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Grand Junction Office
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WM-63

Madeline Roanhorse, Director
Navajo AML Reclamation
UMTRA Department
P.O. Box 1875
Window Rock, AZ 86515

Subject: Results of Drilling Activities and Resolution of Ground Water Issues at the Mexican Hat, Utah, UMTRA Project Site

Dear Ms. Roanhorse:

Per discussions with the Navajo Nation in October 2000, the U.S. Department of Energy (DOE) agreed to install one additional monitor well at the Mexican Hat, Utah, Uranium Mill Tailings Remedial Action (UMTRA) Project site to address Navajo Nation concerns. The purpose of the monitor well was to determine if site-related contamination was present in ground water in the confined uppermost aquifer in the lower unit of the Permian Halgaito Formation ("regional aquifer") downgradient from the Mexican Hat disposal cell. The enclosed report provides information on drilling and monitor well installation, ground water sampling and analytical results, recommendations for continued monitoring, and conclusions that support the Nuclear Regulatory Commission's position that the site is in compliance with Subpart B of 40 CFR 192.

Monitor Well 0899 was installed in November 2000 just east (downgradient) of the disposal cell and completed in the confined "regional aquifer" with the screened interval from 207 to 217 feet in depth. Water level in the completed well was 32 feet below the ground surface. Analytical results from sampling the new monitor well demonstrate that site-related contamination is not present in ground water in the confined uppermost aquifer in the lower unit of the Halgaito Formation in the vicinity of the Mexican Hat site. Concentrations of uranium, sulfate, and nitrate in Monitor Well 0899 are similar to ranges observed in background (upgradient) Monitor Well 0909 in the lower unit of the Halgaito Formation and the background seep 0256 in the upper part of the Honaker Trail Formation upgradient from the site. In general, background ground water quality is characterized by relatively high concentrations of sulfate as the dominant anion, balanced by nearly equal concentrations of sodium, calcium, and magnesium. Background concentrations of nitrate and uranium are less than 10 and 0.050 milligrams per liter (mg/L), respectively. Downward migration of contaminants related to uranium processing activities into the uppermost aquifer has not been observed and is not expected because of the confining properties of thin limestone beds near the top of the lower unit and the observed upward hydraulic gradient from the lower unit of the Halgaito Formation. Ground water quality from the background (0909) and downgradient (0899) monitor wells will continue to be monitored semiannually as a best-management practice through 2002.

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In summary, results of this investigation demonstrate that ground water in the uppermost aquifer downgradient from the Mexican Hat processing/disposal site has not been impacted by site-related uranium milling activities. The Mexican Hat UMTRA site is in compliance with General License for Custody and Long-term Care of the Disposal (10 CFR 40.27).

If you have any questions, please contact me at 970/248-7612.

Sincerely,

Donald R. Metzler
Technical/Project Manager

Enclosures

cc w/enclosures:
R. Russell, Navajo UMTRA
M. Layton, NRC

cc w/o enclosures:
A. Kleinrath, DOE-GJO
S. Marutzky, MACTEC-ERS
Project File GWHAT 3.1.1 (P. Taylor)

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UMTRA
Ground Water Project

Results of Drilling Activities and Resolution of Ground Water Issues at the Mexican Hat, Utah, UMTRA Project Site

February 2001

Prepared by the
U.S. Department of Energy
Grand Junction Office

Work Performed Under DOE Contract No. DE–AC13–96GJ87335 for the U.S. Department of Energy
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MAC–GWHAT 2.0–1

UMTRA Ground Water Project

Results of Drilling Activities and Resolution of Ground Water Issues at the Mexican Hat, Utah, UMTRA Project Site

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Grand Junction Office
Grand Junction, Colorado

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1.0 Introduction

Per discussion with the Navajo Nation in October 2000, the U.S. Department of Energy (DOE) agreed to install one additional monitor well at the Mexican Hat, Utah, Uranium Mill Tailings Remedial Action (UMTRA) Project site to address Navajo Nation concerns. The purpose of the monitor well was to determine if site-related contamination was present in ground water in the confined uppermost aquifer in the lower unit of the Permian Halgaito Formation ("regional aquifer") downgradient from the Mexican Hat disposal cell. Contaminated water is present in ephemeral, perched zones in the upper unit of the Halgaito Formation. To prevent impact to ground water quality in the lower unit, casing was cemented in the borehole to isolate these zones.

This report provides information on drilling and monitor well installation, ground water sampling and analytical results, recommendations for continued monitoring, and conclusions allowing closure of the outstanding Subpart B issues at the Mexican Hat site with DOE in compliance with the requirements in 40 CFR 192.

2.0 Drilling and Monitor Well Installation

The new monitor well (HAT01–0899) is located approximately 100 feet (ft) east of the fence surrounding the disposal cell, 75 ft south of the East Toe Drain, and just inside the DOE property boundary (Figure 1). Drilling commenced on October 31, 2000, and monitor well installation was completed on November 5, 2000. Details of the lithology of the borehole and construction of the monitor well are shown in Attachment A.

The borehole was drilled using a retractable bit ("Stradex") system with an 11-inch diameter temporary casing to 64 ft in depth. From 64 ft to total depth, dual wall reverse circulation with a down-hole hammer was used. Coring in the lower part of the borehole was not necessary because lithologic description of the chip samples through the "Cyclone" return was very good and there was no apparent sample lag.

The borehole was drilled to a depth of 224 ft. The lithologic sequence encountered in the borehole consisted of siltstone, sandstone, claystone, and limestone of the Permian Halgaito Formation (Figure 2). The borehole was designed to reach the McKim Limestone, which is the uppermost unit of the underlying Pennsylvanian Honaker Trail Formation. However, the ultimate objective was to install the monitor well in the lower part of the Halgaito Formation in the confined regional aquifer, which was encountered at approximately 190 ft; consequently, the drilling stopped short of the McKim Limestone.

The first water-bearing zone, producing less than 1 gallon per minute (gpm), was encountered at a depth of 70 ft. The driller lost circulation and had to inject water to get the drill cuttings out of the hole. The zone had dried up when a depth of 89 ft was attained. (Note: the water zone was not 19 ft thick, but difficult to determine when the driller injected water and had no returns from 75 through 90 ft). Another water zone was encountered from 95 to 97 ft in depth. This zone produced water at approximately 2.5 gpm. A third water zone was encountered from 112 to 124 ft producing water at less than 0.5 gpm. The driller circulated the hole for approximately 15 minutes and the total hole to this point was producing 2.5 to 3 gpm. The following day, water

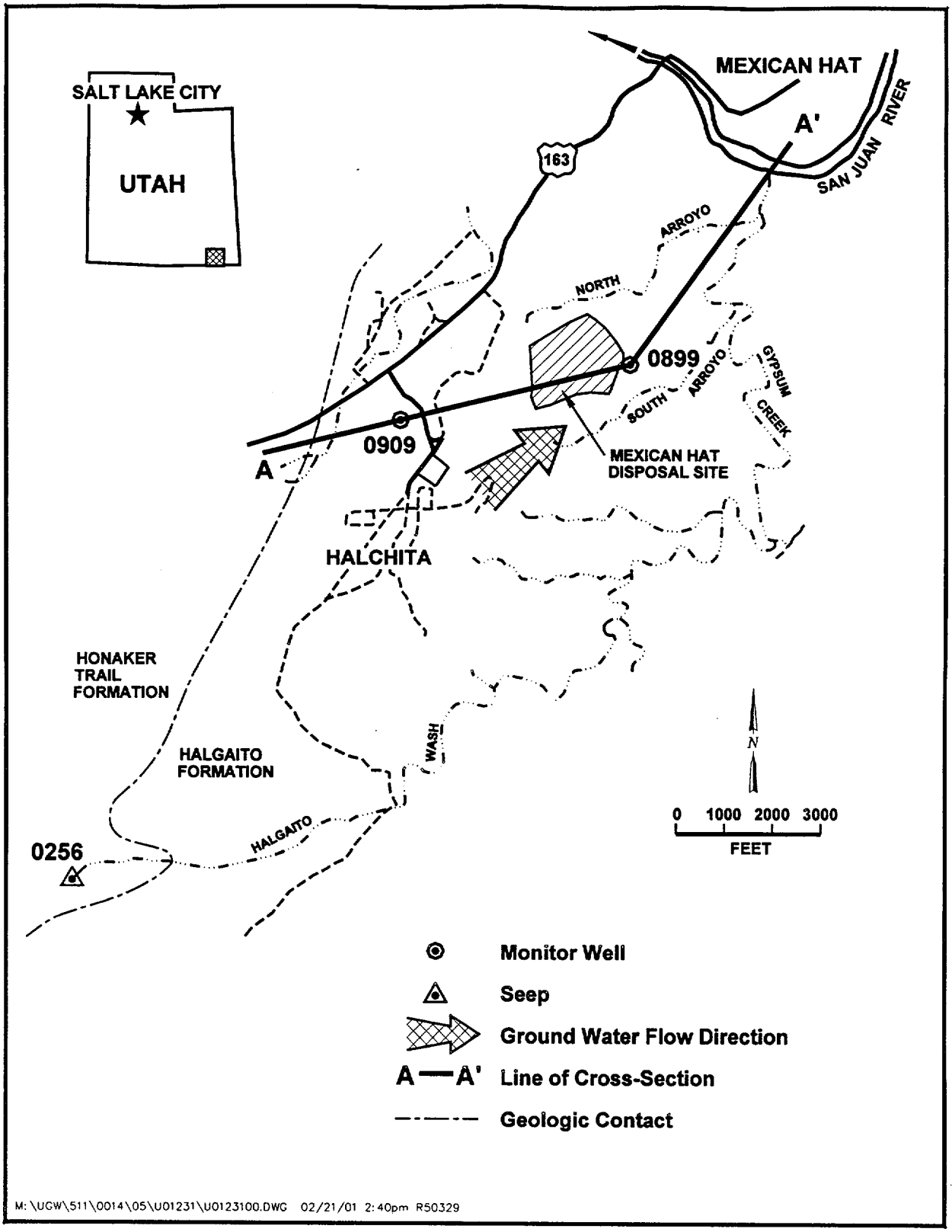

Figure 1. Location of Monitor Wells and Seeps at the Mexican Hat, Utah, Site

from the borehole was removed (approximately 100 gallons), and another water zone (with very little water) was encountered at a depth of 158 ft. The formation was dry from 159 to 164 ft. To prevent hydraulic communication between the upper and lower units of the Halgaito Formation, 6 ⅞-inch diameter steel casing was installed from the surface to 164 ft, cemented in, and allowed to set up over night. Drilling continued to 190 ft where water was encountered with a flow rate of approximately 5 gpm. At 195 ft in depth the flow of water increased to 22 gpm. The borehole set for 15 minutes and the water level in the casing rose to 46 ft below the ground surface. The hole was drilled deeper to a total depth of 224 ft.

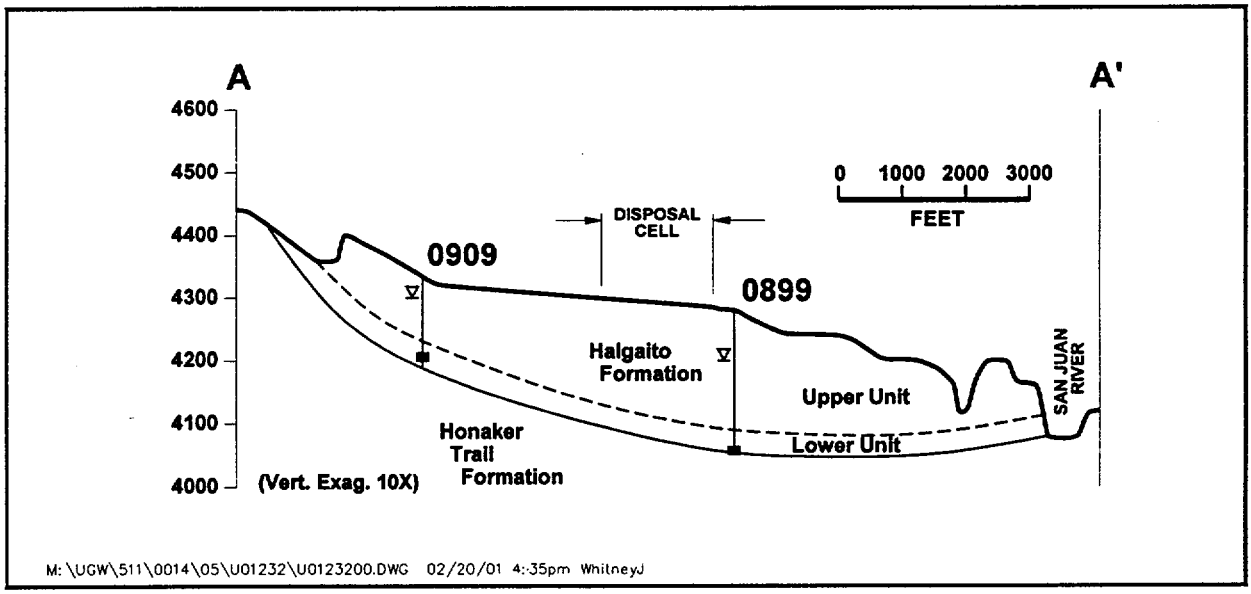

Figure 2. Cross Section of the Mexican Hat, Utah, Site

The monitor well was constructed using 2-inch-diameter Schedule 40 PVC casing with 10 ft of 0.020-inch PVC machine-slotted screen placed from 207 to 217 ft in depth in the uppermost aquifer. The screened interval was set somewhat higher in the hole to include some thin sandstone lenses. The sand pack was placed from 224 to 194 ft in depth with a 5 ft bentonite plug above this. The water level in the completed well was approximately 32 ft below the ground surface (Attachment B).

In summary, ephemeral water from several perched zones was encountered from approximately 70 to 158 ft in depth. These zones were isolated with casing cemented from the surface to 164 ft below the ground surface. Ground water from the confined uppermost aquifer in the lower unit of the Halgaito Formation ("regional aquifer") was encountered at a depth of approximately 190 ft. There is a substantial upward hydraulic gradient from the confined aquifer as indicated by the observed water level in the completed well at approximately 32 ft below the ground surface (Figure 2).

3.0 Ground Water Sampling and Analytical Results

Ground water from monitor well 0899 was collected on November 9, 2000, for preliminary analyses of the constituents of potential concern (nitrate, sulfate, and uranium). Results indicated concentrations of 0.03 milligrams per liter (mg/L) for nitrate, 4,230 mg/L for sulfate, and 0.021 mg/L for uranium. The monitor well was sampled again on November 13, 2000, during a scheduled sampling period. Analytical results from this sampling indicated concentrations of 0.03 mg/L for nitrate, 4,200 mg/L for sulfate, and 0.014 mg/L for uranium. Analytical results were validated in January 2001, and are attached to this report (Attachment C).

Analytical results from monitor well 0899 were compared with background ground water quality in the uppermost aquifer observed in upgradient monitor well 0909 and ground water discharging from seep 0256 in Halgaito Wash (Figure 1 and Attachments D and E). Monitor well 0909 is located approximately 3,000 ft west of the disposal cell and is completed in the lower unit of the Halgaito Formation (confined regional aquifer) at a depth of 157 ft with the screened interval from 130 to 150 ft. Depth to ground water was approximately 53 ft below top of casing in November 2000. Seep 0256 is located approximately 14,000 ft southwest of the disposal cell. This seep emerges from the upper part of the Honaker Trail Formation, but water from this formation provides recharge to the confined regional aquifer in the lower unit of the Halgaito Formation. These two locations have been sampled since 1985 and 1990, respectively.

In general, background ground water quality in the confined regional aquifer is characterized by relatively high concentrations of sulfate as the dominant anion, balanced by nearly equal concentrations of sodium, calcium, and magnesium. The pH is slightly alkaline and limited Eh measurements indicate the water is oxidizing. Total dissolved solids (TDS) range from 3,170 to 5,910 mg/L (DOE 1998). Background concentrations of uranium based on monitor well 0909 average 0.047 mg/L (which is above the UMTRA Project maximum concentration limit [MCL] for uranium of 0.044 mg/L). Naturally elevated concentrations of uranium are confirmed by ground water discharging from seep 0256 with concentrations that average 0.027 mg/L. These occurrences indicate a source of uranium in ground water in these units that is not related to uranium processing activities at the Mexican Hat site. Concentrations of sulfate are naturally elevated in ground water in this area and average 2,300 mg/L. There is no UMTRA Project MCL for sulfate. Concentrations of nitrate average less than 8 mg/L which are substantially below the MCL of 44 mg/L. Concentrations of these three constituents are summarized in Table 1 and analytical results are provided in Attachments C through E. Uranium and sulfate concentrations are plotted versus time in Figures 3 and 4, respectively; nitrate concentrations were not plotted since they are below the MCL.

