



**Horne Engineering
And Environmental
Services**

4501 Ford Avenue
Suite 1100
Alexandria, VA 22302
(703) 379-5800
Fax (703) 379-5809

January 30, 1995

Fort Huachuca

Dear Mr. Shaughnessey:

Re: Portable water source information verification

We appreciate you taking the time to assist us in verifying the information we currently have concerning your installation's water system. Attached are several sheets which present our understanding of what your installation currently maintains as a potable water source.

The tables are organized so that there is a column for each water source, be it Well 1, Well 2, etc. What we have attempted to do is identify all the active, inactive, reserve, and abandoned potable water sources and attribute as many details as possible to each. We have attempted to identify which aquifer the water source taps, and what raw water treatment facility handles the water sources output, as well as generic information concerning the installation proper. Also attached, is a page which describes the information that is presented in each data field.

In addition, we are seeking information concerning the proximity of the water source to a variety of potential pollution sources.

If you have any questions concerning this information please call me at (703) 379-5600.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bryant Bullock', written over a horizontal line.

Bryant Bullock

Enclosures

INSTALLATION	Ft. Huachuca
I.D. No./ARLOC	604289
MACOM	USAISC.
Town/City	Sierra Vista
County/Parish	Cochise County
State	AZ
Zip code	85613-6000
POC	Mike Shaughnessey
Office	DEH, Real Property Office
Telephone	(602) 533-1864

1-27-95: Left message

1-30-95: " " (602) 533-3709

, recalled & he said to Fax to

INSTALLATION	Ft. Huachuca	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SOURCE				
Potable Water Source	Well (75)	Well (75)	Well (75)	Well (75)
Source No./Name	1 (75)	2 (75)	3 (75)	4 (75)
AEHA Sample Location #				
Township/Station/Rge				
Source location				
Permit #/State ID #	55-626106 (301)	55-626111 (301)	55-626110 (301)	55-626109 (301)
Bldg. #/name				
Area served	Cantonment Area (83)	Cantonment Area (83)	Cantonment Area (83)	Cantonment Area (83)
Control	Army	Army	Army	Army
WHP Plan				
Classification				
Source status	1942 (226)	1942 (226)	1942 (226)	1942 (226)
Date constructed				
Date terminated				
Diameter (unspecified) (in)	14 (75)	14 (75)	16 (75)	18 (75)
Hole diameter (in)				
Casing diameter (outside) (in)				
Casing diameter (inside) (in)				
Screened/open hole interval (ft)	762 to 762/open hole (301)	710 to 710/open hole (301)	802 to 802/open hole (301)	912 to 912/open hole (301)
Depth (ft)	702 (75); 762 (301)	710 (75)	802 (75)	807 (75); 912 (301)
Specific yield (gpm/ft)				
Static water level (ft)	483 (75); 518 (301)	484 (75); 515 (301)	460 (75); 501 (301)	462 (75); 494 (301)
Water level while pumping	509 (83)	523 (83)	488 (83)	482 (83)
Pump capacity (gpm)	550 (75); 500 (301)	760(75); 700 (301)	700 (75)	700 (75)
Pump setting (ft)				
Notes				
AQUIFER INFORMATION				
Name				
Sole source				
Type				
Material	Partially cemented sand and gravel (83)			
Depth minimum (ft)				
Depth maximum (ft)				
Thickness average (ft)				
Conductivity (cm/s)				
Average depth to water (ft)				
Flow direction				
Recharge				
Notes				

