has been back-calculated to normalize for the moisture content of the sample.

AR : As-Received. The value has NOT been normalized for moisture.

Other abbreviations, used in special applications, are defined where they appear.

DISPOSAL DATE - Our reports now include the date on which we will dispose of your samples. (In limited instances, we may require that the samples be returned to your custody.) If you wish to have the samples back, or would like to have them stored for a longer period, please notify us before the disposal date.

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86 years

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Chemistry, Microbiology, and Technical Services

CLIENT : Yakima Health District

Certificate of Analysis

Work Order # 94-05-548

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03
Antimony (Method 7041)	mg/kg DB		4.8	0.7
Arsenic (Method 7061)	mg/kg DB		9.3	2.6
Beryllium (Method 6010)	mg/kg DB		< 0.9	< 0.6
Cadmium (Method 6010)	mg/kg DB		17.	< 1.2
Chromium (Method 6010)	mg/kg DB		75.	8.6
Copper (Method 6010)	mg/kg DB		500.	36.
Lead (Method 6010)	mg/kg DB		2300.	620.
Mercury (Method 7471)	mg/kg DB		0.4	< 0.1
Nickel (Method 6010)	mg/kg DB		48.	10.
Selenium (Method 7741)	mg/kg DB		0.9	0.6 U
Silver (Method 6010)	mg/kg DB		< 1.8	< 1.2
Thallium (Method 7841)	mg/kg DB		0.4 U	0.2 U
Total Solids	%	59.7	54.2	86.4
Zinc (Method 6010)	mg/kg DB		1600.	570.

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Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9405548-01A
Client Sample ID: CM2V

Collection Date : 05/11/94
Date Received : 05/12/94
Date Analyzed : 05/19/94
Date Confirmed : 05/26/94

Test Code : 8240_S
Test Method : SW 8240
Report Units : ug/kg DB

Analyte	Result	SDL
Dichlorodifluoromethane ...	210 U	210
Chloromethane	210 U	210
Vinyl chloride	210 U	210
Bromomethane	210 U	210
Chloroethane	420 U	420
Trichlorofluoromethane	1000 U	1000
Acrolein	420 U	420
1,1-Dichloroethene	210 U	210
Acetone	3600 B	1300
Carbon disulfide	210 U	210
Methylene chloride	730 B	210
Acrylonitrile	210 U	210
trans-1,2-Dichloroethene ..	210 U	210
1,1-Dichloroethane	210 U	210
Vinyl acetate	210 U	210
cis-1,2-Dichloroethene	210 U	210
2-Butanone	420 U	420
Chloroform	210 U	210
1,1,1-Trichloroethane	210 U	210
Carbon tetrachloride	210 U	210

Analyte	Result	SDL
Benzene	210 U	210
1,2-Dichloroethane.....	210 U	210
Trichloroethene	210 U	210
1,2-Dichloropropane	210 U	210
Bromodichloromethane	210 U	210
2-Chloroethyl vinyl ether .	1000 U	1000
cis-1,3-Dichloropropene ...	210 U	210
4-Methyl-2-pentanone	210 U	210
Toluene	10000	210
trans-1,3-Dichloropropene .	210 U	210
1,1,2-Trichloroethane	210 U	210
Tetrachloroethene	210 U	210
2-Hexanone	210 U	210
Dibromochloromethane	210 U	210
Chlorobenzene	210 U	210
Ethylbenzene	2960	210
m,p-Xylenes	4200	210
o-Xylene	1500	210
Styrene	210 U	210
Bromoform	210 U	210
1,1,2,2-Tetrachloroethane .	210 U	210

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Chemistry, Microbiology, and Technical Services

Surrogate recovery report for sample 9405548-01A

Surrogate	Percent Recovery	Limits: Min.	Max.
d4-1,2-Dichloroethane	106	76	121
d8-Toluene	99	74	128
p-Bromofluorobenzene	101	72	118

* = Indicates that recovery is outside control limits

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Lab Sample ID : 9405548-02 Date Collected: 05/11/94
Client Sample ID: CM2 Date Received : 05/12/94