In summary, ground water quality in the confined regional aquifer (lower unit of the Halgaito Formation—uppermost aquifer) analyzed from monitor well 0899 is similar to background ground water quality in the vicinity of the Mexican Hat site. This indicates that there is widespread ambient uranium in ground water not related to site-specific milling activities. Also, the elevated sulfate concentrations are representative of natural ground water quality in the area. The observed strong upward vertical hydraulic gradient from this aquifer precludes migration of any site-related contaminants into this confined aquifer.

Table 1. Summary of Constituents at the Mexican Hat, Utah, Site

Constituent	HAT01–0909	HAT01–0256	HAT01–0899
Location	*Background*	*Background*	*Downgradient*
Uranium—MCL	0.044		
Uranium—Average	0.047	0.027	----
Uranium—Range	0.039–0.064	0.010–0.046	0.014
Sulfate—MCL	None		
Sulfate—Average	2,216	2,384	----
Sulfate—Range	1,750–2,800	1,890–3,260	4,200
Nitrate—MCL	44		
Nitrate—Average	8	<1	----
Nitrate—Range	<1–12	<1–4	<1

All concentrations in mg/L.

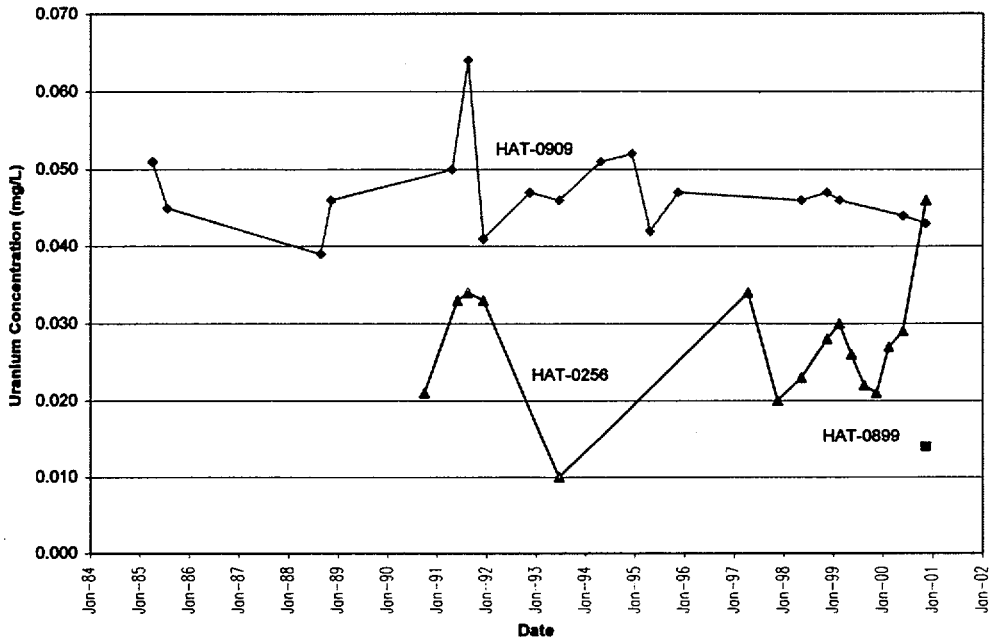

Figure 3. Uranium in Ground Water at the Mexican Hat, Utah, Site

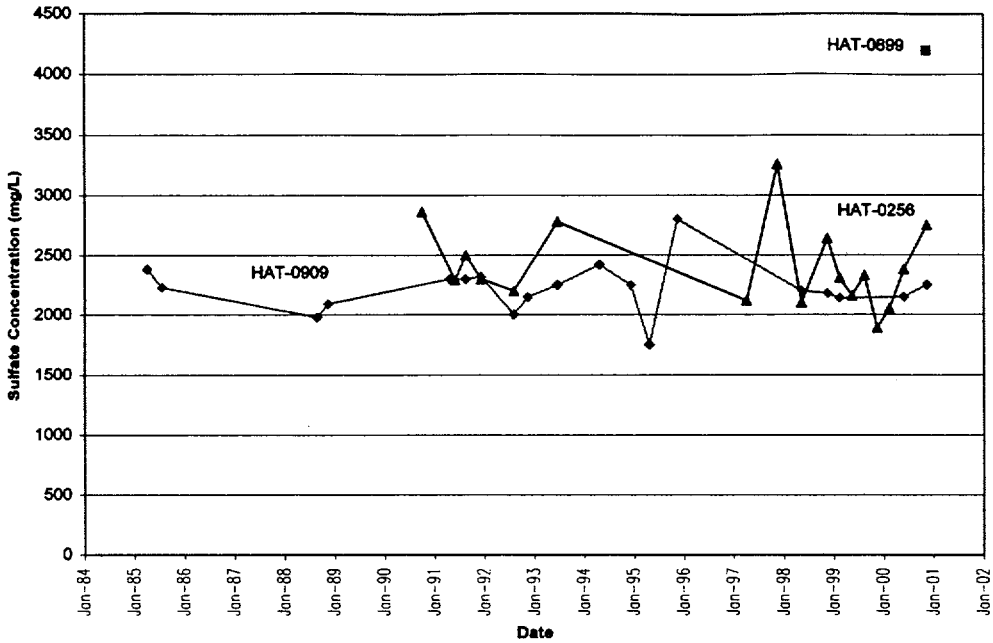

Figure 4. Sulfate in Ground Water at the Mexican Hat, Utah, Site

4.0 Monitoring Plan

Ground water quality from the background (0909) and downgradient (0899) monitor wells will continue to be monitored as a best management practice through 2002. The two monitor wells will be sampled and water levels measured during this period on a semiannual basis (February/August). Indicator parameters to be analyzed will be uranium, sulfate, and nitrate. Standard geochemical parameters will also be measured during the sampling events. At the end of the best management practice monitoring period in 2002 the need for continued monitoring will be determined. This monitoring duration is coincident with the Long-Term Surveillance and Maintenance (LTSM) seep monitoring program at the site.

5.0 Conclusions

Analytical results from this sampling demonstrate that site-related contamination is not present in ground water in the confined uppermost aquifer in the lower unit of the Halgaito Formation ("regional aquifer") in the vicinity of the Mexican Hat site. Concentrations of uranium, sulfate, and nitrate are similar to ranges observed in background monitor well 0909 in the uppermost aquifer and the background seep 0256 in the Honaker Trail Formation upgradient from the site. In general, background ground water quality is characterized by relatively high concentrations of sulfate as the dominant anion, balanced by nearly equal concentrations of sodium, calcium, and magnesium. Background concentrations of nitrate and uranium are less than 10 and 0.050 mg/L, respectively. Downward migration of contaminants related to uranium processing activities into the uppermost aquifer has not been observed and is not expected because of the confining properties of thin limestone beds near the top of the lower unit and the observed upward hydraulic gradient from the lower unit of the Halgaito Formation.

In summary, results of this investigation demonstrate that ground water in the uppermost aquifer downgradient from the Mexican Hat processing/disposal site has not been impacted by site-related uranium milling activities. This will allow closure of the outstanding Subpart B issues at the Mexican Hat site with DOE in compliance with the requirements in 40 CFR 192.

6.0 References

U.S. Department of Energy (DOE), 1993. *Remedial Action Plan* (RAP) *for the Codisposal and Stabilization of the Monument Valley and Mexican Hat Uranium Mill Tailings at Mexican Hat, Utah*, UMTRA-DOE/AL-050509.0000, February.

_____, 1996. *Final Programmatic Environmental Impact Statement for the Uranium Mill Tailings Remedial Action Ground Water Project*, DOE/EIS-0198, October.

_____, 1997. *Long-Term Surveillance Plan for the Mexican Hat Disposal Site, Mexican Hat, Utah*, DOE/AL/62350-207, June.

_____, 1998. *Final Site Observational Work Plan* (SOWP) *for the UMTRA project Site at Mexican Hat, Utah*, MAC-GWHAT 1.1, Rev. 1, July.

_____, 1999. *Draft Ground Water Compliance Action Plan* (GCAP) *for the Mexican Hat, Utah UMTRA Project Site*, U00455AA, March.

U.S. Nuclear Regulatory Commission (NRC), 1996. *Final Technical Evaluation Report* (fTER) *for the Proposed Remedial Action Plan for the Co-disposal of the Monument Valley and Mexican Hat Contaminated Materials at the Mexican Hat Tailings Site, Utah*, transmitted from NRC to DOE with letter of February 27, 1996.

End of current text

Attachment A

Monitoring Well Completion Log for HAT01–0899

MONITORING WELL COMPLETION LOG HAT01-0899

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)		DATE DRILLED	11/04/2000
LOCATION		EAST COORD. (FT)		SURFACE ELEV. (FT NGVD)	
SITE		HOLE DEPTH (FT)	224.00	TOP OF CASING (FT)	
WELL NUMBER		WELL DEPTH (FT)	217.90	MEAS. PT. ELEV. (FT)	
				SLOT SIZE (IN)	0.020
				BIT SIZE(S) (IN)	

	WELL INSTALLATION	INTERVAL (FT)		
SURFACE CASING:	6.875 in. Steel	-1.0	to	163.62
BLANK CASING:	2 in. PVC		to	207.43
WELL SCREEN:	2 in. Machine Slotted PVC	207.43	to	217.57
SUMP/END CAP:	2 in. PVC	217.57	to	217.9
SURFACE SEAL:				
GROUT:	Bentonite	-1.0	to	189.0
SEAL:	Bentonite Pellets	189.0	to	194.0
UPPER PACK:	30-70 Silica Sand	194.0	to	196.0
LOWER PACK:	10-20 Silica Sand	196.0	to	224.0

DRILLING METHOD REVERSE CIRCULATION
SAMPLING METHOD CYCLONE/GRAB
DATE DEVELOPED
WATER LEVEL (FT BTOC) 34.8 on 11/04/2000
LOGGED BY Spencer, L.
REMARKS BIT sizes used: 11" to 64 ft., 9" to 164 ft., 6 5/8" to 224 ft. Steel casing with 1 ft. of stickup above ground surface.

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			0-5 ft.				0-29 ft. SILTSTONE; Halgaito Formation, yellowish red (5 YR 5/6), some interbedded sandstone lenses, very fine grained, a few pebbles, subangular of grayish green limestone, hard and softer lenses, some well cemented fine grained sand, some crumbly dry, calcareous, somewhat weathered and soft, cuttings are powder-like (fine).
			5-10 ft.				
10					Steel		
			10-15 ft.				
			15-20 ft.				
20					Bentonite Grout		
			20-25 ft.				
			25-30 ft.				
30					PVC		29-34 ft. SILTSTONE; dark reddish brown (2.5 YR 3/4) harder drilling than 0-29 ft., calcareous, dry, some chert.
			30-35 ft.				
							34-35 ft. SILTSTONE/SHALE; red (2.5 YR 4/8) softer drilling, calcareous, dry, cuttings are up to 1/2 inch long. (coarse).
			35-40 ft.				35-58 ft. SILTSTONE; dark reddish brown (2.5 YR 3/4) harder drilling, chips up to 3/4 inch long.
40							
			40-45 ft.				
			45-50 ft.				

MONITORING WELL COMPLETION LOG HAT01-0899

PROJECT UMTRA GROUND WATER **WELL NUMBER**
SITE **DATES DRILLED** 11/04/2000

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			50-55 ft.				
			55-60 ft.				58-61 ft. SILTSTONE; red (2.5 YR 4/6) fairly soft drilling, some very tiny micaceous siltstone pebble chips up to 1/8 inch long.
60			60-65 ft.				61-65 ft. SILTSTONE; dark reddish brown (2.5 YR 3/4) a few greenish gray chips of limestone up to 1/4 inch long (small limestone lense) pale olive (5 Y 6/3).
			65-70 ft.				65-70 ft. SANDSTONE; reddish brown (5 YR 5/4) very fine grained. 70 ft. Water zone, less than 1 GPM. Note: Drilling with water to keep from sticking the drill tools
70			70-80 ft.				70-75 ft. SILTSTONE; yellowish red (5 YR 5/6). 75-90 ft. No sample.
80			No Sample				89 ft. Water has pretty much dried up.
90			90-95 ft.				90-97 ft. SILTSTONE; dark reddish brown (2.5 YR 3/4) with a few greenish gray chips, most fines are gone. 95 ft. Water 2.5 GPM (?) interbedded silt and sandstone lenses.
			95-100 ft.				97-110 ft. SILTSTONE; very little, if any, water
100			100-105 ft.				
			105-110 ft.				
110			110-115 ft.				110-125 ft. SILTSTONE; fairly soft, same color as above. 112 ft. SANDSTONE; A thin lense of very fine grained sandstone,

MONITORING WELL COMPLETION LOG HAT01-0899

PROJECT UMTRA GROUND WATER **WELL NUMBER**

SITE **DATES DRILLED** 11/04/2000

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							light gray (2.5 Y 7/2) noncalcareous, making a very small smount of water - less than 1/2 GPM.
			115-120 ft.				
120							
			120-125 ft.				124 ft. No water.
							125-141 ft. SILTSTONE; micaceous, dark reddish brown (2.5 YR 3/4) very little, if any water.
			125-130 ft.				
130							
			130-135 ft.				
			135-140 ft.				
140							
			140-145 ft.				141-143 ft. MUDSTONE; Drilled faster, softer zone.
							143-144 ft. SILTSTONE; Drilled harder. Note: Total hole making 2.5-3.0 GPM circulated - quit for 11-2-2000 at 144 ft. in depth. On 11-3-2000 unloaded hole ~ 100 gallons. 144-158 ft. SILTSTONE; with mudstone lenses, reddish brown (5 YR 5/3).
			145-150 ft.				
150							
			150-155 ft.				
			155-160 ft.				158 ft. Slightly making water.
							158-159 ft. CLAYSTONE; Soft, yellowish red (5 YR 5/6) water on top of it.
160							159-164 ft. SILTSTONE; Dry, calcaceous, mudstone highly calcareous, no mica in either.
			160-165 ft.				
							164-170 ft. SILTSTONE; dark red (2.5 YR 3/6) a few thin lenses of very fine grained sandstone, dry. Note: Blowing dust.
			165-170 ft.				
170							170-178 ft. SILTSTONE; with mudstone lenses, reddish brown (5 YR 4/4).
			170-175 ft.				
			175-180 ft.				

MONITORING WELL COMPLETION LOG HAT01-0899

PROJECT UMTRA GROUND WATER **WELL NUMBER**

SITE **DATES DRILLED** 11/04/2000

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
180			180-185 ft.				178-178.5 ft. LIMESTONE; olive gray (5 YR 5/2). 178.5-190 ft. SILTSTONE; reddish brown (5 YR 4/4) micaceous.
			185-190 ft.				
190			190-195 ft.		Bentonite 30-70 Silica Sand		190-190.5 ft. LIMESTONE; olive gray (5 Y 4/2). Note: Water zone at 190 ft, ~ 5 GPM+ 190.5-200 ft. SILTSTONE; dark reddish brown (5 YR 3/4) some lenses of very fine grained sandstone, a lense of limestone at 195 ft less than 0.5 ft. thick, water increasing to 20 GPM + (22 GPM using timer and bucket). Note: Let rig/hole set for 15 minutes, water level at 46 ft. below ground.
			195-200 ft.				197 ft. SANDSTONE; greenish gray lense, very fine grained, noncalcareous.
200			200-205 ft.		10-20 Silica Sand		200-209.5 ft. SILTSTONE; with interbedded layers of sandstone, dark reddish brown (2.5 Y 3/4).
			205-210 ft.				
210			210-215 ft.		Slotted PVC		209.5-211 ft. SANDSTONE; calcareous, olive gray (5 Y 5.2), very fine grained, well cemented. 211-212 ft. SILTSTONE 212-214 ft. SANDSTONE; olive gray, slightly calcareous.
			215-220 ft.		Sump/End Cap		214-224 ft. SILTSTONE; dark reddish brown (2.5 YR 3/4). Note: Hole making ~5-10 GPM. 216 ft. A thin lense of low calcareous sandstone, olive gray.
220							
230							Total Depth 224 ft.
240							

Attachment B

Static Ground Water Levels for Monitor Wells 0899 and 0909

STATIC GROUND WATER LEVELS (USEE700) FOR SITE HAT01, MEXICAN HAT
REPORT DATE: 1/25/2001 2:41 pm

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT NGVD)	MEASUREMENT DATE	MEASUREMENT TIME	DEPTH FROM TOP OF CASING (FT)	GROUND WATER ELEVATION (FT NGVD)	WATER LEVEL FLAG
0899		-	11/13/2000	16:59	33.45	-33.45	
0909	N	4335.30	04/10/1985	15:21	39.58	4295.72	
		4335.30	04/22/1985	18:20	37.94	4297.36	
		4335.30	06/03/1985	15:05	36.91	4298.39	
		4335.30	07/27/1985	15:00	36.07	4299.23	
		4335.30	08/28/1988	14:45	34.16	4301.14	
		4335.30	11/17/1988	12:00	34.10	4301.20	
		4335.30	04/25/1991	09:20	36.71	4298.59	
		4335.30	08/23/1991	07:25	36.48	4298.82	
		4335.30	12/13/1991	08:15	37.71	4297.59	
		4335.30	08/08/1992	14:21	37.40	4297.90	
		4335.30	11/19/1992	15:08	36.53	4298.77	
		4335.30	06/23/1993	09:40	24.54	4310.76	
		4335.30	04/26/1994	10:04	26.65	4308.65	N
		4335.30	12/11/1994	07:20	36.51	4298.79	
		4335.30	04/25/1995	13:06	29.29	4306.01	
		4335.30	11/18/1995	10:47	27.21	4308.09	
		4335.30	04/15/1997		32.02	4303.28	
		4335.30	05/15/1998		44.19	4291.11	
		4335.30	11/20/1998	08:40	45.14	4290.16	
		4335.30	02/17/1999	11:50	45.67	4289.63	
		4335.30	05/30/2000	14:58	51.02	4284.28	
		4335.30	11/14/2000	09:17	52.57	4282.73	