INSTALLATION	Ft. Huachuca	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SYSTEM				
Name	Main Post Distribution System/TW 07			
State water supply number	02078 (301)	02078 (301)	02078 (301)	02078 (301)
Treatment	Chlorination and flouridation (75)			
Bldg. No./Name	70230			
Maximum capacity (mgd)	8.06 (3)			
Average production (mgpd)	2.6 (3)			
Population served	16039 (302)			
Non-DOD population served	10357 (302)			
Number of service connections				
Notes				
INSTALLATION INFORMATION				
Annual average precipitation (in)	14.5 (83)			
Evaporation (in)				
Recharge (in)				
Annual average temperature (F)				
Annual average minimum temperature (F)				
Annual average maximum temperature (F)				
Topography (%)				
Soils				
Vadose zone material				
Notes				
POTENTIAL CONTAMINANT SOURCE INFORMATION				
Landfill (proximity: mi.)				
Landfill (volume: yd3)				
Surface impoundment (proximity: mi.)				
Surface impoundment (vol. yd3)				
Drums (proximity: mi.)				
Drums (number)				
Tanks and non-drum containers (proximity: mi.)				
Tanks and non-drum containers (gal.)				
Contaminated soil (proximity: mi.)				
Contaminated soil (vol. yd3)				
Piles (proximity: mi.)				
Piles (vol. yd3)				
Land treatment (proximity: mi.)				
Land treatment (vol. yd3)				
Other				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SOURCE				
Potable Water Source	Well (75)	Well (75)	Well (75)	Well (75)
Source No./Name	5 (75)	6 (75)	7 (75)	8 (75)
AEHA Sample Location #				
Township/Stion/Rge				
Source location				
Permit #/State ID #	55-626108 (301)	55-626107 (301)	55-626105 (301)	55-626104 (301)
Bldg. #/name				
Area served	Cantonment Area (83)	Cantonment Area (83)	East Range (83)	East Range (83)
Control	Army	Army	Army	Army
WHP Plan				
Classification				
Source status	1942 (226)	1942 (226)		
Date constructed				
Date terminated				
Diameter (unspecified) (in)	18 (75)	16 (75)	14 (75)	14 (75)
Hole diameter (in)				
Casing diameter (outside) (in)				
Casing diameter (inside) (in)				
Screened/open hole interval (ft)	800 to 800/open hole (301)	803 to 1230 (301)	807 to 807/open hole (301)	422 to 422/open hole (301)
Depth (ft)	800 (75)	1200 (75); 1230 (301)	800 (75)	805 (75); 125 (301)
Specific yield (gpm/ft)				
Static water level (ft)	447 (75); 486 (301)	1039 (75); 523 (301)	480 (75); 500 (301)	470 (75); 217(301)
Water level while pumping	517 (83)	112 (83)	508 (83)	501 (83)
Pump capacity (gpm)	750 (75); 700 (301)	750 (75); 700 (301)	800 (75)	800 (75); 125 (301)
Pump setting (ft)				
Notes				
ADDITIONAL INFORMATION				
Name				
Sole source				
Type				
Material	Partially cemented sand and gravel (83)			
Depth minimum (ft)				
Depth maximum (ft)				
Thickness average (ft)				
Conductivity (cm/s)				
Average depth to water (ft)				
Flow direction				
Recharge				
Notes				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SYSTEM				
Name	Main Post Distribution System/TW 07			
State water supply number	02078 (301)	02078 (301)	02078 (301)	02078 (301)
Treatment	Chlorination and flouridation (75)			
Bldg. No./Name			15665 (75)	15665 (75)
Maximum capacity (mgd)				
Average production (mgpd)				
Population served				
Non-DOD population served				
Number of service connections				
Notes				
INSTALLATION INFORMATION				
Annual average precipitaton (in)				
Evaporation (in)				
Recharge (in)				
Annual average temperature (F)				
Annual average minimum temperature (F)				
Annual average maximum temperature (F)				
Topography (%)				
Soils				
Vadose zone material				
Notes				
POTENTIAL CONTAMINATION SOURCE INFORMATION				
Landfill (proximity: mi.)				
Landfill (volume: yd3)				
Surface impoundment (proximity: mi.)				
Surface impoundment (vol. yd3)				
Drums (proximity: mi.)				
Drums (number)				
Tanks and non-drum containers (proximity: mi.)				
Tanks and non-drum containers (gal.)				
Contaminated soil (proximity: mi.)				
Contaminated soil (vol. yd3)				
Piles (proximity: mi.)				
Piles (vol. yd3)				
Land treatment (proximity: mi.)				
Land treatment (vol. yd3)				
Other				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SOURCE				
Potable Water Source	Well (83)	Well (83)	Well (75)	Well (75)
Source No./Name				