---------- WTPH-HCID ----------

Preparation Date: 05/13/94
Analysis Date : 05/14/94

	Result	
Gasoline Range Hydrocarbons...	<20	mg/kg AR
Diesel Range Hydrocarbons.....	<50	mg/kg AR
Lube Oil and Related Products.	<100	mg/kg AR

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene	72	50	150
2-Fluorobiphenyl	159*	50	150
p-Terphenyl	4100*	50	150

Comments: High surrogate recoveries due to matrix. A partial gasoline pattern is present. Some diesel peaks are present. The majority of the response is a result of heavy oil range hydrocarbons eluting into the diesel range.

Analysis performed in accordance with Washington State Department of Ecology method WTPH-HCID.

Key: < = Result is less than WTPH-HCID screening level.
> = Result exceeded WTPH-HCID screening level.
AR = As received.

If result exceeds the screening level it is recommended that the appropriate quantitative analysis be performed.

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Lab Sample ID : 9405548-03 Date Collected: 05/11/94
Client Sample ID: CM3 Date Received : 05/12/94

---------- WTPH-HCID ----------

Preparation Date: 05/13/94
Analysis Date : 05/14/94

	Result	
Gasoline Range Hydrocarbons...	<20	mg/kg AR
Diesel Range Hydrocarbons.....	<50	mg/kg AR
Lube Oil and Related Products.	<100	mg/kg AR

Surrogate recoveries	% Rec	LCL	UCL
Bromofluorobenzene	46*	50	150
2-Fluorobiphenyl	67	50	150
p-Terphenyl	0*	50	150

Comments: A partial gasoline pattern is present. The diesel range is obscured by heavy oil range hydrocarbons.
Out of control surrogate recoveries are due to matrix interference.

Analysis performed in accordance with Washington State Department of Ecology method WTPH-HCID.

Key: < = Result is less than WTPH-HCID screening level.
> = Result exceeded WTPH-HCID screening level.
AR = As received.

If result exceeds the screening level it is recommended that the appropriate quantitative analysis be performed.

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Chemistry, Microbiology, and Technical Services

REPORT ON SAMPLE: 9405548-03B
Client Sample ID: CM3

Collection Date : 05/11/94
Date Received : 05/12/94

Date Extracted : 05/13/94
Date Analyzed : 05/18/94
Date Confirmed : 05/18/94

Test Code : 8080AS
Test Method : SW 8080
Extraction Method : SW 3550

Analyte	Result (ug/kg DB)		SDL (ug/kg DB)
Aroclor-1016	1100	U	1100
Aroclor-1221	2300	U	2300
Aroclor-1232	1100	U	1100
Aroclor-1242	1100	U	1100
Aroclor-1248	1100	U	1100
Aroclor-1254	1100	U	1100
Aroclor-1260	1100	U	1100

Surrogate recovery report for sample 9405548-03B

Surrogate	Percent Recovery	Limits: Min.	Max.
Isodrin	44	20	150
Tetrachloro-m-xylene	64	20	150
Decachlorobiphenyl	77	20	160

* = Indicates that recovery is outside control limits

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REPORT ON SAMPLE: 9405548-02B
Client Sample ID: CM2
Collection Date : 05/11/94
Date Received : 05/12/94
Date Extracted : 05/13/94
Date Analyzed : 05/17/94