RECORDS: SELECTED FROM USEE700 WHERE site_code='HAT01' AND location_code in('0909','0899')

FLOW CODES:
N UNKNOWN

WATER LEVEL FLAGS:

Attachment C

Ground Water Quality Data by Location for Monitor Well 0899

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0899
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity as CaCO3	mg/L	11/13/2000	0001	127			#	-	-
	mg/L	11/13/2000	N001	115			#	-	-
Ammonium	mg/L	11/13/2000	0001	0.144			#	-	-
	mg/L	11/13/2000	0002	0.144			#	-	-
Calcium	mg/L	11/13/2000	0001	425.000			#	0.0481	-
	mg/L	11/13/2000	0002	428.000			#	0.0481	-
Chloride	mg/L	11/13/2000	0001	460.000			#	0.12	-
	mg/L	11/13/2000	0002	472.000			#	0.12	-
Gross Alpha	pCi/L	11/13/2000	0001	56.51	U		#	56.51	± 30.0
	pCi/L	11/13/2000	0002	56.6	U		#	56.62	± 32.1
Gross Beta	pCi/L	11/13/2000	0001	58.58	U		#	58.58	± 33.6
	pCi/L	11/13/2000	0002	58.65	U		#	58.65	± 34.7
Magnesium	mg/L	11/13/2000	0001	151.000			#	0.0352	-
	mg/L	11/13/2000	0002	151.000			#	0.0352	-
Manganese	mg/L	11/13/2000	0001	0.0325			#	0.002	-
	mg/L	11/13/2000	0002	0.0306			#	0.002	-
Molybdenum	mg/L	11/13/2000	0001	0.038			#	0.0003	-
	mg/L	11/13/2000	0002	0.0382			#	0.0003	-
Nitrate	mg/L	11/13/2000	0001	0.0314	U		#	0.0314	-
	mg/L	11/13/2000	0002	0.0577	B		#	0.0314	-
ORP of Zobell Solution	mV	11/13/2000	N001	235			#	-	-
Oxidation Reduction Potenti	mV	11/13/2000	N001	80			#	-	-
pH	s.u.	11/13/2000	N001	7.58			#	-	-
Potassium	mg/L	11/13/2000	0001	10.200			#	0.0327	-
	mg/L	11/13/2000	0002	10.300			#	0.0327	-
Selenium	mg/L	11/13/2000	0001	0.00019	B		#	0.0001	-
	mg/L	11/13/2000	0002	0.00014	B		#	0.0001	-
Sodium	mg/L	11/13/2000	0001	1610.000			#	3.02	-
	mg/L	11/13/2000	0002	1600.000			#	3.02	-
Specific Conductance	umhos/cm	11/13/2000	N001	8070			#	-	-
Sulfate	mg/L	11/13/2000	0001	4200.000			#	0.2945	-
	mg/L	11/13/2000	0002	4260.000			#	0.2945	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0899
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Temperature	C	11/13/2000	N001	18			#	-	-
Temperature of Zobell Soluti	C	11/13/2000	N001	8.1			#	-	-
Total Dissolved Solids	mg/L	11/13/2000	0001	7300			#	10	-
	mg/L	11/13/2000	0002	7220			#	10	-
Turbidity	NTU	11/13/2000	N001	9.94			#	-	-
Uranium	mg/L	11/13/2000	0001	0.0139	E	J	#	0.0001	-
	mg/L	11/13/2000	0002	0.0138	E	J	#	0.0001	-
Vanadium	mg/L	11/13/2000	0001	0.0013	U		#	0.0013	-
	mg/L	11/13/2000	0002	0.0018	B		#	0.0013	-

RECORDS: SELECTED FROM USEE100 WHERE site_code='HAT01' AND location_code in('0909','0899') AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE '*X*') OR IsNull(data_validation_qualifiers))

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- J Estimated value.
- G Possible grout contamination, pH > 9.
- R Unusable result.
- U Parameter analyzed for but was not detected.
- F Low flow sampling method used.
- L Less than 3 bore volumes purged prior to sampling.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

Attachment D

Ground Water Quality Data by Location for Monitor Well 0909

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity as CaCO3	mg/L	04/10/1985	N001	140.00			#	-	-
	mg/L	07/27/1985	N001	133.00			#	-	-
	mg/L	08/30/1988	N001	152		F	#	-	-
	mg/L	11/18/1988	N001	152			#	-	-
	mg/L	04/25/1991	N001	159			#	-	-
	mg/L	08/22/1991	N001	152		F	#	-	-
	mg/L	12/13/1991	N001	150			#	-	-
	mg/L	08/08/1992	N001	143			#	-	-
	mg/L	11/19/1992	N001	159			#	-	-
	mg/L	06/23/1993	N001	148			#	-	-
	mg/L	04/26/1994	N001	140			#	-	-
	mg/L	12/11/1994	N001	149			#	10	-
	mg/L	04/25/1995	N001	156		F	#	10	-
	mg/L	11/18/1995	N001	150			#	10	-
	mg/L	05/15/1998	N001	148		GL	#	-	-
	mg/L	11/20/1998	0001	131			#	-	-
	mg/L	11/20/1998	N001	138			#	-	-
	mg/L	02/17/1999	0001	147			#	-	-
	mg/L	02/17/1999	N001	141			#	-	-
	mg/L	05/30/2000	0001	130			#	-	-
	mg/L	05/30/2000	N001	197			#	-	-
	mg/L	11/14/2000	0001	97			#	-	-
	mg/L	11/14/2000	N001	124			#	-	-
Aluminum	mg/L	04/10/1985	0001	0.10	U		#	0.1	-
	mg/L	07/27/1985	0001	0.30			#	0.1	-
	mg/L	08/30/1988	0001	0.2		F	#	0.1	-
	mg/L	11/18/1988	0001	0.1	U		#	0.1	-
	mg/L	04/25/1991	0001	0.05	U		#	0.05	-
	mg/L	08/22/1991	0001	0.055		F	#	0.0067	-
	mg/L	12/13/1991	0001	0.05	U		#	0.05	-
	mg/L	08/08/1992	0001	0.2	U		#	0.2	-
	mg/L	05/15/1998	0001	0.0070	U	GL	#	0.007	-
	mg/L	11/20/1998	0001	0.0100	U		#	0.01	-
	mg/L	11/20/1998	0002	0.0100	U		#	0.01	-
	mg/L	02/17/1999	0001	0.0100	U		#	0.01	-
	mg/L	02/17/1999	0002	0.0100	U		#	0.01	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Ammonium	mg/L	04/10/1985	0001	0.10	U		#	0.1	-
	mg/L	07/27/1985	0001	0.10	U		#	0.1	-
	mg/L	08/30/1988	0001	0.1	U	F	#	0.1	-
	mg/L	11/18/1988	0001	0.1			#	0.1	-
	mg/L	04/25/1991	0001	0.4			#	0.1	-
	mg/L	06/23/1993	N001	0.1	U		#	0.1	-
	mg/L	06/23/1993	N002	0.1	U		#	0.1	-
	mg/L	04/26/1994	N001	0.10	U		#	0.1	-
	mg/L	12/11/1994	N001	0.10	U		#	0.1	-
	mg/L	04/26/1995	N001	0.10	U	F	#	0.1	-
	mg/L	11/18/1995	N001	0.10	U		#	0.1	-
	mg/L	11/18/1995	N002	0.10	U		#	0.1	-
	mg/L	05/15/1998	0001	0.0044	BN	JGL	#	-	-
	mg/L	11/20/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/20/1998	0002	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0001	0.0389	B		#	-	-
	mg/L	02/17/1999	0002	0.0389	B		#	-	-
	mg/L	05/30/2000	0001	0.0047	U		#	0.0047	-
	mg/L	11/14/2000	0001	0.0047	U		#	0.0047	-
Antimony	mg/L	04/10/1985	0001	0.003	U		#	0.003	-
	mg/L	07/27/1985	0001	0.006			#	0.003	-
	mg/L	04/25/1991	0001	0.003	U		#	0.003	-
	mg/L	08/22/1991	0001	0.020	U	F	#	0.02	-
	mg/L	12/13/1991	0001	0.003	U		#	0.003	-
	mg/L	08/08/1992	0001	0.06	UN		#	0.06	-
	mg/L	05/15/1998	0001	0.0010	U	GL	#	0.001	-
	mg/L	11/20/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/20/1998	0002	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0001	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0002	0.0010	U		#	0.001	-
Arsenic	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.01	U		#	0.01	-
	mg/L	08/30/1988	0001	0.02		F	#	0.01	-
	mg/L	11/18/1988	0001	0.01	U		#	0.01	-
	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0020	U	F	#	0.002	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Arsenic	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.01	U		#	0.01	-
	mg/L	11/19/1992	0001	0.0050	U		#	0.005	-
	mg/L	11/19/1992	N001	0.005	U		#	0.005	-
	mg/L	05/15/1998	0001	0.0010	U	GL	#	0.001	-
	mg/L	11/20/1998	0001	0.0011	B		#	-	-
	mg/L	11/20/1998	0002	0.0011	B		#	-	-
	mg/L	02/17/1999	0001	0.00067	B		#	-	-
	mg/L	02/17/1999	0002	0.00064	B		#	-	-
Barium	mg/L	04/10/1985	0001	0.10	U		#	0.1	-
	mg/L	07/27/1985	0001	0.10			#	0.1	-
	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0022	U	F	#	0.0022	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.2	U		#	0.2	-
	mg/L	11/19/1992	0001	0.100	U		#	0.1	-
	mg/L	11/19/1992	N001	0.100	U		#	0.1	-
Beryllium	mg/L	04/25/1991	0001	0.005	U		#	0.005	-
Boron	mg/L	04/10/1985	0001	1.00			#	0.1	-
	mg/L	07/27/1985	0001	0.10			#	0.1	-
	mg/L	04/25/1991	0001	0.59			#	0.05	-
	mg/L	12/11/1994	0001	0.54			#	0.1	-
	mg/L	04/26/1995	0001	0.50		F	#	0.1	-
	mg/L	11/18/1995	0001	0.62			#	0.1	-
	mg/L	11/18/1995	0002	0.62			#	0.1	-
Bromide	mg/L	04/10/1985	0001	2.00	U		#	2	-
	mg/L	04/25/1991	0001	0.6			#	0.1	-
Cadmium	mg/L	04/10/1985	0001	0.001	U		#	0.001	-
	mg/L	07/27/1985	0001	0.001	U		#	0.001	-
	mg/L	04/25/1991	0001	0.001	U		#	0.001	-
	mg/L	08/22/1991	0001	0.0048		F	#	0.0046	-
	mg/L	12/13/1991	0001	0.001	U		#	0.001	-
	mg/L	08/08/1992	0001	0.005	UN		#	0.005	-
	mg/L	11/19/1992	0001	0.0010	UW		#	0.001	-
	mg/L	11/19/1992	N001	0.001	UN		#	0.001	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Cadmium	mg/L	05/15/1998	0001	0.0010	U	GL	#	0.001	-
	mg/L	11/20/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/20/1998	0002	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0001	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0002	0.0010	U		#	0.001	-
Calcium	mg/L	04/10/1985	0001	445.00			#	0.01	-
	mg/L	07/27/1985	0001	320.00			#	0.01	-
	mg/L	08/30/1988	0001	331		F	#	0.01	-
	mg/L	11/18/1988	0001	330			#	0.01	-
	mg/L	04/25/1991	0001	353			#	0.5	-
	mg/L	08/22/1991	0001	350		F	#	0.009	-
	mg/L	12/13/1991	0001	375			#	0.5	-
	mg/L	08/08/1992	0001	350			#	5	-
	mg/L	06/23/1993	0001	378			#	0.5	-
	mg/L	06/23/1993	N001	352			#	0.5	-
	mg/L	06/23/1993	N002	363			#	0.5	-
	mg/L	04/26/1994	0001	417			#	1	-
	mg/L	04/26/1994	N001	378			#	1	-
	mg/L	12/11/1994	0001	372			#	1	-
	mg/L	04/26/1995	0001	266		F	#	1	-
	mg/L	11/18/1995	0001	340	E	J	#	0.5	-
	mg/L	11/18/1995	0002	340			#	0.5	-
	mg/L	05/15/1998	0001	360.000		GL	#	-	-
	mg/L	11/20/1998	0001	384.000			#	-	-
	mg/L	11/20/1998	0002	347.000			#	-	-
	mg/L	02/17/1999	0001	383.000			#	-	-
	mg/L	02/17/1999	0002	380.000			#	-	-
	mg/L	05/30/2000	0001	365.000			#	0.031	-
	mg/L	11/14/2000	0001	350.000			#	0.0481	-
Chloride	mg/L	04/10/1985	0001	110.00			#	-	-
	mg/L	07/27/1985	0001	99.00			#	1	-
	mg/L	08/30/1988	0001	89		F	#	1	-
	mg/L	11/18/1988	0001	91			#	1	-
	mg/L	04/25/1991	0001	98			#	0.5	-
	mg/L	08/22/1991	0001	93		F	#	0.5	-
	mg/L	12/13/1991	0001	104			#	1	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Chloride	mg/L	08/08/1992	0001	93			#	0.016	-
	mg/L	06/23/1993	N001	103			#	0.5	-
	mg/L	06/23/1993	N002	101			#	0.5	-
	mg/L	04/26/1994	0001	94.5			#	0.5	-
	mg/L	04/26/1994	N001	96.1			#	0.5	-
	mg/L	12/11/1994	0001	104			#	0.5	-
	mg/L	04/26/1995	0001	85.8		F	#	0.5	-
	mg/L	11/18/1995	0001	100			#	0.5	-
	mg/L	11/18/1995	0002	96			#	0.5	-
	mg/L	05/15/1998	0001	92.300		GL	#	-	-
	mg/L	11/20/1998	0001	90.000			#	-	-
	mg/L	11/20/1998	0002	89.900			#	-	-
	mg/L	02/17/1999	0001	90.200			#	-	-
	mg/L	02/17/1999	0002	91.300			#	-	-
	mg/L	05/30/2000	0001	101.000			#	0.24	-
	mg/L	11/14/2000	0001	97.600			#	0.12	-
Chromium	mg/L	04/10/1985	0001	0.03	I		#	0.01	-
	mg/L	07/27/1985	0001	0.06			#	0.01	-
	mg/L	08/30/1988	0001	0.09		F	#	0.01	-
	mg/L	11/18/1988	0001	0.01	U		#	0.01	-
	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0042		F	#	0.0032	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.01	U		#	0.01	-
	mg/L	11/19/1992	0001	0.010	U		#	0.01	-
	mg/L	11/19/1992	N001	0.010	U		#	0.01	-
	mg/L	05/15/1998	0001	0.0020	U	GL	#	0.002	-
	mg/L	11/20/1998	0001	0.0020	U		#	0.002	-
	mg/L	11/20/1998	0002	0.0020	U		#	0.002	-
	mg/L	02/17/1999	0001	0.0028	B		#	-	-
	mg/L	02/17/1999	0002	0.0020	U		#	0.002	-
Cobalt	mg/L	04/10/1985	0001	0.05	U		#	0.05	-
	mg/L	07/27/1985	0001	0.05	U		#	0.05	-
	mg/L	04/25/1991	0001	0.03	U		#	0.03	-
	mg/L	12/13/1991	0001	0.03	U		#	0.03	-
	mg/L	08/08/1992	0001	0.05	U		#	0.05	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:15 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Cobalt	mg/L	12/11/1994	0001	0.05	U		#	0.05	-
	mg/L	04/26/1995	0001	0.05	U	F	#	0.05	-
	mg/L	11/18/1995	0001	0.05	U		#	0.05	-
	mg/L	11/18/1995	0002	0.05	U		#	0.05	-
Copper	mg/L	04/10/1985	0001	0.02	U		#	0.02	-
	mg/L	07/27/1985	0001	0.04			#	0.02	-
	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0066		F	#	0.0005	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.02	U		#	0.02	-
	mg/L	12/11/1994	0001	0.02	U		#	0.02	-
	mg/L	04/26/1995	0001	0.02	U	F	#	0.02	-
	mg/L	11/18/1995	0001	0.02	U		#	0.02	-
	mg/L	11/18/1995	0002	0.02	U		#	0.02	-
Dissolved Oxygen	mg/L	08/08/1992	0001	3.6			#	-	-
	mg/L	11/19/1992	0001	4.9			#	-	-
	mg/L	06/23/1993	0001	3.1			#	-	-
	mg/L	06/23/1993	N001	3.1			#	-	-
	mg/L	04/26/1994	N001	3.1			#	-	-
	mg/L	12/11/1994	N001	3.3			#	0.6	-
	mg/L	11/18/1995	N001	3.3			#	0.6	-
Fluoride	mg/L	04/10/1985	0001	1.40			#	0.1	-
	mg/L	07/27/1985	0001	1.40			#	0.1	-
	mg/L	08/30/1988	0001	1.3		F	#	0.1	-
	mg/L	11/18/1988	0001	1.5			#	0.1	-
	mg/L	04/25/1991	0001	1.4			#	0.1	-
	mg/L	08/22/1991	0001	1.5		F	#	0.1	-
Gross Alpha	pCi/L	04/10/1985	0001	60.00			#	0.2	± 20.0
	pCi/L	07/27/1985	0001	41.00			#	0.2	± 22.0
	pCi/L	08/30/1988	0001	29		F	#	0.2	± 17.0
	pCi/L	11/18/1988	0001	23			#	0.2	± 18.0
	pCi/L	04/25/1991	0001	32.8			#	1	± 27.2
	pCi/L	08/22/1991	0001	6		F	#	1	± 26.0
	pCi/L	12/13/1991	0001	5.5			#	1	± 25.5
	pCi/L	08/08/1992	0001	40	I		#	35	± 28.0