AEHA Sample Location #				
Township/Station/Reg				
Source location				
Permit #/State ID #				
Bldg. #/name				
Area served	East Range (83)	East Range (83)	East Range (83)	East Range (83)
Control	Army	Army	Army	Army
WHP Plan				
Classification	Non-potable w/potable potential (83)	Non-potable w/potable potential (83)	Test well (83)	Test well (83)
Source status	Active (83)	Active (83)	Abandoned (83)	Abandoned (83)
Date constructed			1971 to 1972 (83)	1971 to 1972 (83)
Date terminated				
Diameter (unspecified) (in)			8 to 12 (83)	8 to 12 (83)
Hole diameter (in)				
Casing diameter (outside) (in)				
Casing diameter (inside) (in)				
Screened/open hole interval (ft)				
Depth (ft)			> 500 (83)	> 500 (83)
Specific yield (gpm/ft)				
Static water level (ft)				
Water level while pumping				
Pump capacity (gpm)				
Pump setting (ft)				
Notes	Service single building in remote area, workers bring bottled water for consumption (83)	Service single building in remote area, workers bring bottled water for consumption (83)		
SOIL INFORMATION				
Name				
Sole source				
Type				
Material				
Depth minimum (ft)				
Depth maximum (ft)				
Thickness average (ft)				
Conductivity (cm/s)				
Average depth to water (ft)				
Flow direction				
Recharge				
Notes				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SYSTEM				
Name				
State water supply number				
Treatment	Chlorination potential (83)	Chlorination potential (83)		
Bldg. No./Name				
Maximum capacity (mgd)				
Average production (mgpd)				
Population served				
Non-DOD population served				
Number of service connections				
Notes				
INSTALLATION INFORMATION				
Annual average precipitation (in)				
Evaporation (in)				
Recharge (in)				
Annual average temperature (F)				
Annual average minimum temperature (F)				
Annual average maximum temperature (F)				
Topography (%)				
Soils				
Vadose zone material				
Notes				
POTENTIAL CONTAMINANT SOURCE INFORMATION				
Landfill (proximity: mi.)				
Landfill (volume: yd3)				
Surface impoundment (proximity: mi.)				
Surface impoundment (vol. yd3)				
Drums (proximity: mi.)				
Drums (number)				
Tanks and non-drum containers (proximity: mi.)				
Tanks and non-drum containers (gal.)				
Contaminated soil (proximity: mi.)				
Contaminated soil (vol. yd3)				
Piles (proximity: mi.)				
Piles (vol. yd3)				
Land treatment (proximity: mi.)				
Land treatment (vol. yd3)				
Other				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SOURCE				
Potable Water Source	Well (83)	Well (83)	Well (83)	Well (83)
Source No./Name				
AEHA Sample Location #				
Township/Station/Rge				
Source location				
Permit #/State ID #				
Bldg. #/name				
Area served	East Range (83)	East Range (83)	East Range (83)	East Range (83)
Control	Army	Army	Army	Army
WHP Plan				
Classification	Test well (83)	Test well (83)	Test well (83)	Test well (83)
Source status	Abandoned (83)	Abandoned (83)	Abandoned (83)	Abandoned (83)
Date constructed	1971 to 1972 (83)			
Date terminated				
Diameter (unspecified) (in)	8 to 12 (83)			
Hole diameter (in)				
Casing diameter (outside) (in)				
Casing diameter (inside) (in)				
Screened/open hole interval (ft)				
Depth (ft)	> 500 (83)	> 500 (83)	> 500 (83)	> 500 (83)
Specific yield (gpm/ft)				
Static water level (ft)				
Water level while pumping				
Pump capacity (gpm)				
Pump setting (ft)				
Notes				
AQUIFER INFORMATION				
Name				
Sole source				
Type				
Material				
Depth minimum (ft)				
Depth maximum (ft)				
Thickness average (ft)				
Conductivity (cm/s)				
Average depth to water (ft)				
Flow direction				
Recharge				
Notes				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SYSTEM				
Name				
State water supply number				
Treatment				
Bldg. No./Name				
Maximum capacity (mgd)				
Average production (mgpd)				
Population served				
Non-DOD population served				
Number of service connections				
Notes				
INSTALLATION INFORMATION				
Annual average precipitation (in)				
Evaporation (in)				
Recharge (in)				
Annual average temperature (F)				
Annual average minimum temperature (F)				
Annual average maximum temperature (F)				
Topography (%)				
Soils				
Vadose zone material				
