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  - [x] *Report date*
  - [x] *Project Name*
  - [x] *Company's job number*
  - [ ] *Site address*
- [x] Executive Summary / Introduction of the report
- [ ] Table of contents
- [x] Project Location Map / Vicinity Map
- [x] Site / Exploration Plans, Boring Location Plans
- [x] Cross-sections / Subsurface profiles
- [ ] Exploration Logs
- [ ] Monitoring Well Logs
- [x] Cone Penetrometer Logs
- [ ] Groundwater Elevation Tables / Data

- [ ] Includes data from Previous Reports
- [ ] No new data / data review
- [ ] Missing Data / Illegible Data
  Explanation _____

Comments: _____

4846

49/49

11-26-04

DRAFT TECHNICAL REPORT ON EARTH, WATER, TOXIC AND HAZARDOUS MATERIALS LAKEPOINTE MASTER PLAN EIS KING COUNTY, WASHINGTON

1126049001

MAIR9005

STEVE BOTTHEIM
DDES/LAND USE SERVICES
MS 1-B

AGRA
Earth & Environmental

11-26-04

DRAFT TECHNICAL REPORT ON EARTH, WATER, TOXIC AND HAZARDOUS MATERIALS LAKEPOINTE MASTER PLAN EIS KING COUNTY, WASHINGTON

1126049001

B96C9005

Submitted to:

Pacific Rim Equities
11 Crescent Key
Bellevue, Washington 98006

Submitted by:

AGRA Earth & Environmental, Inc.
11335 N.E. 122nd Way, Suite 100
Kirkland, Washington 98034-6918

November 1996

6-91M-10459-E

AGRA
Earth & Environmental

AGRA
Earth & Environmental

AGRA Earth &
Environmental, Inc.
11335 NE 122nd Way
Suite 100
Kirkland, Washington
U.S.A. 98034-6918
Tel (206) 820-4669
Fax (206) 821-3914

8 November 1996
6-91M-10459-E

Pacific Rim Equities
11 Crescent Key
Bellevue, Washington 98006

Attention: Mr. Mike Gleason

Subject: Draft Technical Report on
Earth, Water, Toxic and Hazardous Materials
Lakepointe Master Plan EIS
King County, Washington

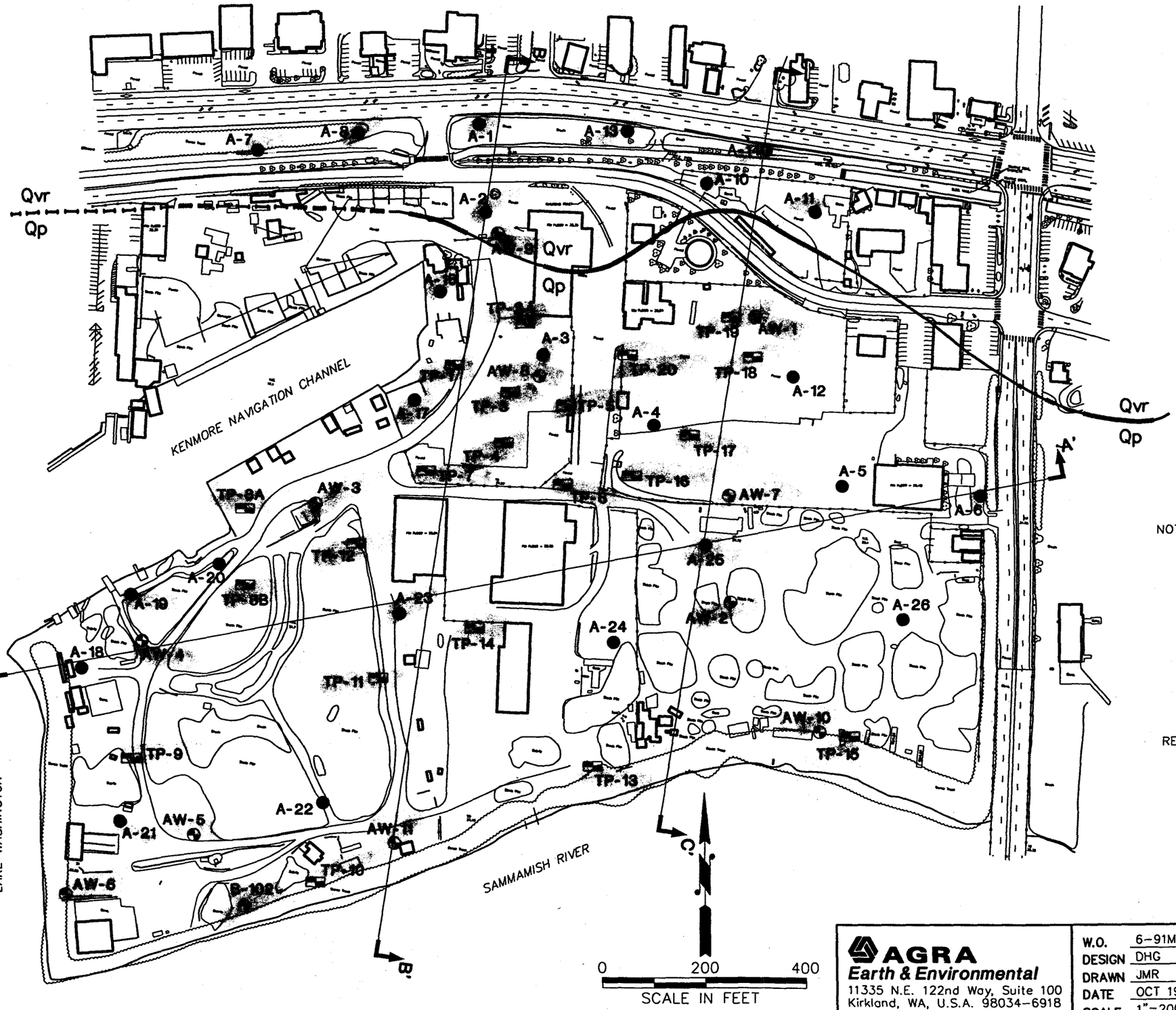
Dear Mr. Gleason:

