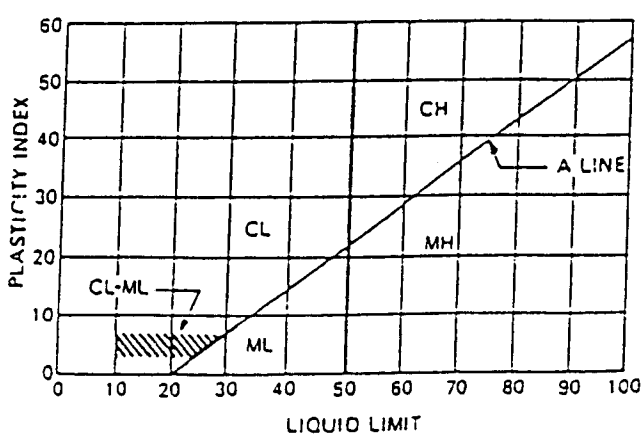
UNIFIED SOIL CLASSIFICATION SYSTEM

Soils are visually classified by the Unified Soil Classification system on the boring logs presented in this report. Grain-size analysis and Atterberg Limits Tests are often performed on selected samples to aid in classification. The classification system is briefly outlined on this chart. For a more detailed description of the system, see "The Unified Soil Classification System" Corp of Engineers, US Army Technical Memorandum No. 3-357 (Revised April 1960) or ASTM Designation: D2487-66T.

MAJOR DIVISIONS				GRAPHIC SYMBOL	GROUP SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS (Less than 50% passes No. 200 sieve)	GRAVELS (50% or less of coarse fraction passes No. 4 sieve)	CLEAN GRAVELS (Less than 5% passes No. 200 sieve)			GW	Well graded gravels, gravel-sand mixtures, or sand-gravel-cobble mixtures.
					GP	Poorly graded gravels, gravel-sand mixtures, or sand-gravel-cobble mixtures.
		GRAVELS WITH FINES (More than 12% passes No. 200 sieve)	Limits plot below "A" line & hatched zone on plasticity chart		GM	Silty gravels, gravel-sand-silt mixtures.
			Limits plot above "A" line & hatched zone on plasticity chart		GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction passes No. 4 sieve)	CLEAN SANDS (Less than 5% passes No. 200 seive)			SW	Well graded sands, gravelly sands.
					SP	Poorly graded sands, gravelly sands.
		SANDS WITH FINES (More than 12% passes No. 200 sieve)	Limits plot below "A" line & hatched zone on plasticity chart		SM	Silty sands, sand-silt mixtures.
			Limits plot above "A" line & hatched zone on plasticity chart		SC	Clayey sands, sand-clay mixtures.
FINE-GRAINED SOILS (50% or more passes No. 200 sieve)	SILTS (Limits plot below "A" line & hatched zone on plasticity chart)	SILTS OF LOW PLASTICITY (Liquid Limit Less Than 50)			ML	Inorganic silts, clayey silts with slight plasticity.
		SILTS OF HIGH PLASTICITY (Liquid Limit More Than 50)			MH	Inorganic silts, micaceous or diatomaceous silty soils, elastic silts.
	CLAYS (Limits plot above "A" line & hatched zone on plasticity chart)	CLAYS OF LOW PLASTICITY (Liquid Limit Less Than 50)			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		CLAYS OF HIGH PLASTICITY (Liquid Limit More Than 50)			CH	Inorganic clays of high plasticity, fat clays, sandy clays of high plasticity.

NOTE: Coarse grained soils with between 5% & 12% passing the No. 200 sieve and fine grained soils with limits plotting in the hatched zone on the plasticity chart to have double symbol.