Notes				
POTENTIAL CONTAMINANT SOURCE INFORMATION				
Landfill (proximity: mi.)				
Landfill (volume: yd3)				
Surface impoundment (proximity: mi.)				
Surface impoundment (vol. yd3)				
Drums (proximity: mi.)				
Drums (number)				
Tanks and non-drum containers (proximity: mi.)				
Tanks and non-drum containers (gal.)				
Contaminated soil (proximity: mi.)				
Contaminated soil (vol. yd3)				
Piles (proximity: mi.)				
Piles (vol. yd3)				
Land treatment (proximity: mi.)				
Land treatment (vol. yd3)				
Other				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SOURCE				
Potable Water Source	Well (83)	Spring (75)	Well (75)	Prod. - raw source is Garden Canyon streams (83)
Source No./Name				
AEHA Sample Location #				
Township/Stion/Rge				
Source location				
Permit #/State ID #				
Bldg. #/name				
Area served	East Range (83)	Old Fort (75)	East Post (75)	Remote sites within training ranges (83)
Control	Army	Army	Army	Army
WHP Plan				
Classification	Test well (83)		?Potable (75)	Potable (83)
Source status	Abandoned (83)	Not in service (75)		
Date constructed	1971 to 1972 (83)			
Date terminated				
Diameter (unspecified) (in)	8 to 12 (83)			
Hole diameter (in)				
Casing diameter (outside) (in)				
Casing diamter (inside) (in)				
Screened/open hole interval (ft)				
Depth (ft)	> 500 (83)			
Specific yield (gpm/ft)		@400 (75)		
Static water level (ft)				
Water level while pumping				
Pump capacity (gpm)				
Pump setting (ft)				
Notes				
ADDITIONAL INFORMATION				
Name				
Sole source				
Type				
Material				
Depth minimum (ft)				
Depth maximum (ft)				
Thickness average (ft)				
Conductivity (cm/s)				
Average depth to water (ft)				
Flow direction				
Recharge				
Notes				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SYSTEM				
Name				
State water supply number				
Treatment				
Bldg. No./Name				
Maximum capacity (mgd)				
Average production (mgpd)				
Population served				
Non-DOD population served				
Number of service connections				
Notes				
INSTALLATION INFORMATION				
Annual average precipitation (in)				
Evaporation (in)				
Recharge (in)				
Annual average temperature (F)				
Annual average minimum temperature (F)				
Annual average maximum temperature (F)				
Topography (%)				
Soils				
Vadose zone material				
Notes				
POTENTIAL CONTAMINANT SOURCE INFORMATION				
Landfill (proximity: mi.)				
Landfill (volume: yd3)				
Surface impoundment (proximity: mi.)				
Surface impoundment (vol. yd3)				
Drums (proximity: mi.)				
Drums (number)				
Tanks and non-drum containers (proximity: mi.)				
Tanks and non-drum containers (gal.)				
Contaminated soil (proximity: mi.)				
Contaminated soil (vol. yd3)				
Piles (proximity: mi.)				
Piles (vol. yd3)				
Land treatment (proximity: mi.)				
Land treatment (vol. yd3)				
Other				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SOURCE				
Potable Water Source	Well (301)	Well (301)	Well (301)	Well (301)
Source No./Name	Well #SR (301)	Rembass No. 2 (301)	Rembass No. 1 (301)	Well #1 (301)
AEHA Sample Location #				
Township/Stion/Rge				
Source location				
Permit #/State ID #	55-626101 (301)	55-626102 (301)	55-626103 (301)	55-626112 (301)
Bldg. #/name				
Area served				Garden Canyon (301)
Control	Army	Army	Army	Army
WHP Plan				
Classification				
Source status	Reserve (301)	Reserve (301)	Reserve (301)	
Date constructed				
Date terminated				
Diameter (unspecified) (in)				
Hole diameter (in)				
Casing diameter (outside) (in)				
Casing diameter (inside) (in)				
Screened/open hole interval (ft)	750 to 750/open hole (301)	202 to 202/open hole (301)	420 to 420/open hole (301)	823 to 823/open hole (301)
Depth (ft)	750 (301)	202 (301)	420 (301)	823 (301)
Specific yield (gpm/ft)				
Static water level (ft)	329 (301)	17 (301)	217 (301)	518 (301)
Water level while pumping				
Pump capacity (gpm)	350 (301)	80 (301)	125 (301)	500 (301)
Pump setting (ft)				
Notes				
QUALITY INFORMATION				
Name				
Sole source				
Type				
Material				
Depth minimum (ft)				
Depth maximum (ft)				
Thickness average (ft)				
Conductivity (cm/s)				
Average depth to water (ft)				
Flow direction				
Recharge				
Notes				