Test Code : LXTCSS
Test Method : SW8270
Extraction Method : SW3550

Analyte	Result (ug/kg DB)	SDL (ug/kg DB)	Analyte	Result (ug/kg DB)	SDL (ug/kg DB)
Phenol	9200 U	9200	3-Nitroaniline	46000 U	46000
Aniline	46000 U	46000	Acenaphthene	9200 U	9200
Bis(2-chloroethyl)ether	9200 U	9200	2,4-Dinitrophenol	92000 U	92000
2-Chlorophenol	9200 U	9200	4-Nitrophenol	92000 U	92000
1,3-Dichlorobenzene	9200 U	9200	Dibenzofuran	9200 U	9200
1,4-Dichlorobenzene	9200 U	9200	2,4-Dinitrotoluene	18000 U	18000
Benzyl alcohol	9200 U	9200	Diethyl phthalate	9200 U	9200
1,2-Dichlorobenzene	9200 U	9200	4-Chlorophenyl phenylether	9200 U	9200
2-Methylphenol	9200 U	9200	Fluorene	9200 U	9200
Bis(2-chloroisopropyl)ether	9200 U	9200	4-Nitroaniline	18000 U	18000
4-Methylphenol	13000	9200	4,6-Dinitro-2-methylphenol	92000 U	92000
N-Nitroso-di-n-propylamine	9200 U	9200	N-Nitrosodiphenylamine	9200 U	9200
Hexachloroethane	18000 U	18000	1,2-Diphenylhydrazine	18000 U	18000
Nitrobenzene	9200 U	9200	4-Bromophenyl phenylether	18000 U	18000
Isophorone	9200 U	9200	Hexachlorobenzene	18000 U	18000
2-Nitrophenol	18000 U	18000	Pentachlorophenol	92000 U	92000
2,4-Dimethylphenol	9200 U	9200	Phenanthrene	4800 J	9200
Benzoic acid	230000 U	230000	Anthracene	9200 U	9200
Bis(2-chloroethoxy)methane	9200 U	9200	Carbazole	9200 U	9200
2,4-Dichlorophenol	18000 U	18000	Di-n-butyl phthalate	9200 U	9200
1,2,4-Trichlorobenzene	9200 U	9200	Fluoranthene	2500 J	9200
Naphthalene	4200 J	9200	Pyrene	4400 J	9200
4-Chloroaniline	9200 U	9200	Benzidine	230000 U	230000
Hexachlorobutadiene	9200 U	9200	Butylbenzylphthalate	9200	9200
4-Chloro-3-methylphenol	18000 U	18000	3,3'-Dichlorobenzidine	92000 U	92000
2-Methylnaphthalene	11000	9200	Benzo(a)anthracene	9200 U	9200
Hexachlorocyclopentadiene	18000 U	18000	Chrysene	9200 U	9200
2,4,6-Trichlorophenol	18000 U	18000	Bis(2-ethylhexyl)phthalate	170000	9200
2,4,5-Trichlorophenol	18000 U	18000	Di-n-octyl phthalate	9200 U	9200
2-Chloronaphthalene	9200 U	9200	Benzo(b)fluoranthene	9200 U	9200
2-Nitroaniline	18000 U	18000	Benzo(k)fluoranthene	9200 U	9200
Dimethyl phthalate	9200 U	9200	Benzo(a)pyrene	9200 U	9200
Acenaphthylene	9200 U	9200	Indeno(1,2,3-cd)pyrene	9200 U	9200
2,6-Dinitrotoluene	18000 U	18000	Dibenzo(a,h)anthracene	9200 U	9200
			Benzo(g,h,i)perylene	9200 U	9200

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GC/MS ABN surrogate recovery report for sample 9405548-02B

Surrogate	Percent Recovery	Limits: Min.	Max.
2-Fluorophenol	69	33	115
d5-Phenol	73	45	112
d4-2-Chlorophenol ...	75	41	110
d5-Nitrobenzene	63	38	117
2-Fluorobiphenyl	85	47	124
d4-1,2-Dichlorobenzene	78	43	118
2,4,6-Tribromophenol	90	30	136
d14-p-Terphenyl	81	51	135

* = Surrogate recovery outside control limits

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REPORT ON SAMPLE: 9405548-03B
Client Sample ID: CM3
Collection Date : 05/11/94
Date Received : 05/12/94
Date Extracted : 05/13/94
Date Analyzed : 05/17/94