PLASTICITY CHART



DEFINITIONS OF SOIL FRACTIONS

SOIL COMPONENT	PARTICLE SIZE RANGE
Cobbles	Above 3 in.
Gravel	3 in. to No. 4 sieve
Coarse gravel	3 in. to ¾ in.
Fine gravel	¾ in. to No. 4 sieve
Sand	No. 4 to No. 200
Coarse	No. 4 to No. 10
Medium	No. 10 to No. 40
Fine	No. 40 to No. 200
Fines (silt or clay)	Below No. 200 sieve

TERMINOLOGY USED TO DESCRIBE THE RELATIVE DENSITY, CONSISTENCY OR FIRMNESS OF SOILS

The terminology used on the boring logs to describe the relative density, consistency or firmness of soils relative to the standard penetration resistance is presented below. The standard penetration resistance (N) in blows per foot is obtained by the ASTM D1586 procedure using 2" O.D., 1 3/8" I.D. samplers.

1. Relative Density. Terms for description of relative density of cohesionless, uncemented sands and sand-gravel mixtures.

N	Relative Density
0-4	Very loose
5-10	Loose
11-30	Medium dense
31-50	Dense
50+	Very dense

2. Relative Consistency. Terms for description of clays which are saturated or near saturation.

N	Relative Consistency	Remarks
0-2	Very soft	Easily penetrated several inches with fist.
3-4	Soft	Easily penetrated several inches with thumb.
5-8	Medium stiff	Can be penetrated several inches with thumb with moderate effort.
9-15	Stiff	Readily indented with thumb, but penetrated only with great effort.
16-30	Very stiff	Readily indented with thumbnail.
30+	Hard	Indented only with difficulty by thumbnail.

3. Relative Firmness. Terms for description of partially saturated and/or cemented soils which commonly occur in the Southwest including clays, cemented granular materials, silts and silty and clayey granular soils.

N	Relative Firmness
0-4	Very soft
5-8	Soft
9-15	Moderately firm
16-30	Firm
31-50	Very firm
50+	Hard

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. 01

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, trace of gravel and cobbles, predominantly fine-grained, highly stratified, nonplastic, brown
		X	D		ML	slightly moist	**CLAYEY SILT**, some sand, predominantly fine-grained, slightly stratified, low plasticity, brown
5		X	D	1	SW	slightly moist	**SAND**, some gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
10					SM	slightly moist	**SILTY SAND**, trace of gravel, predominantly fine-grained, highly stratified, nonplastic, brown
15							Stopped excavation @ 11'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 02

OB NO. E95-126 DATE 12/27/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0			U			slightly moist	**SILTY SAND**, trace of gravel, predominantly fine-grained, subrounded to rounded, moderately stratified, nonplastic, brown Note: lenses of fine-grained sand below 2'
			D		SM		
			D				
5							
			U		SW	slightly moist	**SAND**, trace of gravel, well-graded, subrounded to rounded, moderately stratified, nonplastic, brown
							Stopped excavation @ 8'
10							
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 03

JOB NO. E95-126 DATE 12/22/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, predominantly fine-grained, slightly stratified, weakly cemented, nonplastic, brown
					SM		
			D				
5						slightly moist	**SAND**, predominantly fine to medium-grained, subangular, highly stratified, nonplastic, brown
			D				
					SP		
			D				Note: moist below 8' with some to considerable gravel and cobbles from 8'
10							
							Stopped excavation @ 12'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 04

JOB NO. E95-126 DATE 12/22/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, predominantly fine-grained, highly stratified, nonplastic, brown
					SM		
			U	4			
5			D			slightly moist	**SAND**, well-graded, some gravel, trace of cobbles, subrounded to rounded, highly stratified with gravel, nonplastic, brown
					SW		
10							
			D				
							Stopped excavation @ 12'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 05

JOB NO. E95-126 DATE 12/22/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, trace of gravel, predominantly fine-grained, weakly cemented, nonplastic, brown
						slightly moist	**SAND**, some silt and gravel, trace of cobbles, predominantly fine to medium-grained, subrounded, highly stratified with gravel layers, nonplastic, brown
5			U		SP		Note: highly stratified with layers of silt from 6' to 7'
							Note: highly stratified with gravel and cobble layers below 8'
10			U				Note: well-graded below 10'
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/22/95