INSTALLATION	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)	Ft. Huachuca (cont.)
WATER SYSTEM				
Name				
State water supply number				
Treatment				
Bldg. No./Name				
Maximum capacity (mgd)				
Average production (mgpd)				
Population served				
Non-DOD population served				
Number of service connections				
Notes				
INSTALLATION INFORMATION				
Annual average precipitation (in)				
Evaporation (in)				
Recharge (in)				
Annual average temperature (F)				
Annual average minimum temperature (F)				
Annual average maximum temperature (F)				
Topography (%)				
Soils				
Vadose zone material				
Notes				
POTENTIAL CONTAMINANT SOURCE INFORMATION				
Landfill (proximity: mi.)				
Landfill (volume: yd3)				
Surface impoundment (proximity: mi.)				
Surface impoundment (vol. yd3)				
Drums (proximity: mi.)				
Drums (number)				
Tanks and non-drum containers (proximity: mi.)				
Tanks and non-drum containers (gal.)				
Contaminated soil (proximity: mi.)				
Contaminated soil (vol. yd3)				
Piles (proximity: mi.)				
Piles (vol. yd3)				
Land treatment (proximity: mi.)				
Land treatment (vol. yd3)				
Other				

INSTALLATION	Ft. Huachuca (cont.)
GENERAL INFORMATION	
Potable Water Source	Well (301)
Source No./Name	
AEHA Sample Location #	
Township/Section/Rge	
Source location	
Permit #/State ID #	55-626113 (301)
Bldg. #/name	
Area served	
Control	Army
WHP Plan	
Classification	
Source status	Reserve (301)
Date constructed	
Date terminated	
Diameter (unspecified) (in)	
Hole diameter (in)	
Casing diameter (outside) (in)	
Casing diameter (inside) (in)	
Screened/open hole interval (ft)	350 to 350/open hole (301)
Depth (ft)	350 (301)
Specific yield (gpm/ft)	
Static water level (ft)	225 (301)
Water level while pumping	
Pump capacity (gpm)	35 (301)
Pump setting (ft)	
Notes	
CONSTRUCTION INFORMATION	
Name	
Sole source	
Type	
Material	
Depth minimum (ft)	
Depth maximum (ft)	
Thickness average (ft)	
Conductivity (cm/s)	
Average depth to water (ft)	
Flow direction	
Recharge	
Notes	