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Gross Alpha	pCi/L	11/19/1992	0001	33.8			#	30	± 23.0
	pCi/L	11/19/1992	N001	23.0			#	32.9	± 23.2
	pCi/L	06/23/1993	0001	0			#	1	± 67.0
	pCi/L	06/23/1993	N001	33			#	1	± 51.0
	pCi/L	06/23/1993	N002	0			#	1	± 50.0
	pCi/L	04/26/1994	0001	68.2			#	26.3	± 26.3
	pCi/L	04/26/1994	N001	29.7			#	27	± 21.4
	pCi/L	12/11/1994	0001	40.4	N*	J	#	9.1	± 8.90
	pCi/L	04/26/1995	0001	34.5		F	#	8.3	± 7.60
	pCi/L	05/15/1998	0001	27.59		JGL	#	26.7	± 18.1
	pCi/L	11/20/1998	0001	30.02	U		#	30.02	± 19.2
	pCi/L	11/20/1998	0002	35.15			#	29.57	± 20.2
	pCi/L	02/17/1999	0001	59.58		J	#	27.09	± 21.6
	pCi/L	02/17/1999	0002	38.01		J	#	26.2	± 18.7
	pCi/L	05/30/2000	0001	30.52	U	J	#	30.52	± 19.8
	pCi/L	11/14/2000	0001	27.5	U		#	27.5	± 17.6
Gross Beta	pCi/L	04/10/1985	0001	120.00			#	1	± 10.0
	pCi/L	07/27/1985	0001	20.00			#	1	± 18.0
	pCi/L	08/30/1988	0001	25		F	#	1	± 10.0
	pCi/L	11/18/1988	0001	7.4			#	1	± 13.0
	pCi/L	04/25/1991	0001	25.3			#	0.5	± 15.9
	pCi/L	08/22/1991	0001	35		F	#	0.5	± 18.0
	pCi/L	12/13/1991	0001	12.4			#	0.5	± 17.1
	pCi/L	08/08/1992	0001	17	I		#	30	± 18.0
	pCi/L	11/19/1992	0001	39.2			#	25.9	± 17.5
	pCi/L	11/19/1992	N001	39.4			#	28	± 18.7
	pCi/L	06/23/1993	0001	12			#	0.5	± 43.0
	pCi/L	06/23/1993	N001	0			#	0.5	± 33.0
	pCi/L	06/23/1993	N002	2			#	0.5	± 33.0
	pCi/L	04/26/1994	0001	24.7			#	32.8	± 20.9
	pCi/L	04/26/1994	N001	48.2			#	33.6	± 22.6
	pCi/L	12/11/1994	0001	4.0			#	17.2	± 9.20
	pCi/L	04/26/1995	0001	18.3		F	#	12.5	± 7.80
	pCi/L	05/15/1998	0001	30.09	U	GL	#	30.09	± 17.6
	pCi/L	11/20/1998	0001	29.75			#	25.97	± 16.3
	pCi/L	11/20/1998	0002	26.00	U		#	26	± 15.7

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Gross Beta	pCi/L	02/17/1999	0001	37.63			#	27.52	± 17.5
	pCi/L	02/17/1999	0002	39.61			#	27.27	± 17.5
	pCi/L	05/30/2000	0001	31.36	U		#	31.36	± 18.2
	pCi/L	11/14/2000	0001	29.35	U		#	29.35	± 18.2
Iron	mg/L	04/10/1985	0001	0.13			#	0.03	-
	mg/L	07/27/1985	0001	0.03	U		#	0.03	-
	mg/L	08/30/1988	0001	0.06		F	#	0.03	-
	mg/L	11/18/1988	0001	0.03	U		#	0.03	-
	mg/L	04/25/1991	0001	0.03	U		#	0.03	-
	mg/L	08/22/1991	0001	0.044		F	#	0.0053	-
	mg/L	12/13/1991	0001	0.03	U		#	0.03	-
	mg/L	08/08/1992	0001	0.1	U		#	0.1	-
	mg/L	06/23/1993	0001	0.03	U		#	0.03	-
	mg/L	06/23/1993	N001	0.10			#	0.03	-
	mg/L	06/23/1993	N002	0.14			#	0.03	-
	mg/L	04/26/1994	0001	0.03	U		#	0.03	-
	mg/L	04/26/1994	N001	0.03	U		#	0.03	-
	mg/L	12/11/1994	0001	0.03	U		#	0.03	-
	mg/L	04/26/1995	0001	0.03	U	F	#	0.03	-
	mg/L	11/18/1995	0001	0.03	U		#	0.03	-
	mg/L	11/18/1995	0002	0.03	U		#	0.03	-
	mg/L	05/15/1998	0001	0.0136	B	UGL	#	-	-
	mg/L	11/20/1998	0001	0.0030	U		#	0.003	-
	mg/L	11/20/1998	0002	0.0030	U		#	0.003	-
	mg/L	02/17/1999	0001	0.0030	U		#	0.003	-
	mg/L	02/17/1999	0002	0.0030	U		#	0.003	-
Lead	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.01	U		#	0.01	-
	mg/L	04/25/1991	0001	0.005	U		#	0.005	-
	mg/L	08/22/1991	0001	0.0017	U	F	#	0.0017	-
	mg/L	12/13/1991	0001	0.005	U		#	0.005	-
	mg/L	08/08/1992	0001	0.003	U		#	0.003	-
	mg/L	11/19/1992	0001	0.0030	U		#	0.003	-
	mg/L	11/19/1992	N001	0.003	U		#	0.003	-
	mg/L	05/15/1998	0001	0.0010	U	GL	#	0.001	-
	mg/L	11/20/1998	0001	0.0010	U		#	0.001	-

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Lead	mg/L	11/20/1998	0002	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0001	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0002	0.0010	U		#	0.001	-
Lead-210	pCi/L	04/10/1985	0001	0.00			#	1.5	± 1.50
	pCi/L	07/27/1985	0001	0.20			#	1.5	± 0.80
Magnesium	mg/L	04/10/1985	0001	165.00			#	-	-
	mg/L	07/27/1985	0001	190.00			#	0.001	-
	mg/L	08/30/1988	0001	137		F	#	0.001	-
	mg/L	11/18/1988	0001	141			#	0.001	-
	mg/L	04/25/1991	0001	154			#	0.5	-
	mg/L	08/22/1991	0001	150		F	#	0.014	-
	mg/L	12/13/1991	0001	162			#	0.5	-
	mg/L	08/08/1992	0001	150			#	5	-
	mg/L	06/23/1993	0001	155			#	0.1	-
	mg/L	06/23/1993	N001	141			#	0.1	-
	mg/L	06/23/1993	N002	142			#	0.1	-
	mg/L	04/26/1994	0001	179	E	J	#	0.5	-
	mg/L	04/26/1994	N001	164			#	0.5	-
	mg/L	12/11/1994	0001	161			#	0.5	-
	mg/L	04/26/1995	0001	95.6	E	FJ	#	0.5	-
	mg/L	11/18/1995	0001	160			#	0.1	-
	mg/L	11/18/1995	0002	160			#	0.1	-
	mg/L	05/15/1998	0001	159.000		GL	#	-	-
	mg/L	11/20/1998	0001	174.000			#	-	-
	mg/L	11/20/1998	0002	176.000			#	-	-
	mg/L	02/17/1999	0001	173.000			#	-	-
	mg/L	02/17/1999	0002	170.000			#	-	-
	mg/L	05/30/2000	0001	166.000			#	0.0103	-
	mg/L	11/14/2000	0001	154.000			#	0.0352	-
Manganese	mg/L	04/10/1985	0001	0.02			#	0.01	-
	mg/L	07/27/1985	0001	0.01	U		#	0.01	-
	mg/L	08/30/1988	0001	0.01		F	#	0.01	-
	mg/L	11/18/1988	0001	0.01	U		#	0.01	-
	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.015		F	#	0.0019	-

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Manganese	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.01	U		#	0.01	-
	mg/L	11/19/1992	0001	0.010	U		#	0.01	-
	mg/L	11/19/1992	N001	0.010	U		#	0.01	-
	mg/L	06/23/1993	0001	0.01	U		#	0.01	-
	mg/L	06/23/1993	N001	0.01	U		#	0.01	-
	mg/L	06/23/1993	N002	0.01	U		#	0.01	-
	mg/L	04/26/1994	0001	0.01	U		#	0.01	-
	mg/L	04/26/1994	N001	0.01	U		#	0.01	-
	mg/L	12/11/1994	0001	0.01	U		#	0.01	-
	mg/L	04/26/1995	0001	0.01	U	F	#	0.01	-
	mg/L	11/18/1995	0001	0.01	U		#	0.01	-
	mg/L	11/18/1995	0002	0.01	U		#	0.01	-
	mg/L	05/15/1998	0001	0.0010	U	GL	#	0.001	-
	mg/L	11/20/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/20/1998	0002	0.0011	B		#	-	-
	mg/L	02/17/1999	0001	0.0010	U		#	0.001	-
	mg/L	02/17/1999	0002	0.0010	U		#	0.001	-
	mg/L	05/30/2000	0001	0.0004	U		#	0.0004	-
	mg/L	11/14/2000	0001	0.002	U		#	0.002	-
Mercury	mg/L	04/10/1985	0001	0.0002	U		#	0.0002	-
	mg/L	07/27/1985	0001	0.0002	U		#	0.0002	-
	mg/L	08/22/1991	0001	0.00010	U	F	#	0.0001	-
	mg/L	12/13/1991	0001	0.0002	U		#	0.0002	-
	mg/L	08/08/1992	0001	0.0002	U		#	0.0002	-
Molybdenum	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.20	*		#	0.01	-
	mg/L	08/30/1988	0001	0.05		F	#	0.01	-
	mg/L	11/18/1988	0001	0.02			#	0.01	-
	mg/L	04/25/1991	0001	0.02			#	0.01	-
	mg/L	08/22/1991	0001	0.024		F	#	0.0048	-
	mg/L	12/13/1991	0001	0.02			#	0.01	-
	mg/L	08/08/1992	0001	0.2	U		#	0.2	-
	mg/L	11/19/1992	0001	0.021			#	0.01	-
	mg/L	11/19/1992	N001	0.021			#	0.01	-
	mg/L	06/23/1993	0001	0.02			#	0.01	-

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Molybdenum	mg/L	06/23/1993	N001	0.02			#	0.01	-
	mg/L	06/23/1993	N002	0.02			#	0.01	-
	mg/L	04/26/1994	0001	0.02	*		#	0.01	-
	mg/L	04/26/1994	N001	0.01	U		#	0.01	-
	mg/L	12/11/1994	0001	0.02			#	0.01	-
	mg/L	04/26/1995	0001	0.01		F	#	0.01	-
	mg/L	11/18/1995	0001	0.02			#	0.01	-
	mg/L	11/18/1995	0002	0.02			#	0.01	-
	mg/L	05/15/1998	0001	0.0225		GL	#	-	-
	mg/L	11/20/1998	0001	0.0219			#	-	-
	mg/L	11/20/1998	0002	0.0216			#	-	-
	mg/L	02/17/1999	0001	0.0221			#	-	-
	mg/L	02/17/1999	0002	0.0217			#	-	-
	mg/L	05/30/2000	0001	0.0227			#	0.0004	-
	mg/L	11/14/2000	0001	0.0237			#	0.0003	-
Nickel	mg/L	04/10/1985	0001	0.04	U		#	0.04	-
	mg/L	07/27/1985	0001	0.11			#	0.04	-
	mg/L	08/30/1988	0001	0.04		F	#	0.04	-
	mg/L	11/18/1988	0001	0.04	U		#	0.04	-
	mg/L	04/25/1991	0001	0.04	U		#	0.04	-
	mg/L	08/22/1991	0001	0.0078		F	#	0.0061	-
	mg/L	12/13/1991	0001	0.04	U		#	0.04	-
	mg/L	08/08/1992	0001	0.04	U		#	0.04	-
	mg/L	11/19/1992	0001	0.040	U		#	0.04	-
	mg/L	11/19/1992	N001	0.040	U		#	0.04	-
	mg/L	06/23/1993	0001	0.04	U		#	0.04	-
	mg/L	06/23/1993	N001	0.04	U		#	0.04	-
	mg/L	06/23/1993	N002	0.04	U		#	0.04	-
	mg/L	12/11/1994	0001	0.04	U		#	0.04	-
	mg/L	04/26/1995	0001	0.04	U	F	#	0.04	-
	mg/L	11/18/1995	0001	0.04	U		#	0.04	-
	mg/L	11/18/1995	0002	0.04	U		#	0.04	-
	mg/L	05/15/1998	0001	0.0050	U	GL	#	0.005	-
	mg/L	11/20/1998	0001	0.0040	U		#	0.004	-
	mg/L	11/20/1998	0002	0.0072	B		#	-	-
	mg/L	02/17/1999	0001	0.0090	B		#	-	-

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Nickel	mg/L	02/17/1999	0002	0.0040	U		#	0.004	-
Nitrate	mg/L	04/10/1985	0001	0.80	*		#	-	-
	mg/L	07/27/1985	0001	4.00			#	1	-
	mg/L	08/30/1988	0001	5.2		F	#	1	-
	mg/L	11/18/1988	0001	11.1			#	1	-
	mg/L	04/25/1991	0001	7.5			#	1	-
	mg/L	08/22/1991	0001	7.1		F	#	0.22	-
	mg/L	12/13/1991	0001	9.7			#	1	-
	mg/L	08/08/1992	0001	10			#	0.075	-
	mg/L	11/19/1992	0001	9.5			#	0.1	-
	mg/L	06/23/1993	N001	8			#	1	-
	mg/L	06/23/1993	N002	8			#	1	-
	mg/L	04/26/1994	N001	9.2			#	1	-
	mg/L	12/11/1994	N001	8.2			#	1	-
	mg/L	04/26/1995	N001	12.4		F	#	1	-
	mg/L	11/18/1995	N001	12			#	1	-
	mg/L	11/18/1995	N002	12			#	1	-
	mg/L	05/15/1998	0001	7.790		GL	#	-	-
	mg/L	11/20/1998	0001	7.400			#	-	-
	mg/L	11/20/1998	0002	7.480			#	-	-
	mg/L	02/17/1999	0001	8.640			#	-	-
	mg/L	02/17/1999	0002	8.790			#	-	-
	mg/L	05/30/2000	0001	6.940			#	0.0314	-
	mg/L	11/14/2000	0001	6.880			#	0.0314	-
Nitrate + Nitrite as Nitrogen	mg/L	08/30/1988	0001	1.1		F	#	1	-
	mg/L	11/18/1988	0001	2.5			#	1	-
	mg/L	04/25/1991	0001	1.71			#	0.05	-
Nitrite	mg/L	04/10/1985	0001	0.00		J	#	0.1	-
	mg/L	07/27/1985	0001	0.10	U		#	0.1	-
ORP of Zobell Solution	mV	05/30/2000	N001	223			#	-	-
	mV	11/14/2000	N001	235			#	-	-
Oxidation Reduction Potenti	mV	08/22/1991	N001	350.8		F	#	-	-
	mV	08/08/1992	N001	402.2			#	-	-
	mV	11/19/1992	N001	464.2			#	-	-
	mV	06/23/1993	N001	404			#	-	-

