

MAC-GWADM 19.1-2
Rev. 2



UMTRA Ground Water Project

FY 1997 Sampling Frequencies and Analyses

April 1997

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9801260358 970915
PDR WASTE
WM-54 PDR



**MAC-GWADM 19.1-2
(P-GJPO-2352)
Rev. 2**

**UMTRA Ground Water Project
FY 1997 Sampling Frequencies and Analyses**

UMTRA Ground Water Sampling and Analysis

Site	SIP/SOS	Relocate	Other	Surface Project		Groundwater Project	Private Well Obligation	LTSM Project	Sampling Frequencies
				RAP	PLCC				
Ambrosia, New Mexico (B)	X			No	No	Yes	No	No	3
Belfield, North Dakota (C)			X	NA	NA	NA	NA	NA	None
Bluewater, New Mexico (II)	X			No	No	No	No	Yes	3
Bowman, North Dakota (C)			X	NA	NA	NA	NA	NA	None
Burrell, Pennsylvania (VP) (B)		X		No	No	No	No	Yes	3
Canonsburg, Pennsylvania (B)	X			No	No	Yes	No	Yes	3
Durango, Colorado (B)		X		No	No	Yes	No	Yes	3,4
Falls City, Texas (A)	X			No	No	Yes	Yes	Yes	2,3,4
Grand Junction, Colorado (B)		X		No	Yes	Yes	No	NL	1,3
Green River, Utah (B)	X			No	Yes	Yes	No	NL	2,3,4
Gunnison, Colorado (B)		X		No	No	Yes	Yes	Yes	2,3,4
Lakeview, Oregon (B)		X		No	No	Yes	Yes	Yes	5
Lowman, Idaho (C)	X			No	No	No	No	Yes	None
Maybell, Colorado (B)	X			Yes	No	Yes	No	No	None
Mexican Hat, Utah (A)	X			No	No	No	No	Yes	2
Monument Valley, Arizona (A)		X		No	No	Yes	Yes	No	2,3,4
Naturita, Colorado (B)			X	Yes	No	Yes	Yes	NA	2,3
Rifle, Colorado (A)		X		No	No	Yes	Yes	No	2,3
Riverton, Wyoming (A)			X	No	No	Yes	Yes	NA	3,4
Salt Lake City, Utah (B)		X		No	No	Yes	No	NA	3,4
Shiprock, New Mexico (A)	X			No	No	Yes	No	NA	3
Slick Rock, Colorado (B)		X		No	No	Yes	Yes	NL	3,4
Spook, Wyoming (A)	X			No	No	No	No	No	None
Tuba City, Arizona (A)	X			No	Yes	Yes	No	NL	1,2,3,4

NL = Not licensed yet
 NA = Not applicable
 VP = Vicinity property
 A = Project Category
 B = Base Category
 C = No Action Category
 II = Title II Site
 RAP = Remedial action not complete
 PLCC = RAP complete but not licensed

(1) Quarterly
 (2) Semiannually
 (3) Annually
 (4) Biennially
 (5) Once every 5 years

**Sampling Frequencies
for UMTRA Sites**

Sampling Frequencies For UMTRA Sites

Site	Ambrosia		ARCO-Bluewater		Burrell		Canonsburg	
	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface
Project								
Number of Sample Locations	18 / 0*	0 / 0*	0 / 4	0 / 0	0 / 10	0 / 2	1 / 7	0 / 3
Frequency								
quarterly								
semiannually								
annually	18 / 0		0 / 4		0 / 10	0 / 2	1 / 7	0 / 3
biennially								
other								

Site	Durango		Falls City		Grand Junction		Green River	
	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface
Project								
Number of Sample Locations	20 / 6	3 / 0	52 / 7	0 / 0	17 / 2	8 / 0	10 / 11	9 / 0
Frequency								
quarterly					0 / 2			
semiannually			12 / 5				0 / 11	2 / 0
annually	11 / 6	3 / 0	28 / 0		17 / 0	4 / 0	4 / 0	4 / 0
biennially	9 / 0		2 / 0				6 / 0	3 / 0
other			10 / 2			2 / 0		

Site	Gunnison		Maybell		Mexican Hat		Monument Valley	
	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface
Project								
Number of Sample Locations	58 / 26	16 / 0	0 / 5	0 / 0	1 / 0	0 / 11	33 / 0	9 / 0
Frequency								
quarterly								
semiannually	20 / 19	2 / 0				0 / 11	8 / 0	
annually	11 / 0				1 / 0		11 / 0	3 / 0
biennially	11 / 0						14 / 0	6 / 0
other	16 / 7	14 / 0	0 / 5					