INSTALLATION	Ft. Huachuca (cont.)
Name	
State water supply number	
Treatment	
Bldg. No./Name	
Maximum capacity (mgd)	
Average production (mgpd)	
Population served	
Non-DOD population served	
Number of service connections	
Notes	
Annual average precipitaton (in)	
Evaporation (in)	
Recharge (in)	
Annual average temperature (F)	
Annual average minimum temperature (F)	
Annual average maximum temperature (F)	
Topography (%)	
Soils	
Vadose zone material	
Notes	
Landfill (proximity: mi.)	
Landfill (volume: yd3)	
Surface impoundment (proximity: mi.)	
Surface impoundment (vol. yd3)	
Drums (proximity: mi.)	
Drums (number)	
Tanks and non-drum containers (proximity: mi.)	
Tanks and non-drum containers (gal.)	
Contaminated soil (proximity: mi.)	
Contaminated soil (vol. yd3)	
Piles (proximity: mi.)	
Piles (vol. yd3)	
Land treatment (proximity: mi.)	
Land treatment (vol. yd3)	
Other	

INSTALLATION	
I.D. No./ARLOC	
MACOM	
Town/City	
County/Parish	
State	
Zip code	
POC	Who provided information.
Office	What office are they affiliated with (ex: DPW, Real Property, etc)
Telephone	
WATER SOURCE INFORMATION	
Potable Water Source	What are the potable water sources (surface water, spring, well, etc.) for the installation. List each one in a separate column.
Source No./Name	What name or number is used to identify the water source at the installation (ex: 1, 1A, Health Field well).
Township/Section/Range	
Source location	Where on the installation is the water source located (ex: 12 miles north of the cantonment area)
Permit #	What is the state, community or federal permit number for the water source.
Bldg. #/name	What building is the potable water source associated with.
Area served	What area of the installation is served by the potable water source.
Control	Who controls the potable water source (ex: Army, City, Municipality, etc.)
WHP Plan	If the water source uses groundwater, is there a WHP plan for the source. Identify if each source is covered under the plan.
Classification	Is the potable water source: Potable or non-potable; community or non-community; transient or non-transient; industrial or agricultural)
Source status	Is the water source: active; inactive; reserve; or abandoned.
Date constructed	In what year was the water source completed.
Date terminated	In what year was the water source removed from service.
Diameter (unspecified) (in)	What is the diameter of the well (ex: 8 inches)
Hole diameter (in)	What is the diameter of the drilled or dug hole (ex: 24 inches).
Casing diameter (outside) (in)	What is the diameter of the outside of the well casing (ex: 18 inches)
Casing diameter (inside) (in)	What is the diameter of the inside of the well casing (ex: 16 inches)
Screened/open hole interval (ft)	Over what intervals is the well open to the aquifer/formation (ex: 100 to 200 ft and 300 to 450 ft)
Depth (ft)	What is the completed depth of the well (ex: 450 ft)
Specific yield (g/ft)	What is the possible yield of the well or spring (ex: 450 gallons per minute).
Static water level (ft)	What is the depth to groundwater in each well when the pump is not in operation (ex: artesian, 23 ft below ground surface, etc.)
Drawdown (ft)	What is the depth to water in each well when the pump is in operation (ex: 45 ft below ground surface)
Pump capacity (gpm)	What is the rated capacity of the water extraction pump (ex: 100 gallons per minute)
Pump setting (ft)	At what depth in the well is the pump set (ex: 300 ft below ground surface)
Notes	Any comments on the water system (ex: the well was abandoned due to high nitrate concentrations)
AQUIFER INFORMATION	
Name	What is the name(s) of the water bearing units tapped by the well or spring (ex: Edward's aquifer)
Sole source	Is this aquifer the sole source of water for the installation.
Type	Is the aquifer: unconfined, confined, artesian, semi-confined/leaky, etc.
Material	What is the aquifer composed of (ex: sandstone, sand and gravel, silty sands, etc.)
Depth minimum (ft)	What is the average minimum depth of the aquifer beneath the installation (ex: 100 ft below ground level)
Depth maximum (ft)	What is the average maximum depth of the aquifer beneath the installation (ex: 500 ft below ground level)
Thickness average (ft)	What is the average thickness of the aquifer beneath the installation (ex: 250 ft)
Conductivity (cm/s)	What is the measured/calculated hydraulic conductivity of the aquifer, ideally based on a data collected from the well.
Average depth to water (ft)	At what depth can groundwater be found under the installation (ex: 25 feet)
Flow direction	What is the general flow direction of the aquifer, irrespective of changes due to pumping.
Recharge	In what area and how is the aquifer recharged (ex: direct recharge through infiltration of precipitation on the installation)
Notes	Any comments on the aquifer (ex: the water bearing zones are capped by 300 feet of dense clay, and are impervious)
WATER SYSTEM INFORMATION	
Name	What is the name of the raw water treatment system (East Area Water Treatment Plant), please assign each treatment plant to the water sources that supply its raw water.
State water supply number	What is the state identification number for the water treatment system (ex: WTP 1002)
Treatment	How is the raw water treated (ex: pre- and post chlorination, rapid sand filtration, aeration, chemical addition)
Bldg. No./Name	What is the water treatment plants building number.
Maximum capacity (mgd)	What is the maximum capacity in million gallons per day of the water treatment plant.
Average production (mgpd)	What is the average production of the water treatment plant based on actual usage.
Population served	How many people are served by the water system (the sum of all Army, civilian, family, full time reserve, or national guard personnel)
Non-DOD population served	How many non DOD personnel are served (sum of all civilians and families served)
Number of service connections	How many services connections are there which are fed by this water treatment plant (ex: 56)
Notes	Any comments on the plant.