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Oxidation Reduction Potenti	mV	04/26/1994	N001	378			#	-	-
	mV	12/11/1994	N001	407			#	-	-
	mV	04/25/1995	N001	416		F	#	-	-
	mV	11/18/1995	N001	376			#	-	-
	mV	05/15/1998	N001	135		GL	#	-	-
	mV	11/20/1998	N001	124			#	-	-
	mV	02/17/1999	N001	166			#	-	-
	mV	05/30/2000	N001	50			#	-	-
	mV	11/14/2000	N001	120			#	-	-
pH	s.u.	04/10/1985	N001	7.08			#	-	-
	s.u.	07/27/1985	N001	7.05			#	-	-
	s.u.	08/30/1988	N001	7.22		F	#	-	-
	s.u.	11/18/1988	N001	7.1			#	-	-
	s.u.	04/25/1991	N001	7.17			#	-	-
	s.u.	08/22/1991	N001	7.32		F	#	-	-
	s.u.	12/13/1991	N001	7.36			#	-	-
	s.u.	08/08/1992	N001	7.16			#	-	-
	s.u.	11/19/1992	N001	7.23			#	-	-
	s.u.	06/23/1993	N001	7.24			#	-	-
	s.u.	04/26/1994	N001	7.15			#	-	-
	s.u.	12/11/1994	N001	7.04			#	0.1	-
	s.u.	04/25/1995	N001	7.00		F	#	0.1	-
	s.u.	11/18/1995	N001	7.07			#	0.1	-
	s.u.	05/15/1998	N001	7.31		GL	#	-	-
	s.u.	11/20/1998	N001	7.23			#	-	-
	s.u.	02/17/1999	N001	7.44			#	-	-
	s.u.	05/30/2000	N001	7.1			#	-	-
	s.u.	11/14/2000	N001	7.33			#	-	-
Polonium-210	pCi/L	04/10/1985	0001	0.00			#	1	± 0.60
	pCi/L	07/27/1985	0001	0.00			#	1	± 0.60
Potassium	mg/L	04/10/1985	0001	7.80			#	-	-
	mg/L	07/27/1985	0001	8.51			#	0.01	-
	mg/L	08/30/1988	0001	5.4		F	#	0.01	-
	mg/L	11/18/1988	0001	6.1			#	0.01	-
	mg/L	04/25/1991	0001	7.0			#	0.1	-

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Potassium	mg/L	08/22/1991	0001	6.9		F	#	0.0005	-
	mg/L	12/13/1991	0001	6.9			#	0.01	-
	mg/L	08/08/1992	0001	6.7			#	0.575	-
	mg/L	06/23/1993	0001	7.4			#	0.1	-
	mg/L	06/23/1993	N001	6.8			#	0.1	-
	mg/L	06/23/1993	N002	6.8			#	0.1	-
	mg/L	04/26/1994	0001	6.86			#	0.1	-
	mg/L	04/26/1994	N001	23			#	5	-
	mg/L	12/11/1994	0001	10.7			#	5	-
	mg/L	04/26/1995	0001	17.4		F	#	5	-
	mg/L	11/18/1995	0001	7.8			#	0.1	-
	mg/L	11/18/1995	0002	7.2			#	0.1	-
	mg/L	05/15/1998	0001	7.260		GL	#	-	-
	mg/L	11/20/1998	0001	7.980			#	-	-
	mg/L	11/20/1998	0002	7.230			#	-	-
	mg/L	02/17/1999	0001	7.860			#	-	-
	mg/L	02/17/1999	0002	7.680			#	-	-
	mg/L	05/30/2000	0001	7.430			#	0.0344	-
	mg/L	11/14/2000	0001	7.020			#	0.0327	-
Radium-226	pCi/L	04/10/1985	0001	0.00			#	1	± 0.20
	pCi/L	07/27/1985	0001	0.10			#	1	± 0.20
	pCi/L	08/30/1988	0001	0.1		F	#	1	± 0.20
	pCi/L	11/18/1988	0001	0.1			#	1	± 0.20
	pCi/L	04/25/1991	0001	0.1			#	1	± 0.20
	pCi/L	08/22/1991	0001	0.2		F	#	1	± 0.20
	pCi/L	12/13/1991	0001	0.2			#	1	± 0.20
	pCi/L	08/08/1992	0001	0.18			#	0.5	± 0.05
	pCi/L	11/19/1992	0001	0.3			#	0.3	± 0.20
	pCi/L	11/19/1992	N001	1.2			#	0.3	± 0.30
	pCi/L	06/23/1993	0001	0.3			#	1	± 0.30
	pCi/L	06/23/1993	N001	0.6			#	1	± 0.30
	pCi/L	06/23/1993	N002	0.3			#	1	± 0.20
	pCi/L	04/26/1994	0001	0.2	N	J	#	0.2	± 0.10
	pCi/L	04/26/1994	N001	0.4	N	J	#	0.2	± 0.20
	pCi/L	12/11/1994	0001	0.1			#	-	± 0.10
	pCi/L	04/26/1995	0001	0.3		F	#	0.1	± 0.10

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Radium-226	pCi/L	05/15/1998	0001	0.52		GL	#	0.02	± 0.13
	pCi/L	11/20/1998	0001	0.10	U		#	0.1	± 0.06
	pCi/L	11/20/1998	0002	0.10	U		#	0.1	± 0.06
	pCi/L	02/17/1999	0001	0.14			#	0.11	± 0.07
	pCi/L	02/17/1999	0002	0.11	U		#	0.11	± 0.07
Radium-228	pCi/L	04/10/1985	0001	0.00			#	1	± 0.90
	pCi/L	07/27/1985	0001	0.40			#	1	± 1.10
	pCi/L	08/30/1988	0001	0.1		F	#	1	± 0.90
	pCi/L	11/18/1988	0001	1.1			#	1	± 1.10
	pCi/L	04/25/1991	0001	8.5			#	1	± 2.30
	pCi/L	08/22/1991	0001	0.1		F	#	1	± 0.90
	pCi/L	12/13/1991	0001	3.9			#	1	± 2.00
	pCi/L	08/08/1992	0001	1.2			#	3.4	± 1.80
	pCi/L	11/19/1992	0001	4.7			#	1.3	± 1.20
	pCi/L	11/19/1992	N001	3.8			#	1.6	± 1.30
	pCi/L	06/23/1993	0001	0			#	1	± 0.60
	pCi/L	06/23/1993	N001	2			#	1	± 0.70
	pCi/L	06/23/1993	N002	0.3			#	1	± 0.80
	pCi/L	04/26/1994	0001	0.4			#	1	± 0.60
	pCi/L	04/26/1994	N001	0.6			#	1	± 0.60
	pCi/L	12/11/1994	0001	0.3	H		#	0.8	± 0.30
	pCi/L	04/26/1995	0001	0.2		F	#	0.8	± 0.50
	pCi/L	05/15/1998	0001	1.0	U	GL	#	1	± 0.50
	pCi/L	11/20/1998	0001	0.55	U		#	0.55	± 0.33
	pCi/L	11/20/1998	0002	0.55	U		#	0.55	± 0.33
	pCi/L	02/17/1999	0001	0.65	U		#	0.65	± 0.38
	pCi/L	02/17/1999	0002	0.62	U		#	0.62	± 0.37
Selenium	mg/L	04/10/1985	0001	0.005	U		#	0.005	-
	mg/L	07/27/1985	0001	0.005	U		#	0.005	-
	mg/L	04/25/1991	0001	0.040			#	0.005	-
	mg/L	08/22/1991	0001	0.019		F	#	0.0016	-
	mg/L	12/13/1991	0001	0.03	UI		#	0.03	-
	mg/L	08/08/1992	0001	0.014	N		#	0.005	-
	mg/L	11/19/1992	0001	0.0118	S		#	0.005	-
	mg/L	11/19/1992	N001	0.0256	NS		#	0.005	-
	mg/L	12/11/1994	0001	0.031	S		#	0.005	-

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Selenium	mg/L	04/26/1995	0001	0.021		F	#	0.005	-
	mg/L	11/18/1995	0001	0.02	S		#	0.005	-
	mg/L	11/18/1995	0002	0.02	S		#	0.005	-
	mg/L	05/15/1998	0001	0.0446		GL	#	-	-
	mg/L	11/20/1998	0001	0.0448			#	-	-
	mg/L	11/20/1998	0002	0.0382			#	-	-
	mg/L	02/17/1999	0001	0.0546			#	-	-
	mg/L	02/17/1999	0002	0.0528			#	-	-
	mg/L	05/30/2000	0001	0.0447			#	0.001	-
	mg/L	11/14/2000	0001	0.0446			#	0.0005	-
Silica	mg/L	04/10/1985	0001	15.00			#	2	-
	mg/L	07/27/1985	0001	13.00			#	2	-
	mg/L	08/30/1988	0001	14		F	#	2	-
	mg/L	11/18/1988	0001	17			#	2	-
	mg/L	04/25/1991	0001	15.7			#	0.1	-
	mg/L	04/26/1994	0001	17.3	H		#	0.1	-
	mg/L	04/26/1994	N001	0.36	H		#	0.1	-
	mg/L	12/11/1994	0001	14.0			#	0.1	-
	mg/L	04/26/1995	0001	11.7	E	FJ	#	0.1	-
	mg/L	11/18/1995	0001	16			#	0.1	-
	mg/L	11/18/1995	0002	17			#	0.1	-
Silver	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.01	U		#	0.01	-
	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0053		F	#	0.0029	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.01	U		#	0.01	-
Sodium	mg/L	04/10/1985	0001	465.00			#	-	-
	mg/L	07/27/1985	0001	470.00			#	0.002	-
	mg/L	08/30/1988	0001	397		F	#	0.002	-
	mg/L	11/18/1988	0001	450			#	0.002	-
	mg/L	04/25/1991	0001	465			#	5	-
	mg/L	08/22/1991	0001	400		F	#	0.014	-
	mg/L	12/13/1991	0001	484			#	5	-
	mg/L	08/08/1992	0001	460			#	5	-

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Sodium	mg/L	11/19/1992	0001	457.000			#	1	-
	mg/L	11/19/1992	N001	411.000			#	1	-
	mg/L	06/23/1993	0001	458			#	1	-
	mg/L	06/23/1993	N001	418			#	1	-
	mg/L	06/23/1993	N002	415			#	1	-
	mg/L	04/26/1994	0001	516			#	5	-
	mg/L	04/26/1994	N001	458	E	J	#	5	-
	mg/L	12/11/1994	0001	475			#	5	-
	mg/L	04/26/1995	0001	294	E	FJ	#	5	-
	mg/L	11/18/1995	0001	500			#	1	-
	mg/L	11/18/1995	0002	470			#	1	-
	mg/L	11/20/1998	0001	493.000			#	-	-
	mg/L	11/20/1998	0002	516.000			#	-	-
	mg/L	02/17/1999	0001	506.000			#	-	-
	mg/L	02/17/1999	0002	495.000			#	-	-
	mg/L	05/30/2000	0001	487.000			#	0.291	-
	mg/L	11/14/2000	0001	451.000			#	0.302	-
Specific Conductance	umhos/cm	04/10/1985	N001	3000.00			#	-	-
	umhos/cm	07/27/1985	N001	3250.00			#	-	-
	umhos/cm	08/30/1988	N001	2800		F	#	-	-
	umhos/cm	11/18/1988	N001	2500			#	-	-
	umhos/cm	04/25/1991	N001	3870			#	-	-
	umhos/cm	08/22/1991	N001	4060		F	#	-	-
	umhos/cm	12/13/1991	N001	3380			#	-	-
	umhos/cm	08/08/1992	N001	3440			#	-	-
	umhos/cm	11/19/1992	N001	3320			#	-	-
	umhos/cm	06/23/1993	N001	3460			#	-	-
	umhos/cm	04/26/1994	N001	3420			#	-	-
	umhos/cm	12/11/1994	N001	3420			#	1	-
	umhos/cm	04/25/1995	N001	2270		F	#	1	-
	umhos/cm	11/18/1995	N001	3340			#	1	-
	umhos/cm	05/15/1998	N001	4100		GL	#	-	-
	umhos/cm	11/20/1998	N001	4090			#	-	-
	umhos/cm	02/17/1999	N001	3920			#	-	-
	umhos/cm	05/30/2000	N001	3250			#	-	-
	umhos/cm	11/14/2000	N001	3860			#	-	-

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Strontium	mg/L	04/10/1985	0001	0.10	U		#	0.1	-
	mg/L	07/27/1985	0001	0.10	U		#	0.1	-
	mg/L	04/25/1991	0001	8.26			#	0.01	-
	mg/L	08/22/1991	0001	8.3		F	#	0.01	-
	mg/L	12/13/1991	0001	8.76			#	0.01	-
	mg/L	08/08/1992	0001	8.70			#	0.2	-
	mg/L	11/19/1992	0001	9.230			#	0.01	-
	mg/L	11/19/1992	N001	7.650			#	0.01	-
	mg/L	04/26/1994	0001	8.95			#	0.01	-
	mg/L	04/26/1994	N001	8.13	E	J	#	0.01	-
	mg/L	12/11/1994	0001	8.27			#	0.01	-
	mg/L	04/26/1995	0001	5.85		F	#	0.01	-
	mg/L	11/18/1995	0001	8.8			#	0.01	-
	mg/L	11/18/1995	0002	8.8			#	0.01	-
Sulfate	mg/L	04/10/1985	0001	2380.00			#	-	-
	mg/L	07/27/1985	0001	2230.00			#	0.1	-
	mg/L	08/30/1988	0001	1980		F	#	0.1	-
	mg/L	11/18/1988	0001	2090			#	0.1	-
	mg/L	04/25/1991	0001	2300		J	#	10	-
	mg/L	08/22/1991	0001	2300		F	#	1	-
	mg/L	12/13/1991	0001	2320			#	10	-
	mg/L	08/08/1992	0001	2000	I		#	1.2	-
	mg/L	11/19/1992	0001	2150			#	1	-
	mg/L	11/19/1992	N001	2140			#	1	-
	mg/L	06/23/1993	N001	2250			#	1	-
	mg/L	06/23/1993	N002	2250			#	1	-
	mg/L	04/26/1994	0001	2420	I		#	26	-
	mg/L	04/26/1994	N001	2390	I		#	26	-
	mg/L	12/11/1994	0001	2250	I		#	25	-
	mg/L	04/26/1995	0001	1750	I	F	#	8	-
	mg/L	11/18/1995	0001	2800			#	1	-
	mg/L	11/18/1995	0002	2100			#	1	-
	mg/L	05/15/1998	0001	2200.000		GL	#	-	-
	mg/L	11/20/1998	0001	2180.000			#	-	-
	mg/L	11/20/1998	0002	2160.000			#	-	-
	mg/L	02/17/1999	0001	2140.000			#	-	-

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Sulfate	mg/L	02/17/1999	0002	2140.000			#	-	-
	mg/L	05/30/2000	0001	2150.000			#	0.589	-
	mg/L	11/14/2000	0001	2250.000			#	0.2945	-
Sulfide	mg/L	04/10/1985	0001	0.10	U		#	0.1	-
	mg/L	07/27/1985	0001	0.10	U		#	0.1	-
	mg/L	04/25/1991	0001	64.4			#	1	-
	mg/L	12/13/1991	0001	3.6			#	0.1	-
	mg/L	05/15/1998	0001	1.0	U	GL	#	1	-
	mg/L	11/20/1998	0001	1.0	U		#	1	-
	mg/L	11/20/1998	0002	1.0	U		#	1	-
	mg/L	02/17/1999	0001	1.0	U		#	1	-
	mg/L	02/17/1999	0002	1.0	U		#	1	-
Temperature	C	04/10/1985	N001	17.00			#	-	-
	C	07/27/1985	N001	17.00			#	-	-
	C	08/30/1988	N001	18		F	#	-	-
	C	11/18/1988	N001	17			#	-	-
	C	04/25/1991	N001	16.4			#	-	-
	C	08/22/1991	N001	17.3		F	#	-	-
	C	12/13/1991	N001	15.6			#	-	-
	C	08/08/1992	N001	18.6			#	-	-
	C	11/19/1992	N001	16.4			#	-	-
	C	06/23/1993	N001	18.8			#	-	-
	C	04/26/1994	N001	16.8			#	-	-
	C	12/11/1994	N001	15.6			#	0.1	-
	C	04/25/1995	N001	16.5		F	#	0.1	-
	C	11/18/1995	N001	17.2			#	0.1	-
	C	05/15/1998	N001	18.3		GL	#	-	-
	C	11/20/1998	N001	17.9			#	-	-
	C	02/17/1999	N001	18.1			#	-	-
	C	05/30/2000	N001	20.5			#	-	-
	C	11/14/2000	N001	18			#	-	-
Temperature of Zobell Soluti	C	05/30/2000	N001	26			#	-	-
	C	11/14/2000	N001	8.1			#	-	-
Thallium	mg/L	04/25/1991	0001	0.01	U		#	0.01	-
Thorium-230	pCi/L	04/10/1985	0001	0.10			#	1	± 0.50