As requested by you, AGRA Earth & Environmental, Inc. (AEE) is pleased to submit this draft technical report as partial response to the "Scope of Work, Lakepointe Master Plan, (File Nos. A95P0105, A95P0218, A95P0219), Supplemental Environmental Impact Statement," dated 3/5/96, as prepared by King County Department of Development and Environmental Services (DDES). Specifically, we have addressed the assigned portions of the following sections of the EIS:

ELEMENTS OF THE NATURAL ENVIRONMENT
A. EARTH
Affected Environment
Significant Impacts
C. WATER
Affected Environment
2. Groundwater (all subsections)

Significant Impacts
1. Surface Water (subsections d., e., f., g., and h.)
2. Groundwater (all subsections)

ELEMENTS OF THE BUILT ENVIRONMENT
B. TOXIC AND HAZARDOUS MATERIALS
Affected Environment
Significant Impacts



LEGEND

AW-11 — GROUNDWATER MONITORING WELL NUMBER AND LOCATION

A-26 — GEOTECHNICAL BORING NUMBER AND LOCATION

TP-20 — TEST PIT NUMBER AND LOCATION

A — A' — ALIGNMENT OF GENERALIZED GEOLOGIC CROSS SECTION

Qvr / Qp — GEOLOGIC CONTACT (DASHED WHERE INFERRED)

Qp – PEAT

ACCUMULATIONS OF ORGANIC MATERIAL. MAY CONTAIN SMALL AMOUNTS OF SAND, SILT, CLAY AND VOLCANIC ASH DEPOSITED IN SWAMPS AND BAYS.

Qvr – VASHON RECESSIONAL OUTWASH

LIGHT BROWN, LOOSELY COMPACTED SAND AND GRAVEL, WELL-ROUNDED FROM STREAM TRANSPORTATION. SORTING VARIES; PARTICLE SIZE VARIES FROM MEDIUM SAND TO COBBLES.

NOTES: INFORMATION REGARDING THE EXTENT OF PEAT SOILS WAS SUPPLEMENTED BY PREVIOUS STUDIES PERFORMED FOR RIGHT-OF-WAYS AND FOR METRO SEWER STATION, AND BY REVIEW OF AERIAL PHOTOGRAPHS OF THE SITE AND VICINITY.

THE GEOLOGIC DEPOSITS SHOWN REPRESENT NATIVE SOIL CONDITIONS BELOW ARTIFICIAL FILLS.

MONITORING WELL B-102 WAS INSTALLED BY OTHERS. REFER TO REVISED: PHASE II ENVIRONMENTAL STUDY – KENMORE PRE-MIX SITE, BY GEOTECH CONSULTANTS, INC., DATED 24 JANUARY 1991.

REFERENCE:

U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

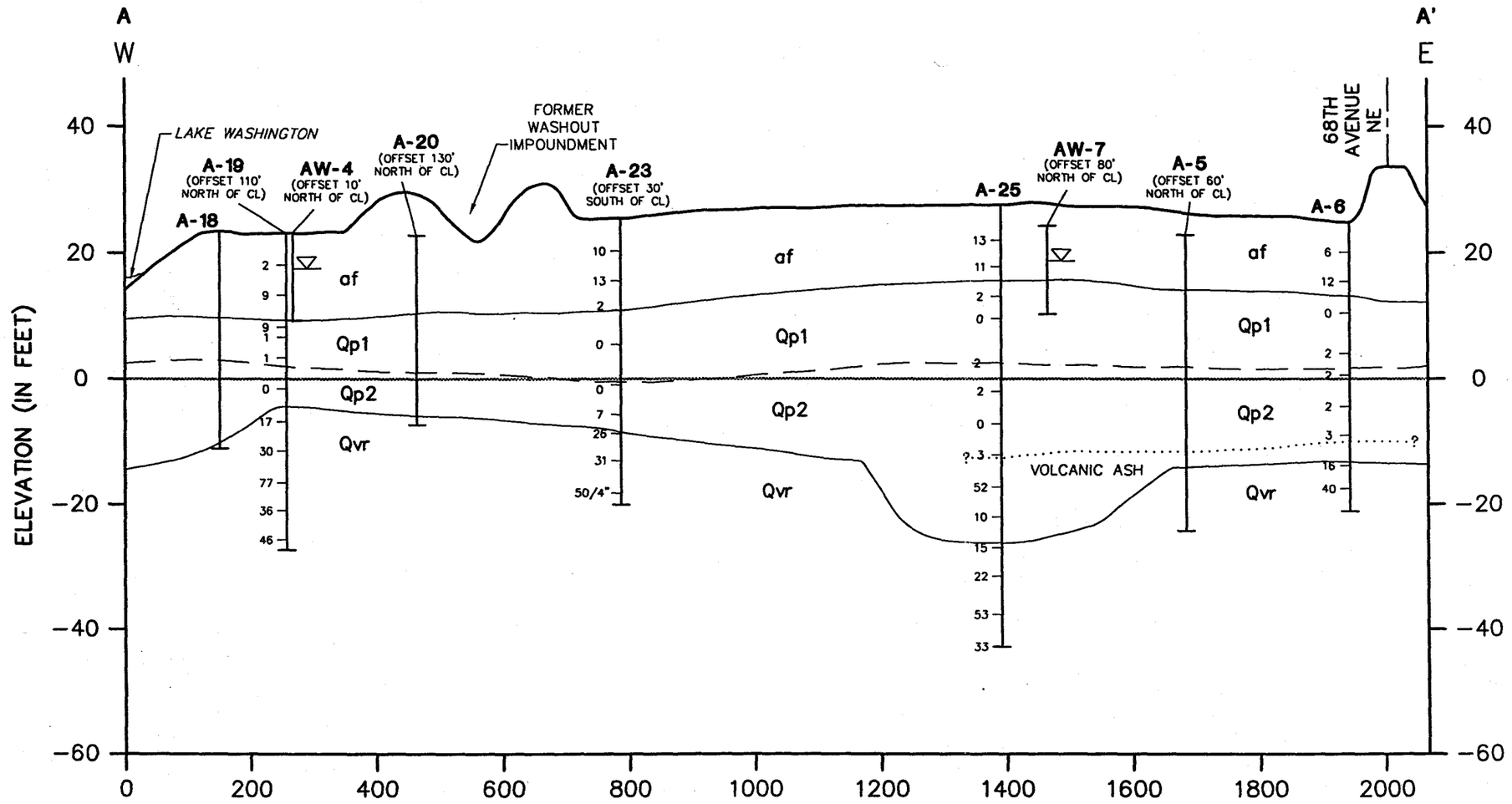
FIGURE 2

AGRA Earth & Environmental
11335 N.E. 122nd Way, Suite 100
Kirkland, WA, U.S.A. 98034-6918

W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	1"=200'

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

SITE AND EXPLORATION PLAN



LEGEND

A-25 — SOIL BORING/MONITORING WELL NUMBER AND LOCATION

OBSERVED GROUNDWATER LEVEL

53 — BLOW COUNT (BLOWS/FOOT)

APPROXIMATE BOUNDARY OF GEOLOGIC UNIT

APPROXIMATE BOUNDARY BETWEEN ORGANIC PEATS (Qp1) AND ALLUVIUM (Qp2)

ELEVATION 0 (KING COUNTY BENCHMARK "KC-B-16")

BOTTOM OF HOLE

0 20 40
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET

mL – MODIFIED LAND

ORIGINAL TOPOGRAPHY DISTURBED BY REMOVAL OF SOME PLEISTOCENE DEPOSITS, GRADING AND ARTIFICIAL FILL OF UNKNOWN QUALITY.

af – ARTIFICIAL FILL

ORIGINAL TOPOGRAPHY MODIFIED BY PLACEMENT OF SIGNIFICANT THICKNESS OF ARTIFICIAL FILL. COMPRISES THE WOOD DEBRIS FILL DESCRIBED IN SUBSURFACE EXPLORATIONS.

Qp – PEAT

ACCUMULATION OF ORGANIC MATERIAL (Qp1)
LOOSE ALLUVIUM.
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Qvt – VASHON TILL