LOG OF TEST PIT NO. 06

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER		
DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0		X	D		ML	slightly moist	**SANDY SILT**, trace of clay, slightly stratified, low plasticity, brown
5			U		SW	slightly moist	**SAND**, predominantly fine to medium-grained, highly stratified, nonplastic, brown
					ML	slightly moist	**CLAYEY SILT**, trace of gravel and cobbles, low plasticity, brown
10		X	D		SW	slightly moist	**SAND**, some gravel and cobbles, well-graded, nonplastic, brown
15							Stopped excavation @ 10' 6"
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/27/95

LOG OF TEST PIT NO. 07

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					ML	slightly moist	**CLAYEY SILT**, considerable silt, trace of gravel, subrounded to rounded, moderately stratified with gravel, low plasticity, brown
			U		SM	slightly moist	**SILTY SAND**, trace of gravel, predominantly fine-grained, subrounded to rounded, highly stratified, nonplastic, brown
5			D				
					SW	slightly moist	**SAND**, some gravel, well-graded, subrounded to rounded, highly stratifed, nonplastic, brown
10			D				
15							Stopped excavation @ 12' 6"
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 08

OB NO. E95-126 DATE 12/22/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SC	slightly moist to moist	**CLAYEY SAND**, considerable silt, trace of gravel, predominantly fine-grained, subrounded to rounded, moderately stratified, low to medium plasticity, brown
			D				
					SP	moist	**SAND**, some silt, trace of clay, trace of gravel and cobbles, predominantly fine to medium-grained, subrounded to rounded, moderately stratified, nonplastic, brown
			U	19	CL	very moist	**SANDY CLAY**, highly stratified, medium to high plasticity, brown
5			D				
					SW	moist	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
10							
15							Stopped excavation @ 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 09

OB NO. E95-126 DATE 12/28/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classifi-tion	REMARKS	VISUAL CLASSIFICATION
0					GW	slightly moist	**GRAVELLY SAND**, some to considerable cobbles, well-graded, subrounded to rounded, moderately stratified, nonplastic, dark brown
5		X	D				
					SW	slightly moist	**SAND**, well-graded, subrounded to rounded, highly stratified, nonplastic, dark brown
10		X	D				
					GW	slightly moist	**GRAVELLY SAND**, some to considerable cobbles, well-graded, subrounded to rounded, moderately stratified, nonplastic, dark brown
		X	D				
					SW	slightly moist	**SAND**, well-graded, subrounded to rounded, nonplastic, dark brown
15							Stopped excavation to 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/28/95

LOG OF TEST PIT NO. 10

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0			U		SM	slightly moist	**SILTY SAND**, trace of clay, predominantly fine-grained, subrounded, highly stratified, nonplastic, brown
			D		SC	slightly moist	**CLAYEY SAND**, considerable silt, predominantly fine-grained, moderately stratified, low plasticity, brown
5			D		SM	slightly moist	**SILTY SAND**, some gravel, trace of clay, predominantly fine-grained, subrounded to rounded, highly stratified, nonplastic, brown Note: stratified with well-graded sand and cobbles below 8'
10			D		SP	slightly moist	**SAND**, some gravel and cobbles, predominantly medium-grained, subrounded to rounded, nonplastic, dark brown
15							Stopped excavation @ 13'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/28/95

LOG OF TEST PIT NO. 11

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent Dry Weight	Unified Soil Classifi-tion	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, predominantly fine-grained, subrounded to rounded, moderately to highly stratified, nonplastic, brown
			U		SM		Note: trace of rubbish to 3'
5							
				13		moist	**CLAY**, some silt, weakly cemented, medium to high plasticity, brown
			D		CL		
10							
						slightly moist	**SAND**, trace of clay, well-graded, considerable gravel and cobbles, subrounded to rounded, nonplastic, orange brown
					SW		
15							Stopped excavation @ 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/28/95