Site Project	Naturita		Riverton		Riverton		Salt Lake	
	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface
Number of Sample Locations	10 / 5*	11 / 0*	33 / 0	12 / 0	50 / 0	11 / 0	24 / 0	10 / 0
Frequency								
quarterly								
semiannually	8 / 5	3 / 0	17 / 0	2 / 0				
annually	2 / 0	8 / 0	15 / 0	10 / 0	48 / 0	11 / 0	18 / 0	7 / 0
biennially					2 / 0		6 / 0	3 / 0
other			1 / 0					

Site Project	Shiprock		Slick Rock (2)		Tuba City	
	Ground Water	Surface	Ground Water	Surface	Ground Water	Surface
Number of Sample Locations	25 / 0	13 / 0	7 / 0	4 / 0	25 / 10	4 / 0
Frequency						
quarterly					4 / 3	
semiannually					6 / 0	
annually	25 / 0	13 / 0	4 / 0	4 / 0	8 / 0	
biennially			3 / 0		7 / 0	4 / 0
other					0 / 7	

* The left number represents Ground Water Project samples and the right number represents LTSM or Surface Project samples. To understand the meaning of the "other" category, it is important to view the " Sampling Frequencies for Locations" worksheets

**Sampling frequencies for Locations
at Individual UMTRA Sites**

**Sampling Frequencies for Locations at
Ambrosia Lake, New Mexico**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Ground Water Project Monitor Wells</i>						
674			X			
675			X			
676			X			
677			X			
678			X			
679			X			
680			X			
681			X			
778			X			
779			X			
781			X			Dry in 12/96
785			X			
786			X			
787			X			
792			X			
793			X			
797			X			Dry in 12/96
798			X			Dry in 12/96

**Sampling Frequencies for Locations at
ARCO-Bluewater, New Mexico**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>LTSM Project Monitor Wells</i>						
E(M)			X			
Y2(M)			X			
F(M)			X			
X(M)			X			

**Sampling Frequencies for Locations at
Durango, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
DUR01 Mill Tailings						
612			X			
617			X			
622				X		
629				X		
630			X			
631			X			
633			X			
634			X			
635			X			
DUR02 Rafinate Pond						
592				X		
593				X		
594			X			
595				X		
596			X			
597				X		
598			X			
602				X		
603				X		
607				X		
628			X			
LTSM Project Monitor Wells						
DUR03 Bodo Canyon						
605			X			
607			X			POC WELL
608			X			"
612			X			"
621			X			"
623			X			BACKGROUND
Surface Water/Sediment Locations						
DUR01 Mill Tailings						
652			X			RIVER
691			X			RIVER
DUR02 Rafinate Pond						
654			X			RIVER

**Sampling Frequencies for Locations at
Falls City, Texas**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
676					X	H2O LEVEL DATA LOG SEMI; REINSTALL DATA LOGGER
677			X			
678			X			Added by D. Metzler for the 1/97 sampling round
712			X			Added by D. Metzler for the 1/97 sampling round
851			X			H2O LEVEL DATA LOG SEMI
853					X	H2O LEVEL DATA LOG SEMI; REINSTALL DATA LOGGER
854						H2O LEVEL DATA LOG SEMI
857			X			
859					X	H2O LEVEL DATA LOG SEMI
861			X			Added by D. Metzler for the 1/97 sampling round
862					X	Not sampled 1/97 per D. Metzler
865			X			
867			X			
881			X			H2O LEVEL DATA LOG SEMI
882			X			"
883		X				
884		X				
885		X				
887		X				
888		X				
889		X				
890		X				
891		X				
892		X				
893					X	Not sampled 1/97 per D. Metzler
894		X				
918			X			Added by D. Metzler for the 1/97 sampling round; H2O LEVEL DATA LOG SEMI
919			X			
922			X			
924		X				
953			X			
954					X	
955					X	H2O LEVEL DATA LOG SEMI
956					X	H2O LEVEL DATA LOG SEMI
957			X			Added by D. Metzler for the 1/97 sampling round
958				X		

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
			X			
965			X			H2O LEVEL DATA LOG SEMI; REINSTALL DATA LOGGER
966			X			Added by D. Metzler for the 1/97 sampling round
969				X		
971					X	H2O LEVEL DATA LOG SEMI
977			X			
LTSM Project Monitor Wells						
709		X				
858		X				DATA LOGGER INSTALLED
880		X				"
906		X				"
908					X	H2O LEVEL ONLY SEMI
916					X	"
921		X				DATA LOGGER INSTALLED