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FIGURE 3

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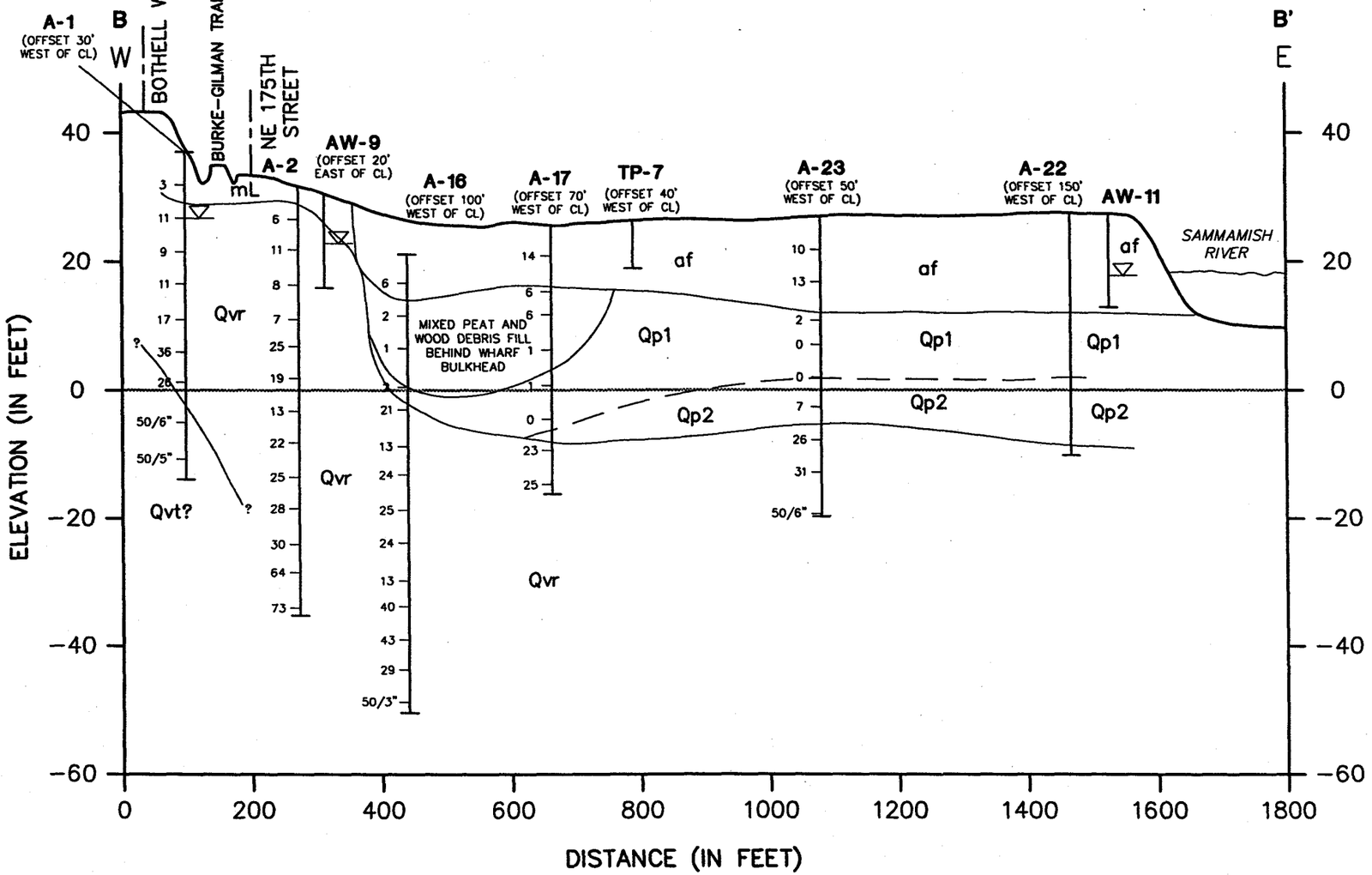
W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	V:1-20, H:1-200

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GENERALIZED GEOLOGIC CROSS SECTION
A - A'



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APPROXIMATE BOUNDARY BETWEEN ORGANIC PEATS (Qp1) AND ALLUVIUM (Qp2)

ELEVATION 0 (KING COUNTY BENCHMARK "KC-B-16")