LOG OF TEST PIT NO. 12

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SC	slightly moist	**CLAYEY SAND**, considerable silt, predominantly fine-grained, subrounded to rounded, slightly stratified, low plasticity, brown Note: glass shards present
			D				
					SM	slightly moist	**SILTY SAND**, trace of gravel, predominantly fine-grained, highly stratified, nonplastic, brown Note: rubbish within this layer
					SC	slightly moist	**CLAYEY SAND**, considerable silt, predominantly fine-grained, subrounded to rounded, moderately stratified, low plasticity, brown Note: contains silty sand lenses Note: contains rubbish @ 4'
5							
10					SW	moist	**SAND**, some clay, trace of gravel, predominantly medium-grained to well-graded, subrounded to rounded, nonplastic, dark brown
			D				
15							Stopped excavation @ 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/27/95

LOG OF TEST PIT NO. 13

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classifi-tion	REMARKS	VISUAL CLASSIFICATION
0			D		SM	slightly moist	**SILTY SAND**, predominantly fine-grained, moderately stratified, nonplastic, brown
					SC	slightly moist	**CLAYEY SAND**, considerable gravel and cobbles, subrounded to rounded, medium plasticity, brown
			D				
						slightly moist	**SAND**, trace to some gravel and cobbles, well-graded, subrounded to rounded, highly sdtratified, nonplastic, brown
5			U				
					SW		
							Note: reddish-brown, gap graded below 9'
10							
			D				
							Stopped excavation @ 13' 6"
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/28/95

LOG OF TEST PIT NO. 14

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, predominantly medium-grained to well-graded, highly stratified, nonplastic, brown
					SM		
			D				Note: predominantly fine-grained, trace of clay below 4'
5							
						slightly moist	**SAND**, some gravel, trace of clay, predominantly coarse-grained, subrounded to rounded, highly stratified, nonplastic, brown
					SP		
							Note: considerable gravel below 8'
			D	2			
10						slightly moist	**CLAYEY SAND**, predominantly fine to medium-grained, subrounded to rounded, slightly stratified, low to medium plasticity, brown
					SC		
			D				
15							Stopped excavation @ 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/2/96

LOG OF TEST PIT NO. 15

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, predominantly fine-grained, subrounded to rounded, highly stratified, nonplastic, brown
					SW	slightly moist	**SAND**, some gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
5			D		SC	slightly moist	**CLAYEY SAND**, considerable silt, trace of gravel and cobbles, predominantly fine-grained, moderately stratified, low to medium plasticity, brown
10			D				
					SW	slightly moist	**SAND**, some gravel and cobbles, well-graded, subrounded to rounded, moderate to highly stratified, nonplastic, brown
			D				
15							Stopped excavation @ 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/2/96

LOG OF TEST PIT NO. 16

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to moist	**SILTY SAND**, some gravel, predominantly fine to medium-grained, subrounded to rounded, highly stratified, low plasticity, brown
					SM		
5		X	D	4			
					SC	moist	**CLAYEY SAND**, considerable cobbles and gravel, predominantly fine-grained, moderately stratified, low plasticity, dark brown
		X	D				
						moist	**SAND**, considerable gravel and cobbles, well-graded, subrounded to rounded, nonplastic, brown
		X	D		SW		
10							
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 17

JOB NO. E95-126 DATE 1/2/96

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0		X	D		SW	slightly moist	**SAND**, trace of gravel, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
						slightly moist to moist	**CLAYEY SAND**, trace of gravel, some silt, predominantly fine-grained, moderately stratified, low plasticity, dark brown
			U	12			
					SC		Note: considerable gravel below 3-1/2'
5		X	D				
						slightly moist to moist	**SAND**, considerable gravel, well-graded, subrounded to rounded, nonplastic, brown
					SW		
10		X	D				
							Stopped excavation @ 12'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/2/96