**Sampling Frequencies for Locations at
Grand Junction, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
GRJ01 Processing Site						
590			X			
726			X			
735			X			
736			X			
737					X	Obstructed; casing damaged
740			X			
741			X			
742			X			
743			X			
744			X			
745			X			
746			X			
1000			X			
1001			X			
1002			X			
Surface Project Monitor Wells						
GRJ03 Disposal Site						
731	X					
732	X					
Surface Water/Sediment Locations						
423			X			
424			X			
425			X			
426					X	Not sampled per D. Metzler
427			X			
428					X	Not sampled per D. Metzler

**Sampling Frequencies for Locations at
Green River, Utah**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
582				X		
583				X		
584			X			
585				X		
588			X			
707			X			
806				X		
810			X			Dry after 1.3 CVs in 2/97
811				X		
817				X		
Surface Project Monitor Wells						
171		X				
172		X				
173		X				
174		X				
175		X				
176		X				
177		X				
178		X				
179		X				
180		X				
813		X				
Surface Water/Sediment Locations						
526			X			Dry 2/97
709			X			Dry 2/97
710			X			Dry 2/97
711			X			Dry 2/97
717				X		Sediment location
718		X				Dry 2/97
720		X				Dry 2/97
801				X		
802				X		

**Sampling Frequencies for Locations at
Gunnison, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Ground Water Project Monitor Wells</i>						
GUN01						
001				X		
002				X		
006		X				IF WELL STILL EXISTS
013		X				"
014			X			
058			X			INCLUDE DATA LOGGER
059			X			"
060					X	DATA LOGGER ONLY
061					X	"
088			X			INCLUDE DATA LOGGER
096					X	DATA LOGGER ONLY
097					X	"
101				X		
102				X		
106		X				IF WELL STILL EXISTS
113		X				"
120				X		
121				X		
122			X			
123				X		
125			X			
126		X				
127		X				
130		X				
132			X			
136		X				
145			X			INCLUDE DATA LOGGER
147			X			"
155				X		
157				X		
160					X	DATA LOGGER ONLY
161					X	"
163				X		
170			X			
181					X	DATA LOGGER ONLY
183					X	"
186		X				
188		X				INCLUDE DATA LOGGER
189			X			"
196					X	DATA LOGGER ONLY
197					X	"

GUNNISON

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Surface Project Monitor Wells						
GUN08						
609		X				
621		X				
628		X				
630					X	WATER LEVELS ONLY
632		X				
633		X				
634					X	WATER LEVELS ONLY
635		X				
663		X				POC
707		X				POC
708		X				POC
709					X	WATER LEVELS ONLY
710					X	"
712					X	"
713		X				POC
714					X	WATER LEVELS ONLY
715					X	"
716		X				POC
717		X				POC
720		X				
721		X				
722		X				
723		X				
724		X				
725		X				
750		X				
Private Wells						
455		X				BUFFER ZONE
461				X		"
468		X				IF ACCESSIBLE
469		X				"
472		X				BUFFER ZONE
600		X				IF ACCESSIBLE
660					X	ALTERNATE WELLS
661					X	"
665		X				IF ACCESSIBLE
667		X				"
679					X	ALTERNATE WELLS
680		X				IF ACCESSIBLE
683		X				"
684					X	ALTERNATE WELLS
685		X				IF ACCESSIBLE
686					X	ALTERNATE WELLS
687					X	"

GUNNISON

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Surface Water/Sediment Locations</i>						
780					X	H2O LEVEL ONLY SEMI
785					X	"
786					X	"
787					X	"
788					X	"
789					X	"
790					X	"
791					X	"
792		X				H2O LEVEL & CHEMISTRY
793					X	H2O LEVEL ONLY SEMI
794					X	"
795		X				H2O LEVEL & CHEMISTRY
796					X	H2O LEVEL ONLY SEMI
797					X	"
798					X	"
799					X	"