BOTTOM OF HOLE

0 20 40
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET

REFERENCE:
U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

FIGURE 4

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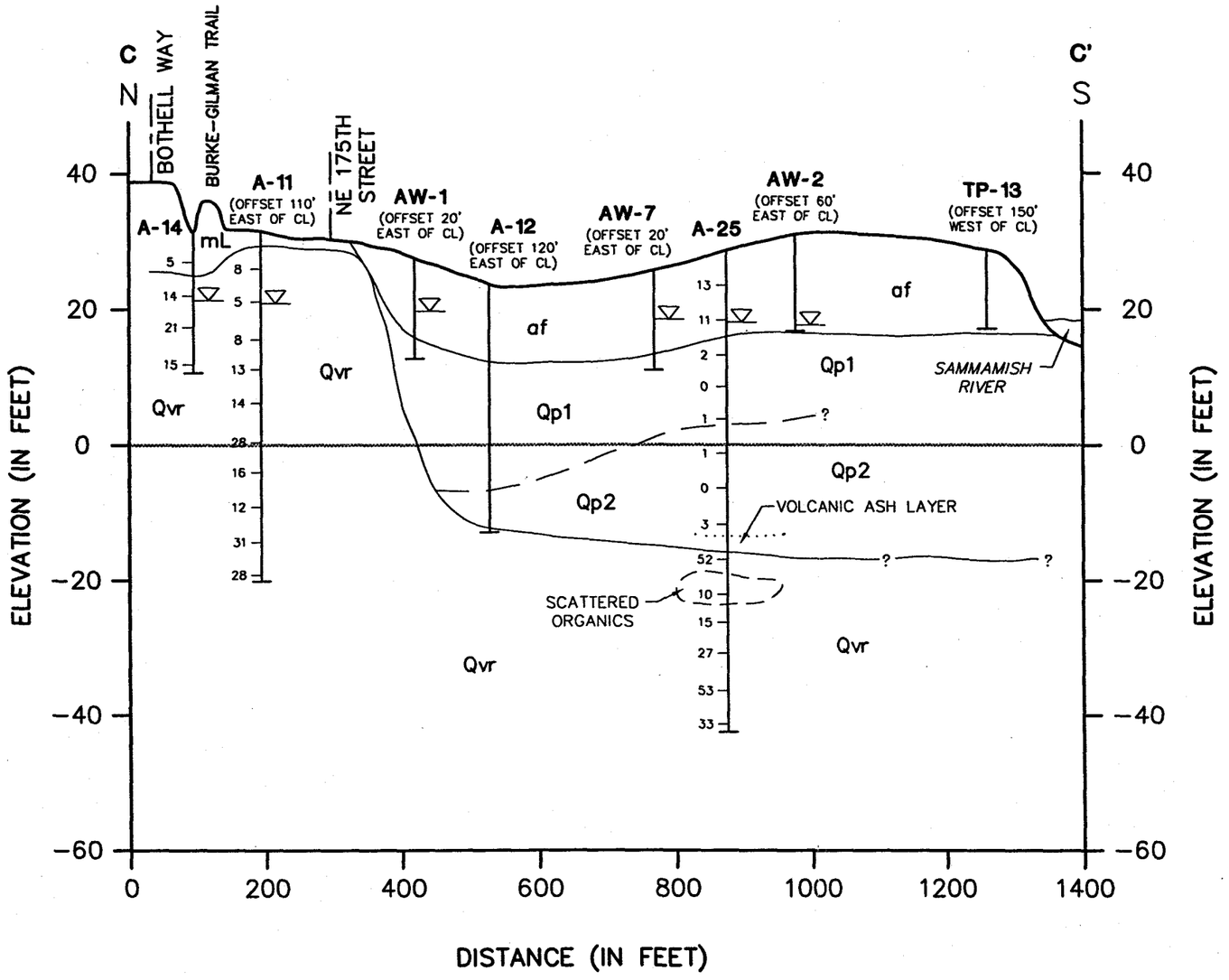
W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	V: 1-20, H: 1-200

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GENERALIZED GEOLOGIC CROSS SECTION B - B'



mL – MODIFIED LAND

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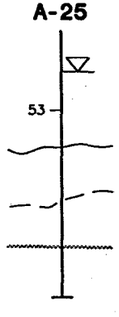
LEGEND



- A-25 — SOIL BORING/MONITORING WELL NUMBER AND LOCATION
- OBSERVED GROUNDWATER LEVEL
- 53 — BLOW COUNT (BLOWS/FOOT)
- APPROXIMATE BOUNDARY OF GEOLOGIC UNIT
- APPROXIMATE BOUNDARY BETWEEN ORGANIC PEATS (Qp1) AND ALLUVIUM (Qp2)
- ELEVATION 0 (KING COUNTY BENCHMARK "KC-B-16")
- BOTTOM OF HOLE