LOG OF TEST PIT NO. 18

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SANDY CLAY**, trace to some gravel, moderately to slightly stratified, medium to high plasticity, brown
					CL		
5			D				
10					SM	slightly moist	**SILTY SAND**, considerable gravel and cobbles, predominantly fine to medium-grained, subrounded to rounded, slightly to moderately stratified, moderately lime cemented, nonplastic, light brown
			D				
15							Stopped excavation @ 12'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/2/96

LOG OF TEST PIT NO. 19

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, predominantly fine-grained, highly stratified, nonplastic, brown
5			D			moist	**CLAYEY SAND**, some gravel and cobbles, predominantly fine-grained, subrounded to rounded, moderately stratified, medium plasticity, brown
			D		SC		
					SW	slightly moist	**SAND**, considerable gravel and cobbles, well-graded, subrounded to rounded, moderately stratified, nonplastic, brown
10			D				
15							Stopped excavation @ 12'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/21/95

LOG OF TEST PIT NO. 20

GROUNDWATER

DEPTH	HOUR	DATE
	None	

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to very moist	**SAND**, trace of gravel and cobble, well-graded, subrounded to rounded, nonplastic, brown
		X	D				
					SW		
5							
		X	D				Note: trace of some gravel and cobbles below 8'
10		X	D				
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/21/95

LOG OF TEST PIT NO. 21

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
3.0	9:40	12/21/95

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						moist to saturated	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, nonplastic, brown
			D				
					SW		
			D				Note: grey to black in color below 4'
5							Stopped excavation @ 5'
10							
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 22

JOB NO. E95-126 DATE 12/21/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
4.0	8:30	12/21/95

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						moist to saturated	**SAND**, well-graded, subrounded to rounded, nonplastic, brown
					SW		Note: trace to some cobbles below 3'
5			D				
			D		SC	saturated	**CLAYEY SAND**, some cobbles, trace of gravel, well-graded, subrounded to rounded, low plasticity, brown
			D		SW	saturated	**SAND**, some cobbles and gravel, well-graded, subrounded to rounded, nonplastic, brown
10							
15							Stopped excavation @ 13'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/21/95

LOG OF TEST PIT NO. 23

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
10.0	11:30	12/21/95

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					ML	slightly moist	**SANDY SILT**, nonplastic, brown
			D			moist to very moist	**SAND**, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
					SW		
5			D				Note: stratified layers of gravel and cobbles below 5'
10			D				Note: predominantly coarse-grained below 10'
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 24

JOB NO. E95-126 DATE 12/21/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
10.0	1:30	12/21/95

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						moist to saturated	**SAND**, well-graded, subrounded to rounded, highly stratified, nonplastic, brown Note: stratified layers of gravel and cobbles below 1'
			D				
					SW		
5			D				
							Note: stratified layers that are gray-black in color from 8' to 9'
10			D				
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/21/95

LOG OF TEST PIT NO. 25

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
3.0	2:10	12/21/95

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						moist to saturated	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
		X	D				
					SW		
5		X	D				
							Stopped excavation @ 6'
10							
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/21/95

LOG OF TEST PIT NO. 26

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
2.0	3:03	12/21/95

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						moist to saturated	**SAND**, some cobble, well-graded, subrounded to rounded, moderately stratified, nonplastic, brown
							Note: orange-brown below 2'
		X	D				
		X	D		SW		Note: considerable cobbles and gravel, predominantly fine to medium grained below 4'
5							
10		X	D				
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 27

JOB NO. E95-126 DATE 12/21/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to moist	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
					SW		
5			D				Note: considerable gravel below 5-1/2'
							Note: orange-brown below 8'
10			D				
					GW	moist	**GRAVELLY SAND**, well-graded, subrounded to rounded, nonpalstic, orange-brown
15							Stopped excavation @ 14'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 28