NOTE: PRIVATE WELL FREQUENCY WILL BE RE-EVALUATED AFTER FY96

**Sampling Frequencies for Locations at
Lakeview, Oregon**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
501					X	NOT SAMPLED UNTIL NEW CHARACTERIZATION
502					X	
503					X	"
504					X	"
505					X	"
506					X	"
507					X	"
508					X	"
509					X	"
510					X	"
518					X	"
523					X	"
524					X	"
525					X	"
540					X	"
541					X	"
LTSM Project Monitor Wells						
515					X	SAMPLED EVERY 5 YEARS
602					X	"
603					X	"
604					X	"
605					X	"
606					X	"
607					X	"
608					X	"
609					X	"
Private Wells						
533					X	NOT SAMPLED UNTIL NEW CHARACTERIZATION
534					X	
535					X	"
536					X	"
537					X	"
538					X	"
542					X	"
543					X	"
544					X	"
545					X	"
546					X	"
547					X	"
548					X	"
549					X	"
550					X	"

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Surface Water/Sediment Locations						
605					X	NOT SAMPLED UNTIL NEW
606					X	CHARACTERIZATION
607					X	"
608					X	"
609					X	"
613					X	"

**Sampling Frequencies for Locations at
Maybell, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Surface Project Monitor Wells</i>						
601					X	Download data logger only
604					X	Not sampled per D. Metzler
605					X	Not sampled per D. Metzler
667					X	Download data logger only
676					X	Download data logger only
695					X	Download data logger only
696					X	Download data logger only

**Sampling Frequencies for Locations at
Monument Valley, Arizona**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
601			X			
602			X			
603				X		
604				X		
605		X				
606		X				
610				X		
611				X		
612			X			
614		X				
615			X			
618				X		
619		X				Unable to locate
650				X		
651				X		
652				X		Unable to locate 1/97
653		X				
654			X			
656		X				
657		X				
658				X		
659			X			
660			X			
662			X			
663				X		
664			X			
668				X		
669		X				
Private Wells						
613			X			
616				X		
640			X			Broken pump 1/97, couldn't sample
Surface Water/Sediment Locations						
620				X		SPRING DOWNGRADIENT
621			X			
622			X			
623			X			
624				X		
626				X		Frozen 1/97
627				X		Frozen 1/97
631				X		
632				X		Dry 1/97

**Sampling Frequencies for Locations at
Naturita, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
547		X				
548		X				
Private Wells						
907			X			Background
908					X	Background; 3/97 inaccessible; unused by owner for 10 years.
Surface Water/Sediment Locations						
531			X			
532			X			
533			X			
534			X			
535			X			
536			X			
538			X			SPRING
539		X				
540		X				
556		X				
557			X			
Surface Project Monitor Wells						
BR95-1		X				
BR95-2		X				
BR95-3		X				
CM93-1		X				
CM93-2		X				
CM93-3					X	Not sampled per Surface Project direction (3/6/97)

**Sampling Frequencies for Locations at
Rifle, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
New Rifle						
590		X				
596		X				
598		X				
599						Data logger
603		X				
609		X				
620		X				
622			X			
633			X			
635		X				Data logger
636		X				Data logger
640			X			
641			X			
643			X			
651			X			
655		X				
656		X				
657		X				
658		X				
659		X				
Old Rifle						
590		X				
597			X			
598			X			
600		X				
604		X				
605			X			
606			X			
620			X			
621			X			
626			X			
644			X			
Private Wells						
New Rifle						
428		X				
436			X			Support supplement std; access denied 11/96

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Surface Water/Sediment Locations						
New Rifle						
538			X			IF WATER IS PRESENT
545			X			COLORADO RIVER
548			X			"
568			X			RIFLE CREEK
569			X			"
574			X			"
575		X				ROARING FORK PIT
576			X			IF WATER IS PRESENT
Old Rifle						
538			X			COLORADO RIVER
570			X			POND
572			X			"
573		X				SPRING

RIFLE

**Sampling Frequencies for Locations at
Riverton, Wyoming**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
101			X			
104			X			
108			X			
110			X			
700			X			Added by D. Metzler 1/22/97
704			X			Added by D. Metzler 1/22/97
705				X		
706			X			
707			X			Data Logger
709				X		
710			X			Added by D. Metzler 1/22/97
711			X			Added by D. Metzler 1/22/97
716			X			
717			X			
718			X			Data Logger
719			X			
720			X			
721			X			
722			X			
723			X			
724			X			
725			X			
726			X			Added by D. Metzler 1/22/97
727			X			Data Logger
728			X			Data Logger
729			X			
731			X			
733			X			Poor recovery; no sample 2/97
781			X			Added by D. Metzler 1/22/97
788			X			
Surface Water/Sediment Locations						
741			X			
742			X			
743			X			
744			X			
745			X			
746			X			
747			X			
749			X			
794			X			
795			X			
796			X			