0 20 40
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET

REFERENCE:
U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

FIGURE 5

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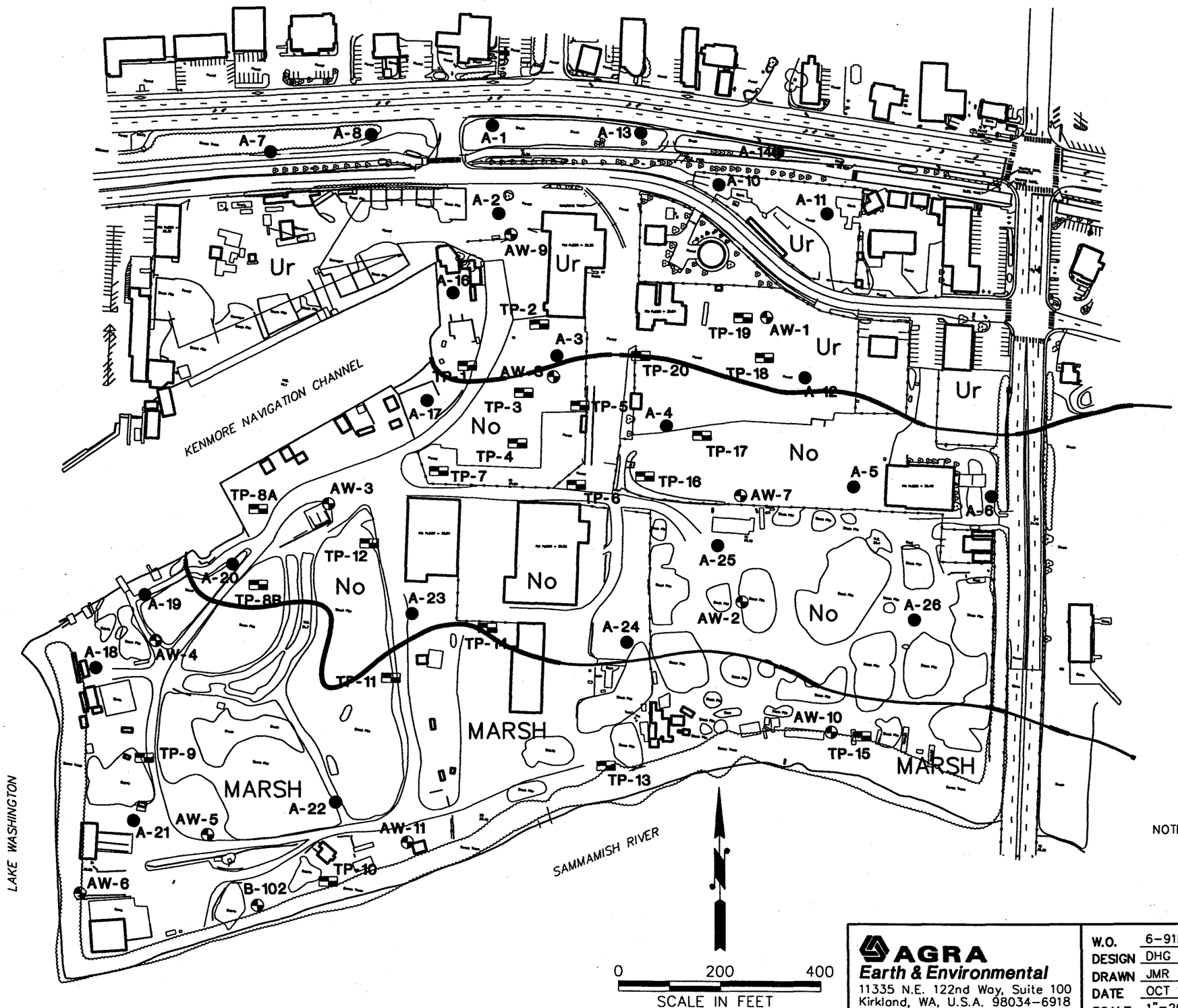
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	V:1-20, H:1-200

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GENERALIZED GEOLOGIC CROSS SECTION
C - C'



LEGEND

AW-11 — GROUNDWATER MONITORING WELL NUMBER AND LOCATION

A-26 — GEOTECHNICAL BORING NUMBER AND LOCATION

TP-20 — TEST PIT NUMBER AND LOCATION

SCS SOIL TYPES

DUE TO UNIFORMITY OF 1996 CONDITIONS, WHEN THE ENTIRE PROPERTY AND SURROUNDING AREAS ARE UNDERLAIN BY URBAN LAND (Ur), 1968 CONDITIONS ARE FEATURED.

Ur – URBAN LAND

SOIL THAT HAS BEEN MODIFIED BY DISTURBANCE OF NATURAL LAYERS WITH ADDITIONS OF FILL MATERIALS SEVERAL FEET THICK TO ACCOMMODATE LARGE INDUSTRIAL AND HOUSING INSTALLATIONS. URBAN LAND DOES NOT CORRESPOND TO A GEOLOGIC UNIT, BUT IS CLASSIFIED AS ARTIFICIAL FILL (AF) OF MODIFIED LAND (ML) IN GEOLOGIC DISCUSSIONS AND ILLUSTRATIONS ACCOMPANYING THIS EIS.

No – NORMA SOILS

POORLY DRAINED SOIL THAT FORMED IN ALLUVIUM, UNDER SEDGES, GRASS, CONIFERS AND HARDWOODS. NORMA SOILS CONSIST OF BLACK, SANDY LOAM TO SILT LOAM. NORMA SOILS CORRESPOND TO QUATERNAY PEAT GEOLOGIC DEPOSITS (QP).

MARSH

AREAS DESIGNATED AS MARSH WERE NOT INCLUDED IN THE SCS SURVEY AND WERE INFERRED TO HAVE BEEN INUNDATED OR INACCESSIBLE. MARSH AREAS CORRESPOND TO QUATERNARY PEAT GEOLOGIC DEPOSITS (QP).

REFERENCE: U.S. DEPARTMENT OF AGRICULTURE (USDA) SOIL CONSERVATION SERVICE (SCS) SOIL SURVEY OF KING COUNTY AREA, WASHINGTON, DATED NOVEMBER 1973.

NOTE: MONITORING WELL B-102 WAS INSTALLED BY OTHERS. REFER TO REVISED: PHASE II ENVIRONMENTAL STUDY – KENMORE PRE-MIX SITE, BY GEOTECH CONSULTANTS, INC., DATED 24 JANUARY 1991.