JOB NO. E95-126 DATE 12/5/95

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0			D	2	SM	slightly moist to moist	**SILTY SAND**, considerable gravel and cobbles, predominantly fine-grained, slightly to moderately stratified, nonplastic, light brown
			D			slightly moist to moist	**CLAYEY SAND**, considerable gravel and cobbles, well-graded, subrounded to rounded, low to medium plasticity, orange-brown
					SC		
5							
10			D				
							Stopped excavation @ 11'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 29

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
6.0	10:35	1/5/96

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, predominantly fine-grained, nonplastic, brown
						moist	**SAND**, well-graded, subrounded to rounded, nonplastic, brown
			D		SW		
5			D			very moist to saturated	**SILTY SAND**, predominantly medium-grained, nonplastic, gray-green-brown
					SM		
10			D				Stopped excavation @ 10'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 30

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
4.0	10:55	1/5/96

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to saturated	**SAND**, trace to some gravel, well-graded, subrounded to rounded, nonplastic, brown
			D		SW		
5							
							Stopped excavation @ 6'
10							
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 31

597+97.45

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
2.0	11:30	1/5/96

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SW	moist to very moist	**SAND**, trace to some gravel, well-graded, nonplastic, brown
						very moist to saturated	**GRAVELLY SAND**, some silt, predominantly coarse-grained, subrounded to rounded, nonplastic, brown
			D		GP		
			D	13			
5							Stopped excavation @ 5'
10							
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 32

590+00

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
6.0	11:57	1/5/96

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to saturated	**SAND**, some to considerable gravel and cobbles, well-graded, subrounded to rounded, moderately stratified, nonplastic, brown
			D		SW		
5			D				
10							Stopped excavation @ 7'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 33

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to very moist	**SAND**, trace to some gravel and cobbles, well-graded, subrounded to rounded, highly to moderately stratified, nonplastic, brown
		X	D				
					SW		
5		X	D				
10							Stopped excavation @ 9'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 34

570 on Alignment

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to very moist	**GRAVELLY SAND**, some cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
		X	D	3	GW		
5		X	D				
						very moist	**CLAYEY SAND**, well-graded, subrounded to rounded, low plasticity, brown
					SC		
10							
15							Stopped excavation @ 12' 6"
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 35

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to very moist	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly to moderately stratified, nonplastic, brown
			D				
					SW		
5			D				
					SM	very moist	**SILTY SAND**, predominantly fine to medium-grained, nonplastic, brown
10							Stopped excavation @ 10'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/5/96

LOG OF TEST PIT NO. 36

550+00

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SW	slightly moist to moist	**SAND**, some gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
		X	D			very moist	**GRAVELLY SAND**, considerable cobbles, predominantly coarse-grained, subrounded to rounded, nonplastic, brown
					GP		
5		X	D				
					CL	moist	**SANDY CLAY**, medium plasticity, brown
10		X	D	39			
							Stopped excavation @ 10'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 12/8/95

LOG OF TEST PIT NO. 37

540+00

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to moist	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
		X	D				
					SW		
5		X	D				
10					SC	moist	**CLAYEY SAND**, some gravel and cobbles, well-graded, subrounded to rounded, moderately stratified, low to medium plasticity, brown
		X	D				
15							Stopped excavation @ 12'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. 38

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to moist	**SAND**, trace of gravel and cobbles, predominantly coarse-grained, subrounded to rounded, highly stratified, nonplastic, brown
		X	D				
					SP		
				4			
5		X	D				Note: some to considerable gravel and cobbles below 5'
10						moist	**CLAYEY SAND**, some cobbles and gravel, well-graded, subrounded to rounded, moderately to highly stratified, low to medium plasticity, brown
					SC		
		X	D				
15							Stopped excavation @ 12'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
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PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. 39