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Private Wells</i>						
405			X			DOWNGRAD OF PLUME
406			X			Added by D. Metzler 1/22/97
410			X			DOWNGRAD OF PLUME
411			X			Added by D. Metzler 1/22/97
417			X			Added by D. Metzler 1/22/97
420			X			DOWNGRAD OF PLUME
430			X			Added by D. Metzler 1/22/97
431			X			Added by D. Metzler 1/22/97
440			X			DOWNGRAD OF PLUME
441			X			DOWNGRAD OF PLUME; shut down for winter 2/97
442			X			DOWNGRAD OF PLUME
444			X			DOWNGRAD OF PLUME
445			X			DOWNGRAD OF PLUME
446			X			Added by D. Metzler 1/22/97
448			X			Added by D. Metzler 1/22/97
451			X			Added by D. Metzler 1/22/97
452			X			Added by D. Metzler 1/22/97
453			X			Added by D. Metzler 1/22/97

**Sampling Frequencies for Locations at
Salt Lake City, Utah**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
001				X		No access agreement in 3/97
002				X		No access agreement in 3/97
003				X		No access agreement in 3/97
005				X		No access agreement in 3/97
006			X			No access agreement in 3/97
007			X			No access agreement in 3/97
008			X			No access agreement in 3/97
011				X		No access agreement in 3/97
109				X		No access agreement in 3/97
130			X			
131			X			
132			X			
133			X			
134			X			
135			X			
136			X			
139					X	2-3' Dewatering well
402			X			Added by D. Metzler 1/22/97
404			X			Added by D. Metzler 1/22/97
406			X			Added by D. Metzler 1/22/97
408			X			Added by D. Metzler 1/22/97
409			X			No access agreement in 3/97
410			X			Added by D. Metzler 1/22/97
Surface Water/Sediment Locations						
181			X			No access agreement in 3/97
182			X			No access agreement in 3/97
186			X			No access agreement in 3/97
187				X		
191			X			No access agreement in 3/97
192			X			
193			X			
194				X		
195				X		
198			X			No access agreement in 3/97

**Sampling Frequencies for Locations at
Shiprock, New Mexico**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Ground Water Project Monitor Wells</i>						
600			X			
602			X			
603			X			
608			X			
610			X			
612			X			Obstruction at 6.8'
614			X			
615			X			
616			X			
617			X			
619			X			
620			X			
624			X			
626			X			
628			X			
630			X			
725			X			
726			X			
727			X			
728			X			
732			X			
733			X			
734			X			
735			X			
736			X			
<i>Surface Water/Sediment Locations</i>						
426			X			
546			X			
548			X			
549			X			
551			X			
553			X			
555			X			
556			X			
655			X			
656			X			
657			X			
658			X			
662			X			

**Sampling Frequencies for Locations at
Slick Rock, Colorado**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
<i>Ground Water Project Monitor Wells</i>						
<i>North Continent Site</i>						
<i>Union Carbide Site</i>						
508			X			
509			X			
510			X			
556			X			Added by D. Metzler 2/97
684				X		
685				X		
<i>Private Wells</i>						
672			X			
<i>Surface Water/Sediment Locations</i>						
692			X			
693			X			
694			X			
696			X			

**Sampling Frequencies for Locations at
Tuba City, Arizona**

Wells	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Ground Water Project Monitor Wells						
901			X			
903			X			
904				X		
906	X					DATA LOGGER
908	X					DATA LOGGER
909		X				
912			X			
913			X			
914			X			
915				X		
916				X		
917				X		
920				X		
921				X		DATA LOGGER
928			X			NEW
929			X			"
930				X		
932		X				NEW
933		X				"
934			X			"
935		X				"
937		X				"
938		X				"
944	X					"
945	X					"
Surface Project Monitor Wells						
925					X	NEW
926					X	"
939					X	"
940	X					"
941	X					DATA LOGGER
942	X					DATA LOGGER
943					X	NEW
946					X	"
947					X	"
948					X	CLEAN WATER SITE WELL
Surface Water Locations						
759				X		
778				X		
965				X		
969				X		