FIGURE 6

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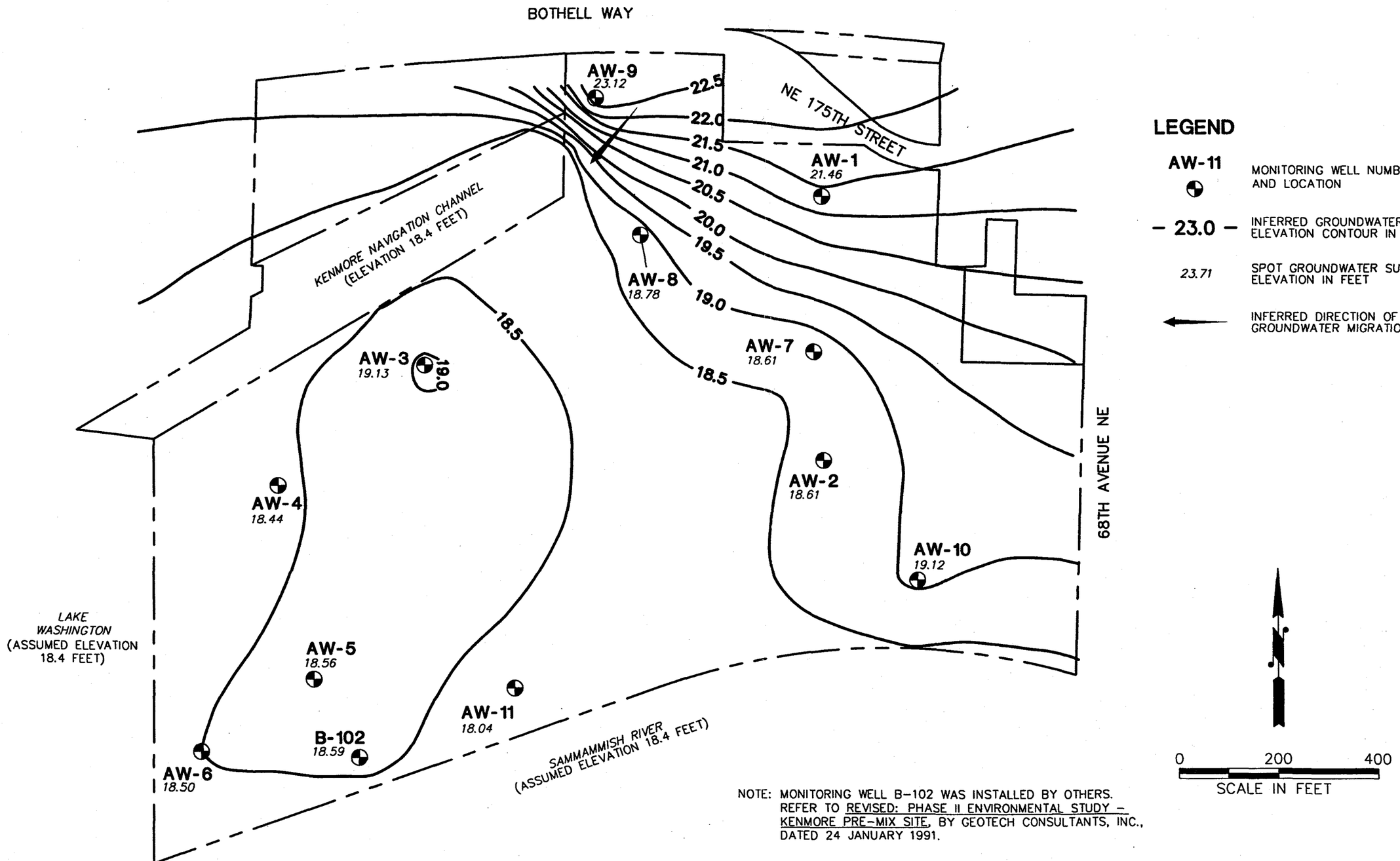
W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	1"=200'

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

DISTRIBUTION OF SCS SOIL TYPES - 1968

AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. \91\10459-E\SCS-SOIL.DWG



NOTE: MONITORING WELL B-102 WAS INSTALLED BY OTHERS. REFER TO REVISED: PHASE II ENVIRONMENTAL STUDY – KENMORE PRE-MIX SITE, BY GEOTECH CONSULTANTS, INC., DATED 24 JANUARY 1991.