GROUNDWATER		
DEPTH	HOUR	DATE
	None	

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to moist	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
					SW		
		X	D				
5		X	D			moist	**CLAYEY SAND**, trace of gravel and cobbles, predominantly medium-grained, subrounded to rounded, moderately to slightly stratified, low to medium plasticity, brown
					SC		
10		X	D				
15							Stopped excavation @ 13'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

LOG OF TEST PIT NO. 40

JOB NO. E95-126 DATE 1/8/96

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SW	slightly moist to moist	**SAND**, trace of gravel and cobbles, well-graded, subrounded to rounded, highly stratified, nonplastic, brown
			D			moist	**CLAYEY SAND**, trace of gravel and cobbles, preodminantly fine to medium-grained, subrounded to rounded, slightly to moderately stratified, low to medium plasticity, brown
5			D		SC		Note: increased clay content and slightly stratified below 6-1/2'
10			D				
15							Stopped excavation @ 13'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. 41

GROUNDWATER		
DEPTH	HOUR	DATE
	None	

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist to moist	**SAND**, trace of gravel and cobbles, predominantly medium-grained, subrounded to rounded, highly stratified, nonplastic, brown
		X	D				
					SP		
5		X	D				
10					SC	moist	**CLAYEY SAND**, predominantly fine to medium-grained, slightly stratified, low to medium plasticity, brown
		X	D				
15							Stopped excavation @ 12'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 11/8/95

LOG OF TEST PIT NO. M-1

BACKHOE TYPE Case 580
LOCATION
ELEVATION
DATUM

GROUNDWATER		
DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILT**, trace of sand, trace of clay, nonplastic, brown
					ML		
			U				Note: increasing clay content, low plasticity from 4' - 5'
5				6			
			D				
					SC	slightly moist	**CLAYEY SAND**, some to considerable gravel and cobbles, predominantly fine to medium-grained, weakly lime cemented, low plasticity, brown
10			D		SM	slightly moist	**SILTY SAND**, some to considerable gravel and cobbles, some clay, predominantly fine-grained, low plasticity, brown
15							Stopped excavation @ 13'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 11/8/95

LOG OF TEST PIT NO. M-2

BACKHOE TYPE Case 580
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, trace of clay, predominantly fine-grained, nonplastic, brown
					SM		
			D				Note: contains lenses of well-graded sand below 3'
5							
						slightly moist	**CLAYEY SILT**, trace of sand, low plasticity, brown
			U	13	ML		
			D				
					SC	slightly moist	**CLAYEY SAND**, predominantly fine-grained, low to medium plasticity, brown
10							Note: considerable gravel and cobbles below 10'
							Stopped excavation @ 12'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 11/10/95

LOG OF TEST PIT NO. M-3

GROUNDWATER		
DEPTH	HOUR	DATE
	None	

BACKHOE TYPE Case 580
LOCATION
ELEVATION
DATUM

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0			D		SM	slightly moist	**SILTY SAND**, trace of gravel, predominantly fine-grained, nonplastic, brown Note: highly stratified from 6" to 1-1/2' Note: trace of clay from 1-1/2' to 3-1/2' Note: sand lenses below 3-1/2'
5			D		ML	slightly moist	**CLAYEY SILT**, low to medium plasticity, brown Note: weakly lime cemented from 5' to 5-1/2' Note: thin lenses of sand below 5-1/2' Note: no gravel below 6'
10							
15							Stopped excavation @ 11'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. M-4

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**CLAYEY SILT**, some sand, moderately stratified, low to medium plasticity, brown
		X	D				
					ML		
5		X	D				
		X	D		GP	slightly moist	**GRAVELLY SAND**, some to considerable cobbles, predominantly fine to medium-grained, subrounded to rounded, stratified, nonplastic, orange-brown
10							Stopped excavation @ 10'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 11/10/95