INSTALLATION INFORMATION	
Annual average precipitation (in)	What is the average annual precipitation on the installation (ex: 45 inches)
Evaporation (in)	What is the average evaporation rate on the installation (ex: 45 inches)
Recharge (in)	What is the average recharge at the installation (ex: 0 inches)
Annual average temperature (F)	What is the average annual temperature at the installation (ex: 78 degrees fahrenheit)
Annual average minimum temperature (F)	What is the average annual minimum temperature at the installation (ex: 34 degrees fahrenheit)
Annual average maximum temperature (F)	What is the average annual maximum temperature at the installation (ex: 87 degrees fahrenheit)
Topography (%)	What is the characteristic topography of the installation (ex: slopes 1 to 2%, 2 to 6%, mildly rolling hills, etc.)
Soils	What are the major soil units at the installation, specifically in the vicinity of the water source and recharge areas (ex: silty loams, clayey organic sands, etc.)
Vadose zone material	What is the vadose zone comprised of, specifically in the vicinity of the water source and recharge areas (ex: silty sands, loose gravels, etc.)
Notes	Any comments on the installation.
POTENTIAL CONTAMINANT SOURCE INFORMATION	
Landfill (proximity: mi.)	How close is the nearest landfill to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Landfill (volume: yd3)	What is the approximate volume of the landfill (ex: 100,000 cubic yards)
Surface impoundment (proximity: mi.)	How close is the nearest surface impoundment to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Surface impoundment (vol. yd3)	What is the approximate volume of the surface impoundment (ex: 100,000 cubic yards)
Drums (proximity: mi.)	How close is the nearest drum field to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Drums (number)	How many drums are in this area (ex: 1,000)
Tanks and non-drum containers (proximity: mi.)	How close is the nearest tanks and non-drum containers to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Tanks and non-drum containers (gal.)	What is the total capacity of the containers in this area (ex: 100,000 gallons)
Contaminated soil (proximity: mi.)	How close is the nearest contaminated soil to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Contaminated soil (vol. yd3)	What is the approximate volume of the contaminated soil (ex: 100,000 cubic yards)
Piles (proximity: mi.)	How close is the nearest pile to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Piles (vol. yd3)	What is the approximate volume of the piles (ex: 100,000 cubic yards)
Land treatment (proximity: mi.)	How close is the nearest land treatment to each source of water (ex: 0.5 miles, 1.0 miles, etc.)
Land treatment (vol. yd3)	What is the approximate volume of the land treatment unit (ex: 100,000 cubic yards)
Other	Any comments on other existing conditions or potential sources of contamination.



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FAX FACSIMILE COVER SHEET

Date: 1-30-95
To: Mike Shaughnessy
Company: Ft. Huachuca
Reference: Wellhead Protection (WHP)
Fax number: (602) 533-3709

Total of 19 pages including this cover sheet

From: Bryant Bullock
Message: Thanks for your help, if you have had a WHP study performed it would be great if we could have a copy.