**Constituent Sampling Breakdown
For Individual UMTRA Sites**

**Constituent Sampling Breakdown
For Individual UMTRA Sites**

Site Analyte	Ambrosia Lake		ARCO/Bluewater		Burrell		Canonsburg		
	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Surface Water
Approx. No. Samples/yr	18	0	0, 4*	0	0, 10*	0, 2*	1, 7*		0, 3*
<i>Field Measurements</i>			<i>LTSM</i>		<i>LTSM</i>	<i>LTSM</i>	<i>GW</i>	<i>LTSM</i>	<i>LTSM</i>
Alkalinity	X				X	X	X	X	X
Dissolved Oxygen									
Redox Potential	X				X	X	X	X	X
pH	X		X		X	X	X	X	X
Specific Conductance	X		X		X	X	X	X	X
Turbidity	X				X	X	X	X	X
Temperature	X		X		X	X	X	X	X
<i>Laboratory Measurements</i>			<i>LTSM</i>		<i>LTSM</i>	<i>LTSM</i>	<i>GW</i>	<i>LTSM</i>	<i>LTSM</i>
Aluminum									
Ammonium	X								
Antimony									
Arsenic	X				X	X		X	
Barium	X								
Beryllium									
Bromide									
Cadmium	X								
Calcium	X				X	X	X	X	X
Chloride	X				X	X	X	X	X
Chromium	X								
Cobalt									
Copper									
Cyanide									
Fluoride	X								
Gross Alpha	X						X		X
Gross Beta									
Iron	X				X	X	X	X	X
Lead	X								
Lead-210							X		X
Magnesium	X				X	X	X	X	X
Manganese	X				X	X	X	X	X
Molybdenum	X				X	X	X	X	X

Analyte	Ambrosia		ARCO/Bluewater		Burrell		Canonsburg		
	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Surface Water
Laboratory Measurements (Continued)			LTSM		LTSM	LTSM	GW	LTSM	LTSM
Nickel									
Nitrate	X				X	X	X	X	X
PCBs			X						
Phosphate	X								
Polonium-210							X		X
Potassium	X				X	X	X	X	X
Radium-226	X						X		X
Radium-228	X						X		X
Selenium	X						X		X
Semi VOC									
Silica									
Silver									
Sodium	X				X	X	X	X	X
Strontium									
Sulfate	X				X	X	X	X	X
Sulfide									
Thallium									
Thorium-230	X						X		X
Tin									
Total Dissolved Solids	X				X	X	X	X	X
Total Organic Carbon									
TPH									
Uranium	X				X	X	X	X	X
Vanadium	X								
Zinc	X								
Total No. of Analytes	27	0	1	0	13	13	19	13	19

Note: All analyte samples are considered filtered unless stated otherwise.

All private well samples are to be unfiltered. The identity of the private wells are available in the "Sampling Frequencies for Locations" worksheet.

The total number of analytes does not include the field parameters.

All single numbers in the "Approximate No. Samples/yr" category are considered Ground Water Project samples.

* The left number represents Ground Water Project samples and the right number represents Surface or LTSM Project samples.

Site	Durango		Falls City		Grand Junction		Green River					
Analyte	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water				
Approx No. Samples/yr	16,	6 *	3	53,	10 *	0	15,	2 *	4	7,	22 *	10
Field Measurements	GW	LTSM		GW	LTSM		GW	SURF		GW	SURF	
Alkalinity	X	X	X	X	X		X	X	X	X	X	X
Dissolved Oxygen												
Redox Potential	X	X	X	X	X		X	X	X	X	X	X
pH	X	X	X	X	X		X	X	X	X	X	X
Specific Conductance	X	X	X	X	X		X	X	X	X	X	X
Turbidity	X	X	X	X	X		X	X	X	X	X	X
Temperature	X	X	X	X	X		X	X	X	X	X	X
Laboratory Measurements	GW	LTSM		GW	LTSM		GW	SURF		GW	SURF	
Aluminum					X							
Ammonium					X							
Antimony	X		X		X							
Arsenic	X		X		X		X	X	X	X	X	
Barium												
Beryllium					X							
Bromide					X							
Cadmium	X		X	X	X		X	X	X	X	X	
Calcium	X	X	X	X	X		X	X	X	X	X	
Chloride	X	X	X	X	X		X	X	X	X	X	
Chromium	X		X	X	X							
Cobalt				X	X		X	X	X			
Copper					X							
Cyanide												
Fluoride				X			X	X	X	X	X	
Gross Alpha	X		X	X	X		X	X	X	X	X	
Gross Beta												
Iron		X		X	X		X	X	X			
Lead	X		X	X	X							
Lead-210										X	X	
Magnesium	X	X	X	X	X		X	X	X	X	X	
Manganese	X	X	X		X		X	X	X	X	X	
Molybdenum	X	X	X	X	X		X	X	X	X	X	