Test Code : LXTCSS
Test Method : SW8270
Extraction Method : SW3550

Analyte	Result (ug/kg DB)	SDL (ug/kg DB)	Analyte	Result (ug/kg DB)	SDL (ug/kg DB)
Phenol	5800 U	5800	3-Nitroaniline	29000 U	29000
Aniline	29000 U	29000	Acenaphthene	5800 U	5800
Bis(2-chloroethyl)ether	5800 U	5800	2,4-Dinitrophenol	58000 U	58000
2-Chlorophenol	5800 U	5800	4-Nitrophenol	58000 U	58000
1,3-Dichlorobenzene	5800 U	5800	Dibenzofuran	5800 U	5800
1,4-Dichlorobenzene	5800 U	5800	2,4-Dinitrotoluene	12000 U	12000
Benzyl alcohol	5800 U	5800	Diethyl phthalate	5800 U	5800
1,2-Dichlorobenzene	5800 U	5800	4-Chlorophenyl phenylether	5800 U	5800
2-Methylphenol	5800 U	5800	Fluorene	5800 U	5800
Bis(2-chloroisopropyl)ether	5800 U	5800	4-Nitroaniline	12000 U	12000
4-Methylphenol	5800 U	5800	4,6-Dinitro-2-methylphenol	58000 U	58000
N-Nitroso-di-n-propylamine	5800 U	5800	N-Nitrosodiphenylamine	5800 U	5800
Hexachloroethane	12000 U	12000	1,2-Diphenylhydrazine	12000 U	12000
Nitrobenzene	5800 U	5800	4-Bromophenyl phenylether	12000 U	12000
Isophorone	5800 U	5800	Hexachlorobenzene	12000 U	12000
2-Nitrophenol	12000 U	12000	Pentachlorophenol	58000 U	58000
2,4-Dimethylphenol	5800 U	5800	Phenanthrene	11000	5800
Benzoic acid	140000 U	140000	Anthracene	5800 U	5800
Bis(2-chloroethoxy)methane	5800 U	5800	Carbazole	5800 U	5800
2,4-Dichlorophenol	12000 U	12000	Di-n-butyl phthalate	4500 J	5800
1,2,4-Trichlorobenzene	5800 U	5800	Fluoranthene	3700 J	5800
Naphthalene	5800 U	5800	Pyrene	12000	5800
4-Chloroaniline	5800 U	5800	Benzidine	140000 U	140000
Hexachlorobutadiene	5800 U	5800	Butylbenzylphthalate	5800 U	5800
4-Chloro-3-methylphenol	12000 U	12000	3,3'-Dichlorobenzidine	58000 U	58000
2-Methylnaphthalene	6000	5800	Benzo(a)anthracene	5800 U	5800
Hexachlorocyclopentadiene	12000 U	12000	Chrysene	5800 U	5800
2,4,6-Trichlorophenol	12000 U	12000	Bis(2-ethylhexyl)phthalate	96000	5800
2,4,5-Trichlorophenol	12000 U	12000	Di-n-octyl phthalate	5800 U	5800
2-Chloronaphthalene	5800 U	5800	Benzo(b)fluoranthene	5800 U	5800
2-Nitroaniline	12000 U	12000	Benzo(k)fluoranthene	5800 U	5800
Dimethyl phthalate	5800 U	5800	Benzo(a)pyrene	5800 U	5800
Acenaphthylene	5800 U	5800	Indeno(1,2,3-cd)pyrene	5800 U	5800
2,6-Dinitrotoluene	12000 U	12000	Dibenzo(a,h)anthracene	5800 U	5800
			Benzo(g,h,i)perylene	5800 U	5800

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GC/MS ABN surrogate recovery report for sample 9405548-03B

Surrogate	Percent Recovery	Limits: Min.	Max.
2-Fluorophenol	65	33	115
d5-Phenol	67	45	112
d4-2-Chlorophenol ...	71	41	110
d5-Nitrobenzene	61	38	117
2-Fluorobiphenyl	74	47	124
d4-1,2-Dichlorobenzene	77	43	118
2,4,6-Tribromophenol	84	30	136
d14-p-Terphenyl	105	51	135

* = Surrogate recovery outside control limits

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APPENDIX A

Method Blank and Method Blank Surrogate Recoveries Report

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Quality Control Report
Method Blanks for Work Order 9405548