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Thorium-230	pCi/L	07/27/1985	0001	0.30			#	1	± 0.50
	pCi/L	08/30/1988	0001	0.0		F	#	1	± 0.40
	pCi/L	11/18/1988	0001	1.4	*	J	#	1	± 0.60
	pCi/L	04/25/1991	0001	0.2			#	1	± 0.20
Tin	mg/L	04/10/1985	0001	0.005	U		#	0.005	-
	mg/L	07/27/1985	0001	0.005	U		#	0.005	-
	mg/L	04/25/1991	0001	0.03	UI		#	0.03	-
	mg/L	08/22/1991	0001	0.0050	U	F	#	0.005	-
Total Cyanide	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.01	U		#	0.01	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/08/1992	0001	0.010	U		#	0.01	-
Total Dissolved Solids	mg/L	04/10/1985	0001	3880.00			#	10	-
	mg/L	07/27/1985	0001	3730.00			#	10	-
	mg/L	08/30/1988	0001	3170		F	#	10	-
	mg/L	11/18/1988	0001	3370			#	10	-
	mg/L	04/25/1991	0001	3690			#	10	-
	mg/L	08/22/1991	0001	3700		F	#	10	-
	mg/L	12/13/1991	0001	3710			#	10	-
	mg/L	08/08/1992	0001	3700			#	42	-
	mg/L	06/23/1993	N001	3660			#	10	-
	mg/L	06/23/1993	N002	3660			#	10	-
	mg/L	04/26/1994	0001	3780			#	10	-
	mg/L	12/11/1994	0001	3880			#	10	-
	mg/L	04/26/1995	0001	2990		F	#	10	-
	mg/L	11/18/1995	0001	3500			#	10	-
	mg/L	11/18/1995	0002	3500			#	10	-
	mg/L	05/15/1998	0001	3590		GL	#	-	-
	mg/L	11/20/1998	0001	3920			#	-	-
	mg/L	11/20/1998	0002	3910			#	-	-
	mg/L	02/17/1999	0001	3730			#	-	-
	mg/L	02/17/1999	0002	3720			#	-	-
	mg/L	05/30/2000	0001	3730			#	10	-
	mg/L	11/14/2000	0001	3580			#	10	-
Total Kjeldahl Nitrogen	mg/L	04/25/1991	0001	1	U		#	1	-

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Total Organic Carbon	mg/L	04/10/1985	0001	31.00			#	1	-
	mg/L	07/27/1985	0001	22.00			#	1	-
	mg/L	04/25/1991	0001	1	U		#	1	-
	mg/L	05/15/1998	0001	0.27	B	GL	#	-	-
	mg/L	11/20/1998	0001	0.10	U		#	0.1	-
	mg/L	11/20/1998	0002	1.0	U		#	1	-
	mg/L	02/17/1999	0001	0.33	B*	J	#	-	-
	mg/L	02/17/1999	0002	0.81	B*	J	#	-	-
Total Phosphorus as PO4	mg/L	04/10/1985	0001	0.10			#	0.1	-
	mg/L	07/27/1985	0001	0.10	U		#	0.1	-
	mg/L	05/15/1998	0001	0.0430	U	GL	#	0.043	-
	mg/L	11/20/1998	0001	0.0430	U		#	0.043	-
	mg/L	11/20/1998	0002	0.0430	U		#	0.043	-
	mg/L	02/17/1999	0001	0.0560	B		#	-	-
	mg/L	02/17/1999	0002	0.0430	U		#	0.043	-
Turbidity	NTU	04/26/1994	N001	5			#	-	-
	NTU	12/11/1994	N001	4			#	1	-
	NTU	11/18/1995	N001	3			#	1	-
	NTU	05/15/1998	N001	4.20		GL	#	-	-
	NTU	11/20/1998	N001	1.92			#	-	-
	NTU	02/17/1999	N001	8.98			#	-	-
	NTU	05/30/2000	N001	0.9			#	-	-
	NTU	11/14/2000	N001	14			#	-	-
Uranium	mg/L	04/10/1985	0001	0.0512			#	0.003	-
	mg/L	07/27/1985	0001	0.0453			#	0.003	-
	mg/L	08/30/1988	0001	0.0385		F	#	0.003	-
	mg/L	11/18/1988	0001	0.046			#	0.003	-
	mg/L	04/25/1991	0001	0.050			#	0.001	-
	mg/L	08/22/1991	0001	0.0636		F	#	0.0003	-
	mg/L	12/13/1991	0001	0.041			#	0.001	-
	mg/L	11/19/1992	0001	0.047			#	0.001	-
	mg/L	11/19/1992	N001	0.049			#	0.001	-
	mg/L	06/23/1993	0001	0.046			#	0.001	-
	mg/L	06/23/1993	N001	0.047			#	0.001	-
	mg/L	06/23/1993	N002	0.047			#	0.001	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:16 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Uranium	mg/L	04/26/1994	0001	0.051			#	0.001	-
	mg/L	04/26/1994	N001	0.051			#	0.001	-
	mg/L	12/11/1994	0001	0.052			#	0.001	-
	mg/L	04/26/1995	0001	0.042		F	#	0.001	-
	mg/L	11/18/1995	0001	0.047			#	0.001	-
	mg/L	11/18/1995	0002	0.047			#	0.001	-
	mg/L	05/15/1998	0001	0.0461		GL	#	-	-
	mg/L	11/20/1998	0001	0.0465			#	-	-
	mg/L	11/20/1998	0002	0.0467			#	-	-
	mg/L	02/17/1999	0001	0.0456			#	-	-
	mg/L	02/17/1999	0002	0.0456			#	-	-
	mg/L	05/30/2000	0001	0.0442			#	0.0001	-
	mg/L	11/14/2000	0001	0.0432	E	J	#	0.0001	-
Vanadium	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.49			#	0.01	-
	mg/L	08/30/1988	0001	0.09		F	#	0.01	-
	mg/L	11/18/1988	0001	0.06			#	0.01	-
	mg/L	04/25/1991	0001	0.02			#	0.01	-
	mg/L	08/22/1991	0001	0.053		F	#	0.0051	-
	mg/L	12/13/1991	0001	0.05			#	0.01	-
	mg/L	08/08/1992	0001	0.05	U		#	0.05	-
	mg/L	11/19/1992	0001	0.053			#	0.01	-
	mg/L	11/19/1992	N001	0.058			#	0.01	-
	mg/L	04/26/1994	0001	0.02			#	0.01	-
	mg/L	04/26/1994	N001	0.05			#	0.01	-
	mg/L	12/11/1994	0001	0.06			#	0.01	-
	mg/L	04/26/1995	0001	0.05		F	#	0.01	-
	mg/L	11/18/1995	0001	0.06			#	0.01	-
	mg/L	11/18/1995	0002	0.05			#	0.01	-
	mg/L	05/15/1998	0001	0.0363		GL	#	-	-
	mg/L	11/20/1998	0001	0.0457			#	-	-
	mg/L	11/20/1998	0002	0.0369			#	-	-
	mg/L	02/17/1999	0001	0.0400			#	-	-
	mg/L	02/17/1999	0002	0.0393			#	-	-
	mg/L	05/30/2000	0001	0.0402	E	J	#	0.0004	-
	mg/L	11/14/2000	0001	0.0389			#	0.0013	-

GROUND WATER QUALITY DATA BY LOCATION (USEE100) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0909
REPORT DATE: 1/22/2001 10:16 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Zinc	mg/L	04/10/1985	0001	0.01	U		#	0.01	-
	mg/L	07/27/1985	0001	0.005	U		#	0.005	-
	mg/L	08/30/1988	0001	0.006		F	#	0.005	-
	mg/L	11/18/1988	0001	0.005	U		#	0.005	-
	mg/L	04/25/1991	0001	0.01	UI		#	0.01	-
	mg/L	08/22/1991	0001	0.026		F	#	0.0026	-
	mg/L	12/13/1991	0001	0.005			#	0.005	-
	mg/L	08/08/1992	0001	0.02	U		#	0.02	-
	mg/L	11/19/1992	0001	0.013			#	0.005	-
	mg/L	11/19/1992	N001	0.031	*		#	0.005	-

RECORDS: SELECTED FROM USEE100 WHERE site_code='HAT01' AND location_code in('0909','0899') AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE '*X*') OR IsNull(data_validation_qualifiers))

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- J Estimated value.
- G Possible grout contamination, pH > 9.
- R Unusable result.
- U Parameter analyzed for but was not detected.
- F Low flow sampling method used.
- L Less than 3 bore volumes purged prior to sampling.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

Attachment E

Surface Water Quality Data by Location for Ground Water Seep 0256

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Alkalinity as CaCO3	mg/L	10/05/1990	N001	246			#	5	-
	mg/L	06/05/1991	N001	1.80			#	-	-
	mg/L	08/22/1991	N001	242			#	-	-
	mg/L	12/13/1991	N001	191			#	-	-
	mg/L	08/09/1992	N001	259			#	-	-
	mg/L	06/23/1993	N001	262			#	-	-
	mg/L	04/17/1997	N001	213			#	-	-
	mg/L	11/19/1997	N001	359			#	-	-
	mg/L	05/13/1998	N001	171			#	-	-
	mg/L	11/19/1998	0001	325			#	-	-
	mg/L	11/19/1998	N001	212			#	-	-
	mg/L	02/18/1999	0001	270			#	-	-
	mg/L	02/18/1999	N001	294			#	-	-
	mg/L	05/18/1999	0001	155			#	-	-
	mg/L	05/18/1999	N001	173			#	-	-
	mg/L	08/18/1999	N001	398			#	-	-
	mg/L	11/17/1999	0001	160			#	-	-
	mg/L	02/15/2000	N001	119			#	-	-
	mg/L	05/31/2000	0001	260			#	-	-
	mg/L	05/31/2000	N001	257			#	-	-
	mg/L	11/15/2000	0001	412			#	-	-
	mg/L	11/15/2000	N001	442			#	-	-
Aluminum	mg/L	10/05/1990	0001	0.05	U		#	0.05	-
	mg/L	06/05/1991	0001	0.05	U		#	0.05	-
	mg/L	08/22/1991	0001	0.0067	U		#	0.0067	-
	mg/L	12/13/1991	0001	0.05	U		#	0.05	-
	mg/L	08/09/1992	0001	0.2	U		#	0.2	-
	mg/L	04/17/1997	0001	0.0130	U		#	0.013	-
	mg/L	11/19/1997	0001	0.0080	U		#	0.008	-
	mg/L	05/13/1998	0001	0.0070	U		#	0.007	-
	mg/L	11/19/1998	0001	0.0100	U		#	0.01	-
	mg/L	02/18/1999	0001	0.0100	U		#	0.01	-
Ammonium	mg/L	10/05/1990	0001	0.1	U		#	0.1	-
	mg/L	06/05/1991	0001	0.5			#	0.1	-
	mg/L	06/23/1993	N001	0.1	U		#	0.1	-
	mg/L	04/17/1997	0001	0.0122	B		#	-	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonium	mg/L	05/13/1998	0001	0.0545	B		#	-	-
	mg/L	11/19/1998	0001	0.0047	B		#	-	-
	mg/L	02/18/1999	0001	1.620			#	-	-
	mg/L	05/18/1999	0001	0.0902	B		#	-	-
	mg/L	08/18/1999	0001	0.0395	B		#	-	-
	mg/L	11/17/1999	0001	0.0144	BN	J	#	-	-
	mg/L	11/17/1999	0002	0.0116	BN	J	#	-	-
	mg/L	02/15/2000	0001	0.0413	B		#	-	-
	mg/L	02/15/2000	0002	0.0495	B		#	-	-
	mg/L	05/31/2000	0001	0.393			#	0.0047	-
	mg/L	11/15/2000	0001	0.0766	B		#	-	-
	mg/L	11/15/2000	0002	0.0738	B		#	-	-
Antimony	mg/L	10/05/1990	0001	0.006	UI		#	0.006	-
	mg/L	06/05/1991	0001	0.02	UI		#	0.02	-
	mg/L	08/22/1991	0001	0.020	U		#	0.02	-
	mg/L	12/13/1991	0001	0.003	U		#	0.003	-
	mg/L	08/09/1992	0001	0.06	UN		#	0.06	-
	mg/L	11/19/1997	0001	0.0010	U		#	0.001	-
	mg/L	05/13/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1998	0001	0.0010	U		#	0.001	-
	mg/L	02/18/1999	0001	0.0010	U		#	0.001	-
Arsenic	mg/L	10/05/1990	0001	0.05	UI		#	0.05	-
	mg/L	06/05/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0043			#	0.002	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/09/1992	0001	0.01	U		#	0.01	-
	mg/L	04/17/1997	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1997	0001	0.0038	B		#	-	-
	mg/L	05/13/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1998	0001	0.0010	U		#	0.001	-
	mg/L	02/18/1999	0001	0.00087	B		#	-	-
Barium	mg/L	10/05/1990	0001	0.02			#	0.01	-
	mg/L	06/05/1991	0001	0.02			#	0.01	-
	mg/L	08/22/1991	0001	0.0022	U		#	0.0022	-
	mg/L	12/13/1991	0001	0.01			#	0.01	-
	mg/L	08/09/1992	0001	0.2	U		#	0.2	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Beryllium	mg/L	06/05/1991	0001	0.005	U		#	0.005	-
Boron	mg/L	10/05/1990	0001	0.40			#	0.05	-
	mg/L	06/05/1991	0001	0.36			#	0.05	-
Bromide	mg/L	10/05/1990	0001	0.9			#	0.1	-
	mg/L	06/05/1991	0001	0.8			#	0.1	-
Cadmium	mg/L	10/05/1990	0001	0.001	U		#	0.001	-
	mg/L	06/05/1991	0001	0.001	U		#	0.001	-
	mg/L	08/22/1991	0001	0.0046	U		#	0.0046	-
	mg/L	12/13/1991	0001	0.001	U		#	0.001	-
	mg/L	08/09/1992	0001	0.005	UN		#	0.005	-
	mg/L	04/17/1997	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1997	0001	0.0010	U		#	0.001	-
	mg/L	05/13/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1998	0001	0.0010	U		#	0.001	-
	mg/L	02/18/1999	0001	0.0010	U		#	0.001	-
Calcium	mg/L	10/05/1990	0001	555			#	0.01	-
	mg/L	06/05/1991	0001	506			#	5	-
	mg/L	08/22/1991	0001	410			#	0.009	-
	mg/L	12/13/1991	0001	435			#	0.5	-
	mg/L	08/09/1992	0001	540			#	5	-
	mg/L	06/23/1993	0001	577			#	0.5	-
	mg/L	06/23/1993	N001	535			#	0.5	-
	mg/L	04/17/1997	0001	472.000			#	-	-
	mg/L	11/19/1997	0001	485.000			#	-	-
	mg/L	05/13/1998	0001	475.000			#	-	-
	mg/L	11/19/1998	0001	429.000			#	-	-
	mg/L	02/18/1999	0001	473.000			#	-	-
	mg/L	05/18/1999	0001	497.000			#	-	-
	mg/L	08/18/1999	0001	459.000			#	-	-
	mg/L	11/17/1999	0001	431.000			#	-	-
	mg/L	11/17/1999	0002	437.000			#	-	-
	mg/L	02/15/2000	0001	390.000			#	-	-
	mg/L	02/15/2000	0002	390.000			#	-	-
	mg/L	05/31/2000	0001	571.000			#	-	-
	mg/L	11/15/2000	0001	542.000			#	0.1924	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Calcium	mg/L	11/15/2000	0002	540.000			#	0.1924	-
Chloride	mg/L	10/05/1990	0001	143			#	1	-
	mg/L	06/05/1991	0001	109			#	0.5	-
	mg/L	08/22/1991	0001	120			#	0.5	-
	mg/L	12/13/1991	0001	126			#	1	-
	mg/L	08/09/1992	0001	110			#	0.016	-
	mg/L	06/23/1993	N001	155			#	0.5	-
	mg/L	04/17/1997	0001	159.000	N	J	#	-	-
	mg/L	11/19/1997	0001	358.000			#	-	-
	mg/L	05/13/1998	0001	133.000			#	-	-
	mg/L	11/19/1998	0001	160.000			#	-	-
	mg/L	02/18/1999	0001	135.000			#	-	-
	mg/L	05/18/1999	0001	124.000			#	-	-
	mg/L	08/18/1999	0001	159.000			#	-	-
	mg/L	11/17/1999	0001	129.000			#	-	-
	mg/L	11/17/1999	0002	151.000			#	-	-
	mg/L	02/15/2000	0001	156.000			#	-	-
	mg/L	02/15/2000	0002	156.000			#	-	-
	mg/L	05/31/2000	0001	145.000			#	0.048	-
	mg/L	11/15/2000	0001	170.000			#	0.048	-
	mg/L	11/15/2000	0002	173.000			#	0.048	-
Chromium	mg/L	10/05/1990	0001	0.01	U		#	0.01	-
	mg/L	06/05/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0041			#	0.0032	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/09/1992	0001	0.01	U		#	0.01	-
	mg/L	04/17/1997	0001	0.0030	U		#	0.003	-
	mg/L	11/19/1997	0001	0.0050	U		#	0.005	-
	mg/L	05/13/1998	0001	0.0020	U		#	0.002	-
	mg/L	11/19/1998	0001	0.0020	U		#	0.002	-
	mg/L	02/18/1999	0001	0.0030	B		#	-	-
Cobalt	mg/L	10/05/1990	0001	0.03	U		#	0.03	-
	mg/L	06/05/1991	0001	0.03	U		#	0.03	-
	mg/L	12/13/1991	0001	0.03	U		#	0.03	-
	mg/L	08/09/1992	0001	0.05	U		#	0.05	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Copper	mg/L	10/05/1990	0001	0.01	U		#	0.01	-
	mg/L	06/05/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0088			#	0.0005	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/09/1992	0001	0.02	U		#	0.02	-
Fluoride	mg/L	10/05/1990	0001	2.2			#	0.1	-
	mg/L	06/05/1991	0001	0.8			#	0.1	-
	mg/L	08/22/1991	0001	0.90			#	0.1	-
Gross Alpha	pCi/L	10/05/1990	0001	0.0			#	1	± 24.6
	pCi/L	06/05/1991	0001	49.1			#	1	± 32.1
	pCi/L	08/22/1991	0001	18			#	1	± 26.0
	pCi/L	12/13/1991	0001	18.2			#	1	± 27.2
	pCi/L	08/09/1992	0001	26	I		#	32	± 22.0
	pCi/L	06/23/1993	0001	0			#	1	± 66.0
	pCi/L	06/23/1993	N001	56			#	1	± 87.0
	pCi/L	04/17/1997	0001	31.43		J	#	20.21	± 14.6
	pCi/L	11/19/1997	0001	48.86	U		#	48.86	± 27.5
	pCi/L	05/13/1998	0001	26.68	U	J	#	26.68	± 15.2
	pCi/L	11/19/1998	0001	38.68	U		#	38.68	± 23.6
	pCi/L	02/18/1999	0001	27.89	U	J	#	27.89	± 14.9
	pCi/L	05/18/1999	0001	28.63	U		#	28.63	± 17.2
	pCi/L	08/18/1999	0001	40.29	U	J	#	40.29	± 19.3
	pCi/L	11/17/1999	0001	28.26	U		#	28.26	± 16.5
	pCi/L	11/17/1999	0002	28.47	U		#	28.47	± 18.8
	pCi/L	02/15/2000	0001	29.35			#	27.04	± 18.6
	pCi/L	02/15/2000	0002	27.13	U		#	27.13	± 17.2
	pCi/L	05/31/2000	0001	37.13	U	UJ	#	37.13	± 24.5
	pCi/L	11/15/2000	0001	50.36			#	37.22	± 26.6
	pCi/L	11/15/2000	0002	37.36	U		#	37.36	± 24.4
Gross Beta	pCi/L	10/05/1990	0001	10.4			#	0.5	± 14.9
	pCi/L	06/05/1991	0001	15.9			#	0.5	± 16.9
	pCi/L	08/22/1991	0001	21			#	0.5	± 17.0
	pCi/L	12/13/1991	0001	9.0			#	0.5	± 16.9
	pCi/L	08/09/1992	0001	5	I		#	36	± 21.0
	pCi/L	06/23/1993	0001	0			#	0.5	± 40.0
	pCi/L	06/23/1993	N001	0			#	0.5	± 42.0