Site Analyte	Durango		Falls City			Grand Junction			Green River			
	Ground Water	Surface Water	Ground Water	Surface Water		Ground Water	Surface Water		Ground Water	Surface Water		
Laboratory Measurements (Continued)	GW	LTSM		GW	LTSM		GW	SURF		GW	SURF	
Nickel				X	X							
Nitrate	X		X	X	X		X	X	X	X	X	X
PCBs												
Phosphate												
Polonium-210												
Potassium	X	X	X	X	X		X	X	X	X	X	
Radium-226					X		X	X	X	X	X	
Radium-228					X		X	X	X	X	X	
Selenium	X	X	X	X	X		X	X	X	X	X	X
Semi VOC												
Silica												
Silver												
Sodium	X	X	X	X	X		X	X	X	X	X	
Strontium										X	X	
Sulfate	X	X	X	X	X		X	X	X	X	X	X
Sulfide					X							
Thallium	X		X		X							
Thorium-230										X	X	
Tin					X							
Total Dissolved Solids	X	X	X	X	X		X	X	X	X	X	X
Total Organic Carbon												
TPH												
Uranium	X	X	X	X	X		X	X	X	X	X	X
Vanadium	X		X		X		X	X	X	X	X	
Zinc					X		X	X	X			
Total No. of Analytes	20	12	20	19	33	0	22	22	22	22	22	5

Note: All analyte samples are considered filtered unless stated otherwise.

All private well samples are to be unfiltered. The identity of the private wells are available in the "Sampling Frequencies for Locations" worksheet.

The total number of analytes does not include the field parameters.

All single numbers in the "Approximate No. Samples/yr" category are considered Ground Water Project samples.

* The left number represents Ground Water Project samples and the right number represents Surface or LTSM Project samples.

Site	Gunnison		Maybell		Mexican Hat		Monument Valley		
Analyte	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	
Approx. No. Samples/yr.	57	38 *	4	0, 0*	0	1	0, 22 *	33	6
Field Measurements	<i>GW</i>	<i>SURF</i>		<i>GW</i>	<i>SURF</i>	<i>GW</i>	<i>LTSM</i>		
Alkalinity	X	X	X		X	X	X	X	X
Dissolved Oxygen									
Redox Potential	X	X	X		X	X	X	X	X
pH	X	X	X		X	X	X	X	X
Specific Conductance	X	X	X		X	X	X	X	X
Turbidity	X	X	X		X	X	X	X	X
Temperature	X	X	X		X	X	X	X	X
Laboratory Measurements	<i>GW</i>	<i>SURF</i>		<i>GW</i>	<i>SURF</i>	<i>GW</i>	<i>LTSM</i>		
Aluminum						X	X		
Ammonium						X	X	X	X
Antimony									
Arsenic						X	X		
Barium									
Beryllium									
Bromide									
Cadmium	X	X	X			X	X	X	X
Calcium	X	X	X			X	X	X	X
Chloride	X	X	X			X	X	X	X
Chromium						X	X		
Cobalt	X	X	X						
Copper									
Cyanide									
Fluoride									
Gross Alpha	X	X	X			X	X	X	X
Gross Beta									
Iron	X	X	X			X	X		
Lead						X	X		
Lead-210	X	X	X					X	X
Magnesium	X	X	X			X	X	X	X
Manganese	X	X	X			X	X		
Molybdenum						X	X		

Site Analyte	Gunnison		Maybell		Mexican Hat		Monument Valley		
	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	
Laboratory Measurements (Continued)	GW	SURF	GW	SURF	GW	LTSM			
Nickel					X	X			
Nitrate	X	X	X		X	X	X	X	
PCBs									
Phosphate					X	X			
Polonium-210	X	X	X						
Potassium	X	X	X		X	X	X	X	
Radium-226	X	X	X		X	X	X	X	
Radium-228	X	X	X		X	X	X	X	
Selenium	X	X	X		X	X	X	X	
Semi VOC									
Silica									
Silver									
Sodium	X	X	X		X	X	X	X	
Strontium							X	X	
Sulfate	X	X	X		X	X			
Sulfide					X	X			
Thallium									
Thorium-230	X	X	X						
Tin									
Total Dissolved Solids	X	X	X		X	X	X	X	
Total Organic Carbon					X	X			
TPH									
Uranium	X	X	X		X	X	X	X	
Vanadium					X	X	X	X	
Zinc									
Total Analytes	20	20	20			27	27	17	17

Note: All analyte samples are considered filtered unless stated otherwise.