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
B051794_GF_S01	2-3	Antimony by Furnace AA	0.30 U	mg/kg DB	0.60
B051794_ICP_S01	2-3	Lead by ICP	10 U	mg/kg DB	20
		Copper by ICP	1.0 U		2.0
		Silver by ICP	1.0 U		2.0
		Beryllium by ICP	0.50 U		1.0
		Nickel by ICP	2.0 U		4.0
		Zinc by ICP	1.0 U		5.0
		Cadmium by ICP	0.50 U		1.0
		Chromium by ICP	1.0 U		2.0
		Arsenic by ICP	20 U		40
		Aluminum by ICP	10 U		50
		Barium by ICP	2.0 U		4.0
		Calcium by ICP	100 U		200
		Cobalt by ICP	2.0 U		4.0
		Iron by ICP	10 U		50
		Mercury by ICP	25 U		50
		Potassium by ICP	100 U		200
		Magnesium by ICP	100 U		200
		Manganese by ICP	2.0 U		4.0
		Sodium by ICP	100 U		200
		Antimony by ICP	6.0 U		12
		Selenium by ICP	20 U		40
		Vanadium by ICP	5.0 U		10
B052094_HG_W01	2-3	Mercury by Cold Vapor	0.0010 U	mg/L	0.0020
B052394_GF_S01	2-3	Thallium by Furnace AA	0.20 U	mg/kg DB	0.40
B052394_GF_W01	2-3	Thallium by Furnace AA	0.0020 U	mg/L	0.0040
B052394_HY_S01	2,3	Arsenic by gaseous hydride AA	0.50 U	mg/kg DB	1.0
		Selenium by Gaseous Hydride AA	0.50 U		1.0
B051393_MSV_S01	2,3	Phenol	1000 U	ug/kg	1000
		Aniline	5000 U		5000

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Because they validate more than one work order, method blank results are not always reported in the same concentration units or to the same detection limits that are used for sample results.

* = blank exceeds control limit

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Method Blanks for Work Order 9405548

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
		Bis(2-chloroethyl)ether	1000 U		1000
		2-Chlorophenol	1000 U		1000
		1,3-Dichlorobenzene	1000 U		1000
		1,4-Dichlorobenzene	1000 U		1000
		Benzyl Alcohol	1000 U		1000
		1,2-Dichlorobenzene	1000 U		1000
		2-Methylphenol	1000 U		1000
		Bis(2-chloroisopropyl)ether	1000 U		1000
		4-Methylphenol	1000 U		1000
		N-Nitroso-di-n-propylamine	1000 U		1000
		Hexachloroethane	2000 U		2000
		Nitrobenzene	1000 U		1000
		Isophorone	1000 U		1000
		2-Nitrophenol	1000 U		1000
		2,4-Dimethylphenol	1000 U		1000
		Benzoic Acid	25000 U		25000
		Bis(2-chloroethoxy)methane	1000 U		1000
		2,4-Dichlorophenol	2000 U		2000
		1,2,4-Trichlorobenzene	1000 U		1000
		Naphthalene	1000 U		1000
		4-Chloroaniline	1000 U		1000
		Hexachlorobutadiene	1000 U		1000
		4-Chloro-3-Methylphenol	2000 U		2000
		2-Methylnaphthalene	1000 U		1000
		Hexachlorocyclopentadiene	2000 U		2000
		2,4,6-Trichlorophenol	2000 U		2000
		2,4,5-Trichlorophenol	2000 U		2000
		2-Chloronaphthalene	1000 U		1000
		2-Nitroaniline	2000 U		2000
		Dimethyl phthalate	1000 U		5000

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Quality Control Report
Method Blanks for Work Order 9405548