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Gross Beta	pCi/L	04/17/1997	0001	22.86	U		#	22.86	± 13.9
	pCi/L	11/19/1997	0001	54.28	U		#	54.28	± 32.9
	pCi/L	05/13/1998	0001	29.99	U		#	29.99	± 16.8
	pCi/L	11/19/1998	0001	34.53	U		#	34.53	± 20.2
	pCi/L	02/18/1999	0001	27.18	U		#	27.18	± 16.7
	pCi/L	05/18/1999	0001	28.13	U		#	28.13	± 16.7
	pCi/L	08/18/1999	0001	45.07	U		#	45.07	± 26.8
	pCi/L	11/17/1999	0001	30.34	U		#	30.34	± 17.4
	pCi/L	11/17/1999	0002	30.44	U		#	30.44	± 17.7
	pCi/L	02/15/2000	0001	30.25	U		#	30.25	± 18.1
	pCi/L	02/15/2000	0002	30.20	U		#	30.2	± 18.6
	pCi/L	05/31/2000	0001	41.39	U		#	41.39	± 24.0
	pCi/L	11/15/2000	0001	39.31	U		#	39.31	± 22.3
	pCi/L	11/15/2000	0002	39.20	U		#	39.2	± 23.9
Iron	mg/L	10/05/1990	0001	0.22			#	0.03	-
	mg/L	06/05/1991	0001	0.03	U		#	0.03	-
	mg/L	08/22/1991	0001	0.069			#	0.0053	-
	mg/L	12/13/1991	0001	0.03	U		#	0.03	-
	mg/L	08/09/1992	0001	0.1	U		#	0.1	-
	mg/L	06/23/1993	0001	0.06			#	0.03	-
	mg/L	06/23/1993	N001	0.63			#	0.03	-
	mg/L	04/17/1997	0001	0.0050	U		#	0.005	-
	mg/L	11/19/1997	0001	0.0518			#	-	-
	mg/L	05/13/1998	0001	0.0465			#	-	-
	mg/L	11/19/1998	0001	0.0387			#	-	-
	mg/L	02/18/1999	0001	0.281			#	-	-
Lead	mg/L	10/05/1990	0001	0.03	UI		#	0.03	-
	mg/L	06/05/1991	0001	0.005	U		#	0.005	-
	mg/L	08/22/1991	0001	0.0017	U		#	0.0017	-
	mg/L	12/13/1991	0001	0.005	U		#	0.005	-
	mg/L	08/09/1992	0001	0.003	U		#	0.003	-
	mg/L	04/17/1997	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1997	0001	0.0010	U		#	0.001	-
	mg/L	05/13/1998	0001	0.0010	U		#	0.001	-
	mg/L	11/19/1998	0001	0.0010	U		#	0.001	-
	mg/L	02/18/1999	0001	0.0010	U		#	0.001	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Lead-210	pCi/L	10/05/1990	0001	0.0			#	1.5	± 2.50
Magnesium	mg/L	10/05/1990	0001	265			#	0.01	-
	mg/L	06/05/1991	0001	176			#	0.5	-
	mg/L	08/22/1991	0001	160			#	0.014	-
	mg/L	12/13/1991	0001	176			#	0.5	-
	mg/L	08/09/1992	0001	190			#	5	-
	mg/L	06/23/1993	0001	224			#	0.1	-
	mg/L	06/23/1993	N001	202			#	0.1	-
	mg/L	04/17/1997	0001	182.000			#	-	-
	mg/L	11/19/1997	0001	390.000			#	-	-
	mg/L	05/13/1998	0001	178.000			#	-	-
	mg/L	11/19/1998	0001	273.000			#	-	-
	mg/L	02/18/1999	0001	209.000			#	-	-
	mg/L	05/18/1999	0001	182.000			#	-	-
	mg/L	08/18/1999	0001	197.000			#	-	-
	mg/L	11/17/1999	0001	172.000			#	-	-
	mg/L	11/17/1999	0002	174.000			#	-	-
	mg/L	02/15/2000	0001	155.000			#	-	-
	mg/L	02/15/2000	0002	155.000			#	-	-
	mg/L	05/31/2000	0001	211.000			#	-	-
	mg/L	11/15/2000	0001	267.000			#	0.0352	-
	mg/L	11/15/2000	0002	268.000			#	0.0352	-
Manganese	mg/L	10/05/1990	0001	0.19			#	0.01	-
	mg/L	06/05/1991	0001	0.03			#	0.01	-
	mg/L	08/22/1991	0001	0.33			#	0.0019	-
	mg/L	12/13/1991	0001	0.02			#	0.01	-
	mg/L	08/09/1992	0001	0.66			#	0.01	-
	mg/L	06/23/1993	0001	0.26			#	0.01	-
	mg/L	06/23/1993	N001	0.27			#	0.01	-
	mg/L	04/17/1997	0001	0.0491			#	-	-
	mg/L	11/19/1997	0001	0.313			#	-	-
	mg/L	05/13/1998	0001	0.0499			#	-	-
	mg/L	11/19/1998	0001	0.120			#	-	-
	mg/L	02/18/1999	0001	0.129			#	-	-
	mg/L	05/18/1999	0001	0.109			#	-	-
	mg/L	08/18/1999	0001	1.420			#	-	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Manganese	mg/L	11/17/1999	0001	0.152			#	-	-
	mg/L	11/17/1999	0002	0.147			#	-	-
	mg/L	02/15/2000	0001	0.0554			#	-	-
	mg/L	02/15/2000	0002	0.0566			#	-	-
	mg/L	05/31/2000	0001	0.389			#	-	-
	mg/L	11/15/2000	0001	0.768			#	0.002	-
	mg/L	11/15/2000	0002	0.764			#	0.002	-
Mercury	mg/L	10/05/1990	0001	0.0002	U		#	0.0002	-
	mg/L	08/22/1991	0001	0.00010	U		#	0.0001	-
	mg/L	12/13/1991	0001	0.0002	U		#	0.0002	-
	mg/L	08/09/1992	0001	0.0002	U		#	0.0002	-
Molybdenum	mg/L	10/05/1990	0001	0.01	U	J	#	0.01	-
	mg/L	06/05/1991	0001	0.01			#	0.01	-
	mg/L	08/22/1991	0001	0.0076			#	0.0048	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/09/1992	0001	0.2	U		#	0.2	-
	mg/L	06/23/1993	0001	0.01	U		#	0.01	-
	mg/L	06/23/1993	N001	0.01	U		#	0.01	-
	mg/L	04/17/1997	0001	0.0114			#	-	-
	mg/L	11/19/1997	0001	0.0031	B		#	-	-
	mg/L	05/13/1998	0001	0.0088	B		#	-	-
	mg/L	11/19/1998	0001	0.0093	B		#	-	-
	mg/L	02/18/1999	0001	0.0096	B		#	-	-
	mg/L	05/18/1999	0001	0.0097	B		#	-	-
	mg/L	08/18/1999	0001	0.0038	B		#	-	-
	mg/L	11/17/1999	0001	0.0114			#	-	-
	mg/L	11/17/1999	0002	0.0085	B		#	-	-
	mg/L	02/15/2000	0001	0.0108			#	-	-
	mg/L	02/15/2000	0002	0.010			#	-	-
	mg/L	05/31/2000	0001	0.012			#	-	-
	mg/L	11/15/2000	0001	0.0033	B		#	0.0004	-
	mg/L	11/15/2000	0002	0.0031	B		#	0.0004	-
Nickel	mg/L	10/05/1990	0001	0.04	U		#	0.04	-
	mg/L	06/05/1991	0001	0.04	U		#	0.04	-
	mg/L	08/22/1991	0001	0.011			#	0.0061	-
	mg/L	12/13/1991	0001	0.04	U		#	0.04	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Nickel	mg/L	08/09/1992	0001	0.04	U		#	0.04	-
	mg/L	06/23/1993	0001	0.04	U		#	0.04	-
	mg/L	06/23/1993	N001	0.04	U		#	0.04	-
	mg/L	04/17/1997	0001	0.0040	U		#	0.004	-
	mg/L	11/19/1997	0001	0.0073	B		#	-	-
	mg/L	05/13/1998	0001	0.0050	U		#	0.005	-
	mg/L	11/19/1998	0001	0.0110	B		#	-	-
	mg/L	02/18/1999	0001	0.0040	U		#	0.004	-
Nitrate	mg/L	10/05/1990	0001	1.0	U		#	1	-
	mg/L	06/05/1991	0001	3.8			#	1	-
	mg/L	08/22/1991	0001	0.22	U		#	0.22	-
	mg/L	12/13/1991	0001	2.2			#	1	-
	mg/L	08/09/1992	0001	2.2			#	0.075	-
	mg/L	06/23/1993	N001	1	U		#	1	-
	mg/L	04/17/1997	0001	0.0262	B		#	-	-
	mg/L	11/19/1997	0001	0.138	B		#	-	-
	mg/L	05/13/1998	0001	0.0773	B	U	#	-	-
	mg/L	11/19/1998	0001	0.255	B		#	-	-
	mg/L	02/18/1999	0001	0.494	B		#	-	-
	mg/L	05/18/1999	0001	0.321	B		#	-	-
	mg/L	08/18/1999	0001	0.0219	B	U	#	-	-
	mg/L	11/17/1999	0001	0.0332	B		#	-	-
	mg/L	11/17/1999	0002	0.0359	B		#	-	-
	mg/L	02/15/2000	0001	0.421	B	U	#	-	-
	mg/L	02/15/2000	0002	0.170	B		#	-	-
	mg/L	05/31/2000	0001	0.180	B		#	0.0314	-
	mg/L	11/15/2000	0001	0.0432	B		#	0.0314	-
	mg/L	11/15/2000	0002	0.0942	B		#	0.0314	-
Nitrate + Nitrite as Nitrogen	mg/L	10/05/1990	0001	0.05	U	J	#	1	-
	mg/L	06/05/1991	0001	0.85			#	0.05	-
ORP of Zobell Solution	mV	05/31/2000	N001	231			#	-	-
	mV	11/15/2000	N001	227			#	-	-
Oxidation Reduction Potenti	mV	04/17/1997	N001	172			#	-	-
	mV	11/19/1997	N001	145			#	-	-
	mV	05/13/1998	N001	158			#	-	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
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PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Oxidation Reduction Potenti	mV	11/19/1998	N001	191			#	-	-
	mV	02/18/1999	N001	-67			#	-	-
	mV	05/18/1999	N001	125			#	-	-
	mV	08/18/1999	N001	-45			#	-	-
	mV	11/17/1999	N001	-32			#	-	-
	mV	02/15/2000	N001	126			#	-	-
	mV	05/31/2000	N001	99			#	-	-
	mV	11/15/2000	N001	-169			#	-	-
pH	s.u.	10/05/1990	N001	7.21			#	-	-
	s.u.	06/05/1991	N001	7.51			#	-	-
	s.u.	08/22/1991	N001	7.80			#	-	-
	s.u.	12/13/1991	N001	7.59			#	-	-
	s.u.	08/09/1992	N001	7.96			#	-	-
	s.u.	06/23/1993	N001	7.08			#	-	-
	s.u.	04/17/1997	N001	7.78			#	-	-
	s.u.	11/19/1997	N001	7.80			#	-	-
	s.u.	05/13/1998	N001	7.22			#	-	-
	s.u.	11/19/1998	N001	7.35			#	-	-
	s.u.	02/18/1999	N001	7.56			#	-	-
	s.u.	05/18/1999	N001	7.63			#	-	-
	s.u.	08/18/1999	N001	7.08			#	-	-
	s.u.	11/17/1999	N001	7.11			#	-	-
	s.u.	02/15/2000	N001	7.85			#	-	-
	s.u.	05/31/2000	N001	7.29			#	-	-
	s.u.	11/15/2000	N001	6.98			#	-	-
Polonium-210	pCi/L	10/05/1990	0001	0.7			#	1	± 0.30
Potassium	mg/L	10/05/1990	0001	9.1			#	0.01	-
	mg/L	06/05/1991	0001	7.3			#	0.01	-
	mg/L	08/22/1991	0001	6.6			#	0.0005	-
	mg/L	12/13/1991	0001	6.1			#	0.01	-
	mg/L	08/09/1992	0001	9.2			#	0.575	-
	mg/L	06/23/1993	0001	10.7			#	0.1	-
	mg/L	06/23/1993	N001	10.4			#	0.1	-
	mg/L	04/17/1997	0001	5.960			#	-	-
	mg/L	11/19/1997	0001	17.400			#	-	-
	mg/L	05/13/1998	0001	6.930			#	-	-