LOG OF TEST PIT NO. M-5

BACKHOE TYPE Case 580
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, trace of clay, predominantly fine-grained, nonplastic, brown
			D		SC	slightly moist	**CLAYEY SAND**, considerable silt, predominantly fine-grained, low plasticity, brown
5					ML	slightly moist	**CLAYEY SILT**, medium plasticity, brown Note: weakly lime cemented from 5' to 6'
10			D		SC	slightly moist	**CLAYEY SAND**, some gravel, predominantly fine to medium-grained, low to medium plasticity, orange-brown
15							Stopped excavation @ 12' 6"
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 11/10/95

LOG OF TEST PIT NO. M-6

BACKHOE TYPE Case 580
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, with sand lenses, trace of clay, predominantly fine to medium-grained, nonplastic, brown
					SM		
		X	D				
		X	D		SC	slightly moist	**CLAYEY SAND**, predominantly fine-grained, low plasticity, brown Note: some gravel and cobbles below 4'
5					SM	slightly moist	**SILTY SAND**, predominantly fine to medium-grained, nonplastic, brown Note: contains lenses of clayey silt
		X	D			slightly moist	**CLAYEY SILT**, medium plasticity, brown Note: weakly lime cemented from 6-1/2' to 7'
10					ML		
					SC	slightly moist	**CLAYEY SAND**, trace of gravel, predominantly fine to medium-grained, low to medium plasticity, brown
15							Stopped excavation @ 13' 6"
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. M-7

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**CLAYEY SILT**, some sand, slightly stratified, weakly cemented, low plasticity, brown
					ML		
5		X	D				
					SW	slightly moist	**SAND**, some gravel, predominantly fine to medium-grained, subrounded to rounded, slightly stratified, nonplastic, orange-brown
		X	D				
10							Stopped excavation @ 10'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 11/10/95

LOG OF TEST PIT NO. M-8

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, trace of gravel, predominantly fine to medium-grained, nonplastic, brown Note: highly stratified, some to considerable gravel, some cobbles, well-graded from 1-1/2' to 6'
					SM		
5							Note: highly stratified, predominantly fine-grained below 6'
			U	15		slightly moist	**SILT**, trace of clay, nonplastic, brown
10					ML		
15							Stopped excavation @ 12'
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. M-9

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0						slightly moist	**SILTY SAND**, predominantly fine-grained, nonplastic, brown Note: predominantly fine to medium-grained, trace to some gravel and cobbles from 1-1/2' to 3' Note: well-graded, highly stratified with silt lenses below 3'
					SM		
5							
					SW	slightly moist	**SAND**, with gravel and cobble lenses, well-graded, nonplastic, brown
			D				
10			U	18		slightly moist	**CLAY**, some silt, medium to high plasticity, brown
					CL		
							Stopped excavation @ 12'
15							
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

AGRA
EARTH & ENVIRONMENTAL, INC.

PROJECT Pima County Discharge
Pima County, Arizona

JOB NO. E95-126 DATE 1/8/96

LOG OF TEST PIT NO. M-10

BACKHOE TYPE Ford 655D
LOCATION
ELEVATION
DATUM

GROUNDWATER

DEPTH	HOUR	DATE
	None	

Depth in Feet	Graphical Log	Sample	Sample Type	Moisture Content Percent of Dry Weight	Unified Soil Classification	REMARKS	VISUAL CLASSIFICATION
0					SM	slightly moist	**SILTY SAND**, some clay, with well-graded sand lenses, predominantly fine-grained, nonplastic, brown
					SC	slightly moist	**CLAYEY SAND**, considerable silt, predominantly fine-grained, low plasticity, brown
5					SW	slightly moist	**SAND**, some gravel, well-graded, highly stratified, with gravel and clayey sand layers, nonplastic, brown
10			D		ML	slightly moist	**SILT**, trace of clay, nonplastic, brown
			U	3			
15							Stopped excavation @ 11' 6"
20							
25							

SAMPLE TYPE
B - Undistured Block Sample.
D - Disturbed Bulk Sample.

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