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
		Acenaphthylene	1000 U		1000
		2,6-Dinitrotoluene	2000 U		2000
		3-Nitroaniline	5000 U		5000
		Acenaphthene	1000 U		1000
		2,4-Dinitrophenol	10000 U		10000
		4-Nitrophenol	10000 U		10000
		Dibenzofuran	1000 U		1000
		2,4-Dinitrotoluene	2000 U		2000
		Diethyl phthalate	1000 U		5000
		4-Chlorophenyl phenylether	1000 U		1000
		Fluorene	1000 U		1000
		4-Nitroaniline	2000 U		2000
		4,6-Dinitro-2-methylphenol	10000 U		10000
		N-Nitrosodiphenylamine	1000 U		1000
		1,2-Diphenylhydrazine	2000 U		2000
		4-Bromophenyl phenyl ether	2000 U		2000
		Hexachlorobenzene	2000 U		2000
		Pentachlorophenol	10000 U		10000
		Phenanthrene	1000 U		1000
		Anthracene	1000 U		1000
		Di-n-butyl phthalate	1000 U		50000
		Fluoranthene	1000 U		1000
		Pyrene	1000 U		1000
		Benzidine	25000 U		25000
		Butylbenzylphthalate	1000 U		5000
		3,3'-Dichlorobenzidine	10000 U		10000
		Benzo(a)anthracene	1000 U		1000
		Chrysene	1000 U		1000
		Bis(2-ethylhexyl) phthalate	1000 U		50000
		Di-n-octyl phthalate	1000 U		5000

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* = blank exceeds control limit

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Quality Control Report
Method Blanks for Work Order 9405548

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
		Benzo(b)fluoranthene	1000 U		1000
		Benzo(k)fluoranthene	1000 U		1000
		Benzo(a)pyrene	1000 U		1000
		Indeno(1,2,3-cd)pyrene	1000 U		1000
		Dibenzo(a,h)anthracene	1000 U		1000
		Benzo(g,h,i)perylene	1000 U		1000
		Carbazole	1000 U		1000
B051394_GPX_S03	02	Aroclor-1016	33 U	ug/kg	33
		Aroclor-1221	67 U		67
		Aroclor-1232	33 U		33
		Aroclor-1242	33 U		33
		Aroclor-1248	33 U		33
		Aroclor-1254	33 U		33
		Aroclor-1260	33 U		33
B051394_GPX_S04	03	Aroclor-1016	33 U	ug/kg	33
		Aroclor-1221	67 U		67
		Aroclor-1232	33 U		33
		Aroclor-1242	33 U		33
		Aroclor-1248	33 U		33
		Aroclor-1254	33 U		33
		Aroclor-1260	33 U		33
B051394_GPX_S05	3	Aroclor-1016	990 U	ug/kg	990
		Aroclor-1221	2000 U		2000
		Aroclor-1232	990 U		990
		Aroclor-1242	990 U		990
		Aroclor-1248	990 U		990
		Aroclor-1254	990 U		990
		Aroclor-1260	990 U		990
B051394_GSV_S01	2,3	Gasoline Range Hydrocarbons	20 U	mg/kg	20
		Diesel Range Hydrocarbons	50 U		50

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* = blank exceeds control limit

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Quality Control Report
Method Blanks for Work Order 9405548

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
		Heavy Hydrocarbons	100 U		100
B051894_MVO_S01	1	Dichlorodifluoromethane	120 U	ug/kg	120
		Chloromethane	120 U		120
		Vinyl chloride	120 U		120
		Bromomethane	120 U		120
		Chloroethane	250 U		250
		Trichlorofluoromethane	620 U		620
		Acrolein	250 U		250
		1,1-Dichloroethene	120 U		120
		Acetone	1900		3800
		Carbon disulfide	120 U		120
		Methylene chloride	160		620
		Acrylonitrile	120 U		120
		trans-1,2-Dichloroethene	120 U		120
		1,1-Dichloroethane	120 U		120
		Vinyl acetate	120 U		120
		cis-1,2-Dichloroethene	120 U		120
		2-Butanone	250 U		250
		Chloroform	120 U		120
		1,1,1-Trichloroethane	120 U		120
		Carbon tetrachloride	120 U		120
		Benzene	120 U		120
		1,2-Dichloroethane	120 U		120
		Trichloroethene	120 U		120
		1,2-Dichloropropane	120 U		120
		Bromodichlormethane	120 U		120
		2-Chloroethyl vinyl ether	620 U		620
		cis-1,3-Dichloropropene	120 U		120
		4-Methyl-2-pentanone	120 U		120
		Toluene	120 U		120

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Because they validate more than one work order, method blank results are not always reported in the same concentration units or to the same detection limits that are used for sample results.