All private well samples are to be unfiltered. The identity of the private wells are available in the "Sampling Frequencies for Locations" worksheet.

The total number of analytes does not include the field parameters.

All single numbers in the "Approximate No. Samples/yr" category are considered Ground Water Project samples.

* The left number represents Ground Water Project samples and the right number represents Surface or LTSM Project samples.

Site Analyte	Naturita		Rifle		Riverton		Salt Lake City		
	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	
Laboratory Measurements (Continued)	GW	SURF							
Nickel					X	X			
Nitrate	X	X	X	X	X	X	X	X	
PCBs									
Phosphate									
Polonium-210	X	X	X	X	X	X			
Potassium	X	X	X		X	X	X	X	
Radium-226	X	X	X	X	X		X	X	
Radium-228	X	X	X	X	X		X	X	
Selenium	X	X	X	X	X		X	X	
Semi VOC									
Silica									
Silver									
Sodium	X	X	X	X	X	X	X	X	
Strontium									
Sulfate	X	X	X	X	X	X	X	X	
Sulfide									
Thallium									
Thorium-230				X	X	X	X		
Tin									
Total Dissolved Solids	X	X	X		X	X	X	X	
Total Organic Carbon									
TPH									
Uranium	X	X	X	X	X	X	X	X	
Vanadium	X	X	X	X	X	X			
Zinc									
Total Analytes	20	20	20	24	24	18	18	20	19

Note: All analyte samples are filtered unless stated otherwise.

All private well samples are to be unfiltered. The identity of the private wells are available in the "Sampling Frequencies for Locations" worksheet.

The total number of analytes does not include the field parameters.

All single numbers in the "Approximate No. Samples/yr" category are considered Ground Water Project samples.

* The left number represents Ground Water Project samples and the right number represents Surface or LTSM Project samples.

Site	Shiprock		Slick Rock (2)		Tuba City	
Analyte	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water
Approx. No. Samples/yr	25	13	7	4	40 , 12 *	2
Field Measurements					GW	SURF
Alkalinity	X	X	X	X	X	X
Dissolved Oxygen						
Redox Potential	X	X	X	X	X	X
pH	X	X	X	X	X	X
Specific Conductance	X	X	X	X	X	X
Turbidity	X	X	X	X	X	X
Temperature	X	X	X	X	X	X
Laboratory Measurements					GW	SURF
Aluminum						
Ammonium			X	X	X	X
Antimony	X	X				
Arsenic	X	X				
Barium			X	X		
Beryllium						
Bromide			X	X		
Cadmium	X	X	X	X	X	X
Calcium	X	X	X	X	X	X
Chloride	X	X	X	X	X	X
Chromium						
Cobalt						
Copper						
Cyanide						
Fluoride						
Gross Alpha	X	X	X	X	X	X
Gross Beta						
Iron	X	X	X	X	X	X
Lead						
Lead-210			X	X		
Magnesium	X	X	X	X	X	X
Manganese	X	X	X	X	X	X
Molybdenum			X	X	X	X

Analyte	Shiprock		Slick Rock		Tuba City		
	Ground Water	Surface Water	Ground Water	Surface Water	Ground Water	Surface Water	Surface Water
Laboratory Measurements (Continued)					GW	SURF	
Nickel							
Nitrate	X	X	X	X	X	X	X
PCBs							
Phosphate			X	X			
Polonium-210	X	X	X	X			
Potassium	X	X	X	X	X	X	X
Radium-226	X	X	X	X			
Radium-228	X	X	X	X			
Selenium	X	X	X	X	X	X	X
Semi VOC							
Silica			X	X			
Silver							
Sodium	X	X	X	X	X	X	X
Strontium	X	X	X	X	X	X	X
Sulfate	X	X	X	X	X	X	X
Sulfide							
Thallium							
Thorium-230			X	X			
Tin							
Total Dissolved Solids	X	X	X	X	X	X	X
Total Organic Carbon							
TPH							
Uranium	X	X	X	X	X	X	X
Vanadium			X	X			
Zinc							
Total Analytes	20	20	27	27	17	17	16

Note: All analyte samples are considered filtered unless stated otherwise.

All private well samples are to be unfiltered. The identity of the private wells are available in the "Sampling Frequencies for Locations" worksheet.

The total number of analytes does not include the field parameters.

All single numbers in the "Approximate No. Samples/yr" category are considered Ground Water Project samples.

* The left number represents Ground Water Project samples and the right number represents Surface or LTSM Project samples.