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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Potassium	mg/L	11/19/1998	0001	10.900			#	-	-
	mg/L	02/18/1999	0001	10.500			#	-	-
	mg/L	05/18/1999	0001	6.530			#	-	-
	mg/L	08/18/1999	0001	9.920			#	-	-
	mg/L	11/17/1999	0001	6.840	E	J	#	-	-
	mg/L	11/17/1999	0002	6.940	E	J	#	-	-
	mg/L	02/15/2000	0001	6.880	E	J	#	-	-
	mg/L	02/15/2000	0002	6.890	E	J	#	-	-
	mg/L	05/31/2000	0001	10.700			#	-	-
	mg/L	11/15/2000	0001	9.940			#	0.0327	-
	mg/L	11/15/2000	0002	10.100			#	0.0327	-
Radium-226	pCi/L	10/05/1990	0001	0.8			#	1	± 0.30
	pCi/L	06/05/1991	0001	1.5			#	1	± 0.90
	pCi/L	08/22/1991	0001	0.1			#	1	± 0.20
	pCi/L	12/13/1991	0001	0.8			#	1	± 0.30
	pCi/L	08/09/1992	0001	0.46			#	0.42	± 0.08
	pCi/L	06/23/1993	0001	0.2			#	1	± 0.20
	pCi/L	06/23/1993	N001	0.2			#	1	± 0.30
	pCi/L	04/17/1997	0001	0.27			#	0.02	± 0.09
	pCi/L	11/19/1997	0001	3.95			#	0.66	± 1.94
	pCi/L	05/13/1998	0001	0.25			#	0.02	± 0.09
	pCi/L	11/19/1998	0001	0.11	U		#	0.11	± 0.06
	pCi/L	02/18/1999	0001	0.11	U		#	0.11	± 0.07
Radium-228	pCi/L	10/05/1990	0001	1.8			#	1	± 1.60
	pCi/L	06/05/1991	0001	4.0			#	1	± 3.80
	pCi/L	08/22/1991	0001	0.2			#	1	± 1.20
	pCi/L	12/13/1991	0001	0.0			#	1	± 2.40
	pCi/L	08/09/1992	0001	0			#	2.2	± 1.10
	pCi/L	06/23/1993	0001	0.5			#	1	± 0.60
	pCi/L	06/23/1993	N001	4.4			#	1	± 0.90
	pCi/L	04/17/1997	0001	0.7	U		#	0.7	± 0.40
	pCi/L	11/19/1997	0001	1.0	U		#	1	± 0.50
	pCi/L	05/13/1998	0001	0.7	U		#	0.7	± 0.40
	pCi/L	11/19/1998	0001	0.57	U		#	0.57	± 0.33
	pCi/L	02/18/1999	0001	0.70	U		#	0.7	± 0.41
Selenium	mg/L	10/05/1990	0001	0.03	UI		#	0.03	-

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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Selenium	mg/L	06/05/1991	0001	0.005	U		#	0.005	-
	mg/L	08/22/1991	0001	0.0032	UI		#	0.0032	-
	mg/L	12/13/1991	0001	0.03	UI		#	0.03	-
	mg/L	08/09/1992	0001	0.005	UN		#	0.005	-
	mg/L	04/17/1997	0001	0.0020	B		#	-	-
	mg/L	11/19/1997	0001	0.0010	U		#	0.001	-
	mg/L	05/13/1998	0001	0.0021	B		#	-	-
	mg/L	11/19/1998	0001	0.0010	U		#	0.001	-
	mg/L	02/18/1999	0001	0.00068	B		#	-	-
	mg/L	05/18/1999	0001	0.0010	U		#	0.001	-
	mg/L	08/18/1999	0001	0.0010	U		#	0.001	-
	mg/L	11/17/1999	0001	0.00062	B		#	-	-
	mg/L	11/17/1999	0002	0.00052	B		#	-	-
	mg/L	02/15/2000	0001	0.0022	B		#	-	-
	mg/L	02/15/2000	0002	0.0022	B		#	-	-
	mg/L	05/31/2000	0001	0.00041	B		#	-	-
	mg/L	11/15/2000	0001	0.00014	B		#	0.0001	-
	mg/L	11/15/2000	0002	0.00015	B		#	0.0001	-
Silica	mg/L	10/05/1990	0001	24.7			#	0.1	-
	mg/L	06/05/1991	0001	18.3			#	0.1	-
Silver	mg/L	10/05/1990	0001	0.01	U		#	0.01	-
	mg/L	06/05/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.0038			#	0.0029	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/09/1992	0001	0.01	U		#	0.01	-
Sodium	mg/L	10/05/1990	0001	465			#	5	-
	mg/L	06/05/1991	0001	314			#	5	-
	mg/L	08/22/1991	0001	270			#	0.014	-
	mg/L	12/13/1991	0001	314			#	5	-
	mg/L	08/09/1992	0001	340			#	5	-
	mg/L	06/23/1993	0001	469			#	1	-
	mg/L	06/23/1993	N001	424			#	1	-
	mg/L	04/17/1997	0001	353.000			#	-	-
	mg/L	11/19/1997	0001	654.000			#	-	-
	mg/L	11/19/1998	0001	475.000			#	-	-
	mg/L	02/18/1999	0001	383.000			#	-	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
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PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Sodium	mg/L	05/18/1999	0001	331.000			#	-	-
	mg/L	08/18/1999	0001	397.000			#	-	-
	mg/L	11/17/1999	0001	320.000			#	-	-
	mg/L	11/17/1999	0002	323.000			#	-	-
	mg/L	02/15/2000	0001	299.000			#	-	-
	mg/L	02/15/2000	0002	296.000			#	-	-
	mg/L	05/31/2000	0001	398.000			#	-	-
	mg/L	11/15/2000	0001	479.000			#	0.302	-
	mg/L	11/15/2000	0002	482.000			#	0.302	-
Specific Conductance	umhos/cm	10/05/1990	N001	4200			#	-	-
	umhos/cm	06/05/1991	N001	3890			#	-	-
	umhos/cm	08/22/1991	N001	4200			#	-	-
	umhos/cm	12/13/1991	N001	274			#	-	-
	umhos/cm	08/09/1992	N001	4380			#	-	-
	umhos/cm	06/23/1993	N001	4130			#	-	-
	umhos/cm	04/17/1997	N001	4190			#	-	-
	umhos/cm	11/19/1997	N001	5940			#	-	-
	umhos/cm	05/13/1998	N001	3930			#	-	-
	umhos/cm	11/19/1998	N001	6300			#	-	-
	umhos/cm	02/18/1999	N001	3850			#	-	-
	umhos/cm	05/18/1999	N001	3290			#	-	-
	umhos/cm	08/18/1999	N001	3310			#	-	-
	umhos/cm	11/17/1999	N001	2510			#	-	-
	umhos/cm	02/15/2000	N001	3760			#	-	-
	umhos/cm	05/31/2000	N001	4490			#	-	-
	umhos/cm	11/15/2000	N001	4620			#	-	-
Strontium	mg/L	10/05/1990	0001	12.0			#	0.01	-
	mg/L	06/05/1991	0001	11.7			#	0.1	-
	mg/L	08/22/1991	0001	12			#	0.01	-
	mg/L	12/13/1991	0001	10.7			#	0.01	-
	mg/L	08/09/1992	0001	13			#	0.2	-
Sulfate	mg/L	10/05/1990	0001	2860			#	0.1	-
	mg/L	06/05/1991	0001	2290		J	#	10	-
	mg/L	08/22/1991	0001	2500			#	1	-
	mg/L	12/13/1991	0001	2300			#	10	-
	mg/L	08/09/1992	0001	2200	I		#	1.2	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Sulfate	mg/L	06/23/1993	N001	2780			#	1	-
	mg/L	04/17/1997	0001	2120.000		J	#	-	-
	mg/L	11/19/1997	0001	3260.000			#	-	-
	mg/L	05/13/1998	0001	2100.000			#	-	-
	mg/L	11/19/1998	0001	2640.000			#	-	-
	mg/L	02/18/1999	0001	2310.000			#	-	-
	mg/L	05/18/1999	0001	2160.000			#	-	-
	mg/L	08/18/1999	0001	2330.000			#	-	-
	mg/L	11/17/1999	0001	1890.000			#	-	-
	mg/L	11/17/1999	0002	2030.000			#	-	-
	mg/L	02/15/2000	0001	2050.000			#	-	-
	mg/L	02/15/2000	0002	2060.000			#	-	-
	mg/L	05/31/2000	0001	2380.000			#	0.589	-
	mg/L	11/15/2000	0001	2750.000			#	0.2945	-
	mg/L	11/15/2000	0002	2740.000			#	0.2945	-
Sulfide	mg/L	10/05/1990	0001	7.1			#	0.1	-
	mg/L	06/05/1991	0001	1.7			#	1	-
	mg/L	04/17/1997	0001	1.0	U		#	1	-
	mg/L	11/19/1997	0001	1.0	U		#	1	-
	mg/L	05/13/1998	0001	1.0	U		#	1	-
	mg/L	11/19/1998	0001	1.0	U		#	1	-
	mg/L	02/18/1999	0001	1.0	U		#	1	-
Temperature	C	10/05/1990	N001	22.0			#	-	-
	C	06/05/1991	N001	22.1			#	-	-
	C	08/22/1991	N001	24.8			#	-	-
	C	12/13/1991	N001	8.9			#	-	-
	C	08/09/1992	N001	30.8			#	-	-
	C	06/23/1993	N001	20.9			#	-	-
	C	04/17/1997	N001	11.9			#	-	-
	C	11/19/1997	N001	9.7			#	-	-
	C	05/13/1998	N001	15.8			#	-	-
	C	11/19/1998	N001	13.8			#	-	-
	C	02/18/1999	N001	10.6			#	-	-
	C	05/18/1999	N001	23.9			#	-	-
	C	08/18/1999	N001	20.9			#	-	-
	C	11/17/1999	N001	8.9			#	-	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Temperature	C	02/15/2000	N001	14.6			#	-	-
	C	05/31/2000	N001	19.3			#	-	-
	C	11/15/2000	N001	8.4			#	-	-
Temperature of Zobell Soluti	C	05/31/2000	N001	21.7			#	-	-
	C	11/15/2000	N001	12.9			#	-	-
Thallium	mg/L	06/05/1991	0001	0.03	UI		#	0.03	-
Thorium-230	pCi/L	10/05/1990	0001	0.2			#	1	± 0.50
	pCi/L	06/05/1991	0001	1.7			#	1	± 0.60
Tin	mg/L	10/05/1990	0001	0.05	UI		#	0.05	-
	mg/L	06/05/1991	0001	0.05	UI		#	0.05	-
	mg/L	08/22/1991	0001	0.0050	U		#	0.005	-
Total Cyanide	mg/L	10/05/1990	0001	0.01	U		#	0.01	-
Total Dissolved Solids	mg/L	10/05/1990	0001	4760			#	10	-
	mg/L	06/05/1991	0001	3700			#	10	-
	mg/L	08/22/1991	0001	4100			#	10	-
	mg/L	12/13/1991	0001	3890			#	10	-
	mg/L	08/09/1992	0001	4200			#	42	-
	mg/L	06/23/1993	N001	4670			#	10	-
	mg/L	04/17/1997	0001	3740			#	-	-
	mg/L	11/19/1997	0001	5910			#	-	-
	mg/L	05/13/1998	0001	3650			#	-	-
	mg/L	11/19/1998	0001	5000			#	-	-
	mg/L	02/18/1999	0001	4220			#	-	-
	mg/L	05/18/1999	0001	3890			#	-	-
	mg/L	08/18/1999	0001	4500			#	-	-
	mg/L	11/17/1999	0001	3660			#	-	-
	mg/L	11/17/1999	0002	3610			#	-	-
	mg/L	02/15/2000	0001	3560			#	-	-
	mg/L	02/15/2000	0002	3530			#	-	-
	mg/L	05/31/2000	0001	4590			#	10	-
	mg/L	11/15/2000	0001	4930			#	10	-
	mg/L	11/15/2000	0002	4810			#	10	-
Total Kjeldahl Nitrogen	mg/L	10/05/1990	0001	1	U		#	1	-
	mg/L	06/05/1991	0001	2			#	1	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY
Total Organic Carbon	mg/L	10/05/1990	0001	8			#	1	-
	mg/L	06/05/1991	0001	7			#	1	-
	mg/L	04/17/1997	0001	11.9			#	-	-
	mg/L	11/19/1997	0001	14.3			#	-	-
	mg/L	05/13/1998	0001	3.0			#	-	-
	mg/L	11/19/1998	0001	6.3			#	-	-
	mg/L	02/18/1999	0001	1.6			#	-	-
Total Phosphorus as PO4	mg/L	10/05/1990	0001	0.1			#	0.1	-
	mg/L	04/17/1997	0001	0.0490	U		#	0.049	-
	mg/L	11/19/1997	0001	0.0530	B		#	-	-
	mg/L	05/13/1998	0001	0.0430	U		#	0.043	-
	mg/L	11/19/1998	0001	0.0430	U		#	0.043	-
	mg/L	02/18/1999	0001	0.0430	U		#	0.043	-
Turbidity	NTU	04/17/1997	N001	2.16			#	-	-
	NTU	11/19/1997	N001	20.6			#	-	-
	NTU	05/13/1998	N001	2.53			#	-	-
	NTU	11/19/1998	N001	0.43			#	-	-
	NTU	02/18/1999	N001	6.57			#	-	-
	NTU	05/18/1999	N001	1000	>		#	-	-
	NTU	08/18/1999	N001	43.8			#	-	-
	NTU	11/15/2000	N001	11.3			#	-	-
Uranium	mg/L	10/05/1990	0001	0.021			#	0.001	-
	mg/L	06/05/1991	0001	0.033			#	0.001	-
	mg/L	08/22/1991	0001	0.0336			#	0.0003	-
	mg/L	12/13/1991	0001	0.033			#	0.001	-
	mg/L	06/23/1993	0001	0.01			#	0.001	-
	mg/L	06/23/1993	N001	0.01			#	0.001	-
	mg/L	04/17/1997	0001	0.0342			#	-	-
	mg/L	11/19/1997	0001	0.0202			#	-	-
	mg/L	05/13/1998	0001	0.0232			#	-	-
	mg/L	11/19/1998	0001	0.0276			#	-	-
	mg/L	02/18/1999	0001	0.0302			#	-	-
	mg/L	05/18/1999	0001	0.0255			#	-	-
	mg/L	08/18/1999	0001	0.0218			#	-	-
	mg/L	11/17/1999	0001	0.0206			#	-	-
	mg/L	11/17/1999	0002	0.0192			#	-	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	ID	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Uranium	mg/L	02/15/2000	0001	0.0266			#	-	-
	mg/L	02/15/2000	0002	0.0269			#	-	-
	mg/L	05/31/2000	0001	0.029			#	-	-
	mg/L	11/15/2000	0001	0.0455			#	0.0001	-
	mg/L	11/15/2000	0002	0.0461			#	0.0001	-
Vanadium	mg/L	10/05/1990	0001	0.01	U		#	0.01	-
	mg/L	06/05/1991	0001	0.01	U		#	0.01	-
	mg/L	08/22/1991	0001	0.010			#	0.0051	-
	mg/L	12/13/1991	0001	0.01	U		#	0.01	-
	mg/L	08/09/1992	0001	0.05	U		#	0.05	-
	mg/L	04/17/1997	0001	0.0050	U		#	0.005	-
	mg/L	11/19/1997	0001	0.0079	B		#	-	-
	mg/L	05/13/1998	0001	0.0014	B		#	-	-
	mg/L	11/19/1998	0001	0.0010	U		#	0.001	-
	mg/L	02/18/1999	0001	0.0017	B		#	-	-
	mg/L	05/18/1999	0001	0.0018	B		#	-	-
	mg/L	08/18/1999	0001	0.0031	B	U	#	-	-
	mg/L	11/17/1999	0001	0.0022	B		#	-	-
	mg/L	11/17/1999	0002	0.0017	B		#	-	-
	mg/L	02/15/2000	0001	0.0024	B		#	-	-
	mg/L	02/15/2000	0002	0.0019	B		#	-	-
	mg/L	05/31/2000	0001	0.0015	B	U	#	-	-
	mg/L	11/15/2000	0001	0.0021	B		#	0.0013	-
	mg/L	11/15/2000	0002	0.0021	B		#	0.0013	-
Zinc	mg/L	10/05/1990	0001	0.03	UI		#	0.03	-
	mg/L	06/05/1991	0001	0.005	U		#	0.005	-
	mg/L	08/22/1991	0001	0.013			#	0.0026	-
	mg/L	12/13/1991	0001	0.005	U		#	0.005	-
	mg/L	08/09/1992	0001	0.02	U		#	0.02	-

SURFACE WATER QUALITY DATA BY LOCATION (USEE102) FOR SITE HAT01, MEXICAN HAT
LOCATION: 0256 GROUNDWATER SEEP
REPORT DATE: 1/22/2001 10:18 am

PARAMETER	UNITS	SAMPLE: DATE	SAMPLE: ID	RESULT	QUALIFIERS: LAB	QUALIFIERS: DATA	QUALIFIERS: QA	DETECTION LIMIT	UN-CERTAINTY

RECORDS: SELECTED FROM USEE102 WHERE site_code='HAT01' AND location_code in('0256') AND quality_assurance = TRUE AND (NOT (data_validation_qualifiers LIKE '*R*' OR data_validation_qualifiers LIKE '*X*') OR IsNull(data_validation_qualifiers))

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

- J Estimated value.
- G Possible grout contamination, pH > 9.
- R Unusable result.
- U Parameter analyzed for but was not detected.
- F Low flow sampling method used.
- L Less than 3 bore volumes purged prior to sampling.
- X Location is undefined.

QA QUALIFIER: # = validated according to Quality Assurance guidelines.