* = blank exceeds control limit

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Quality Control Report
Method Blanks for Work Order 9405548

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
		trans-1,3-Dichloropropene	120 U		120
		1,1,2-Trichloroethane	120 U		120
		Tetrachloroethene	120 U		120
		2-Hexanone	120 U		120
		Dibromochloromethane	120 U		120
		Chlorobenzene	120 U		120
		Ethylbenzene	120 U		120
		m,p-Xylenes	120 U		120
		o-Xylene	120 U		120
		Styrene	120 U		120
		Bromoform	120 U		120
		1,1,2,2-Tetrachloroethane	120 U		120

A method blank can validate more than one analyte on more than one work order. The method blanks in this report may validate analytes not determined on this work order, but nonetheless determined in the associated blank.

Because they validate more than one work order, method blank results are not always reported in the same concentration units or to the same detection limits that are used for sample results.

* = blank exceeds control limit

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Chemistry, Microbiology, and Technical Services

Quality Control Report
Multi-Component Method Blanks
Surrogate Recoveries for Work Order 9405548

Blank Name	Test Description	Surrogate Compound	Recov	LCL	UCL
B051393_MSV_S01	GC/MS ABNs, LTL surrogate limits	2-Fluorophenol	57	33	115
		d5-Phenol	62	45	112
		d4-2-Chlorophenol	60	41	110
		d5-Nitrobenzene	56	38	117
		2-Fluorobiphenyl	61	47	124
		d4-1,2-Dichlorobenzene	60	43	118
		2,4,6-Tribromophenol	74	30	136
		d14-p-Terphenyl	82	51	135
B051394_GPX_S03	Organochlorine PCBs in Soil	Isodrin	85	20	150
		Tetrachloro-m-xylene	78	20	150
		Decachlorobiphenyl	101	20	160
B051394_GPX_S04	Organochlorine PCBs in Soil	Isodrin	58	20	150
		Tetrachloro-m-xylene	61	20	150
		Decachlorobiphenyl	76	20	160
B051394_GPX_S05	Organochlorine PCBs in Soil	Isodrin	58	20	150
		Tetrachloro-m-xylene	61	20	150
		Decachlorobiphenyl	76	20	160
B051394_GSV_S01	WTPH HCID in soil	Bromofluorobenzene	86	50	150
		2-Fluorobiphenyl	94	50	150
		p-Terphenyl	94	50	150
B051894_MVO_S01	GC/MS VOA EPA 8240	d4-1,2-Dichloroethane	99	76	121
		d8-Toluene	102	74	128
		p-Bromofluorobenzene	100	72	118

* = Recovery exceeds control limit

Recov = Percent recovery of surrogate compound
LCL = Lower Control Limit
UCL = Upper Control Limit

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APPENDIX B

MS/MSD and Duplicate Report

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Quality Control Report
MS/MSD Report for Work Order 9405548

MS/MSD Name	Sample Fractions Verified	MS/MSD Sample	Analyte	Percent Recovery MS	MSD	RPD	Cont. Limits LCL	UCL	RPD
K051394_GPXS02	03	9405548-03	Aroclor 1260	62	58	6	20	160	50
K051394_MSVS01	2,3	9405548-03	Phenol	64	66	4	41	109	28
			2-Chlorophenol	66	67	2	40	106	30
			1,4-Dichlorobenzene	68	72	6	34	107	36
			N-Nitroso-di-n-propylamine	89	91	3	48	118	28
			1,2,4-Trichlorobenzene	75	76	1	40	121	30
			4-Chloro-3-methylphenol	78	81	4	55	120	22
			Acenaphthene	81	83	3	41	122	42
			4-Nitrophenol	53	51	4	23	143	37
			2,4-Dinitrotoluene	70	67	4	32	127	25
			Pentachlorophenol	86	85	2	20	159	43
			Pyrene	90	112	22	25	141	50
K051794_GFS01	2-3	9405487-05	Antimony	38	37	2	30	74	30
K051794_ICPS02	2-3	9405487-05	Silver	83	85	3	58	132	30
			Arsenic	95	93	3	70	127	30
			Barium	92	89	4	61	127	20
			Beryllium	94	93	1	84	122	10
			Cadmium	90	88	2	60	138	21
			Cobalt	91	88	3	85	113	10
			Chromium	90	91	1	60	134	30
			Copper	92	89	3	50	150	30
			Mercury	86	79	8	56	110	10

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
LCL = Lower Control Limit
UCL = Upper Control Limit
-1 for recovery value indicates that recovery could not be calculated

An MS/MSD pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this MS/MSD report.

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Quality Control Report
MS/MSD Report for Work Order 9405548

MS/MSD Name	Sample Fractions Verified	MS/MSD Sample	Analyte	Percent Recovery MS	MSD		RPD	Cont. Limits LCL	UCL	RPD
			Manganese	80	95		17	50	150	30
			Nickel	89	88		1	69	124	21
			Lead	93	86		7	50	148	30
			Antimony	39	37		6	30	94	30
			Selenium	88	83		5	67	129	10
			Vanadium	86	96		11	68	125	22
			Zinc	91	91		1	50	150	30
K052094_HGS01	2-3	9405749-01	Mercury	73	57	*	24	65	130	30
K052394_GFS01	2-3	9405548-03	Thallium	106	102		5	50	113	26
K052394_HYS01	2,3	9405548-03	Arsenic	102	98		4	60	128	30
			Selenium	21*	21	*	0	50	148	30
K052494_MVOS01	1	9405586-02	1,1-Dichloroethene	138	132		4	30	160	10
			Trichloroethene	113	109		4	65	146	10
			Benzene	108	107		0	63	141	10
			Toluene	108	107		1	62	148	10
			Chlorobenzene	109	107		2	61	143	10

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
LCL = Lower Control Limit
UCL = Upper Control Limit
-1 for recovery value indicates that recovery could not be calculated

An MS/MSD pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this MS/MSD report.

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Quality Control Report
Duplicate Report for Work Order 9405548

Duplicate Name	Sample Fractions Verified	Sample	Analyte	RPD	Limit
D051694_TSM09	2-3	9405508-02	Total Solids	0	30

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
L = RPD control limit for this analyte is 5x the detection limit. The value appearing in the RPD column is the absolute difference of the duplicates.
-1 for recovery value indicates that recovery could not be calculated

A duplicate pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this duplicate report.

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APPENDIX C

Blank Spike Recovery Report

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Quality Control Report
Blank Spike Report for Work Order 9405548

Blank Spike Names		Fractions Verified	Analyte Name	Recov	LCL	UCL
Database	Lab Assigned					
S051394_GPXS01	S0513GPXSLS	02	Aroclor 1260	92	20	160
S051394_GPXS02	S0513GPXSMS	03	Aroclor 1260	76	20	160
S051394_GPXS04	S0513GPXSMS	03	Aroclor 1260	76	20	160
S051794_GFS01	S051794-S01	2-3	Antimony	87	50	120
S051794_ICMS01	BS0517ICPS01	2-3	Aluminum	106	50	150
			Antimony	90	50	150
			Arsenic	98	70	127
			Barium	96	61	127
			Beryllium	98	84	122
			Cadmium	96	60	138
			Chromium	101	60	134
			Cobalt	97	85	113
			Copper	95	50	150
			Iron	97	50	150
			Lead	100	50	148
			Manganese	98	50	150
			Mercury	102	56	110
			Nickel	98	69	124
			Selenium	88	67	129
			Silver	88	58	132
			Vanadium	97	68	125
			Zinc	98	50	150
S052394_GFS01	S052394-S01	2-3	Thallium	93	50	113
S052394_HYS01	BS0523FAS01	2,3	Arsenic	94	60	128
			Selenium	88	50	148

* = Value Exceeds Control Limit
LCL = Lower Control Limit
UCL = Upper Control Limit

A blank spike can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this blank spike report.

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APPENDIX D

Chain-of-Custody