FIGURE 7

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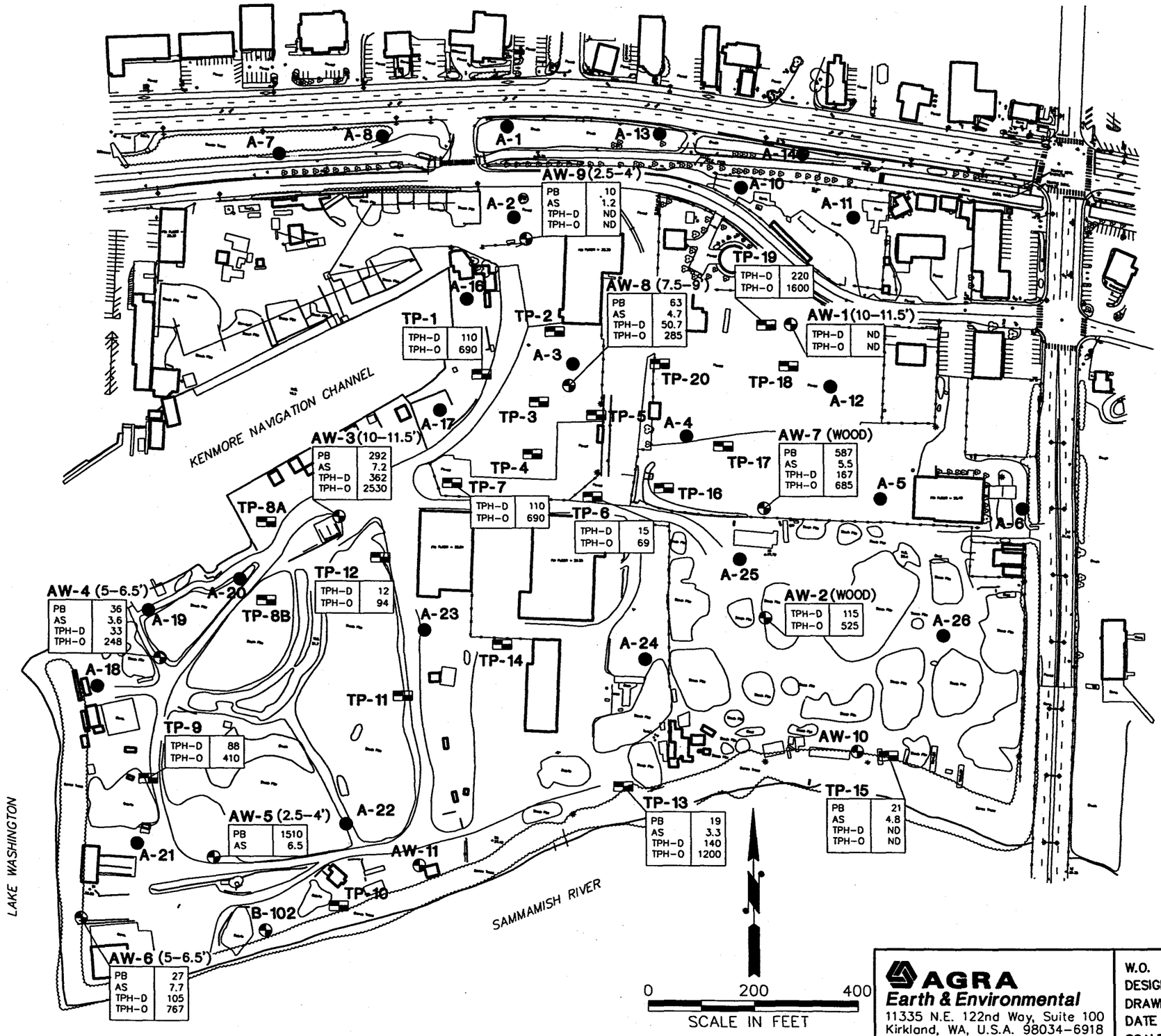
W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	1"=200'

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GROUNDWATER GRADIENT MAP FOR 05 AUGUST 1996

AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. \91\10459-E\GW0896.DWG



LEGEND

AW-11 ◓	GROUNDWATER MONITORING WELL NUMBER AND LOCATION
A-26 ●	GEOTECHNICAL BORING NUMBER AND LOCATION
TP-20 ▬	TEST PIT NUMBER AND LOCATION
(2.5–4')	SAMPLE DEPTH COLLECTED (IN FEET)
(WOOD)	NO SOIL SAMPLE OBTAINED DURING EXPLORATION. ANALYSES PERFORMED ON WOOD CUTTINGS.

SOIL TEST RESULTS

ALL CONCENTRATIONS ARE REPORTED IN PARTS PER MILLION (PPM)

ND	NOT DETECTED, BELOW METHOD DETECTION LIMIT
PB	TOTAL LEAD BY EPA METHOD 6010/7000
AS	TOTAL ARSENIC BY EPA METHOD 6010/7000
TPH-D	TOTAL PETROLEUM HYDROCARBONS – DIESEL RANGE BY ECOLOGY METHOD WTPH-D EXT.
TPH-O	TOTAL PETROLEUM HYDROCARBONS – HEAVY OIL RANGE BY ECOLOGY METHOD WTPH-D EXT.

PB	ND
AS	ND
TPH-D	ND
TPH-O	ND

CONCENTRATIONS IN PPM
COMPOUNDS

NOTES: OTHER COMPOUNDS ARE PRESENT. PLEASE REFER TO TOXIC AND HAZARDOUS MATERIALS SECTION OF THIS REPORT, OR TO AEE'S PHASE II ENVIRONMENTAL ASSESSMENT DATED MAY 1996, FOR FURTHER DISCUSSION OF ANALYTICAL RESULTS.

MONITORING WELL B–102 WAS INSTALLED BY OTHERS. REFER TO REVISED: PHASE II ENVIRONMENTAL STUDY – KENMORE PRE–MIX SITE, BY GEOTECH CONSULTANTS, INC., DATED 24 JANUARY 1991.

FIGURE 8

AGRA Earth & Environmental
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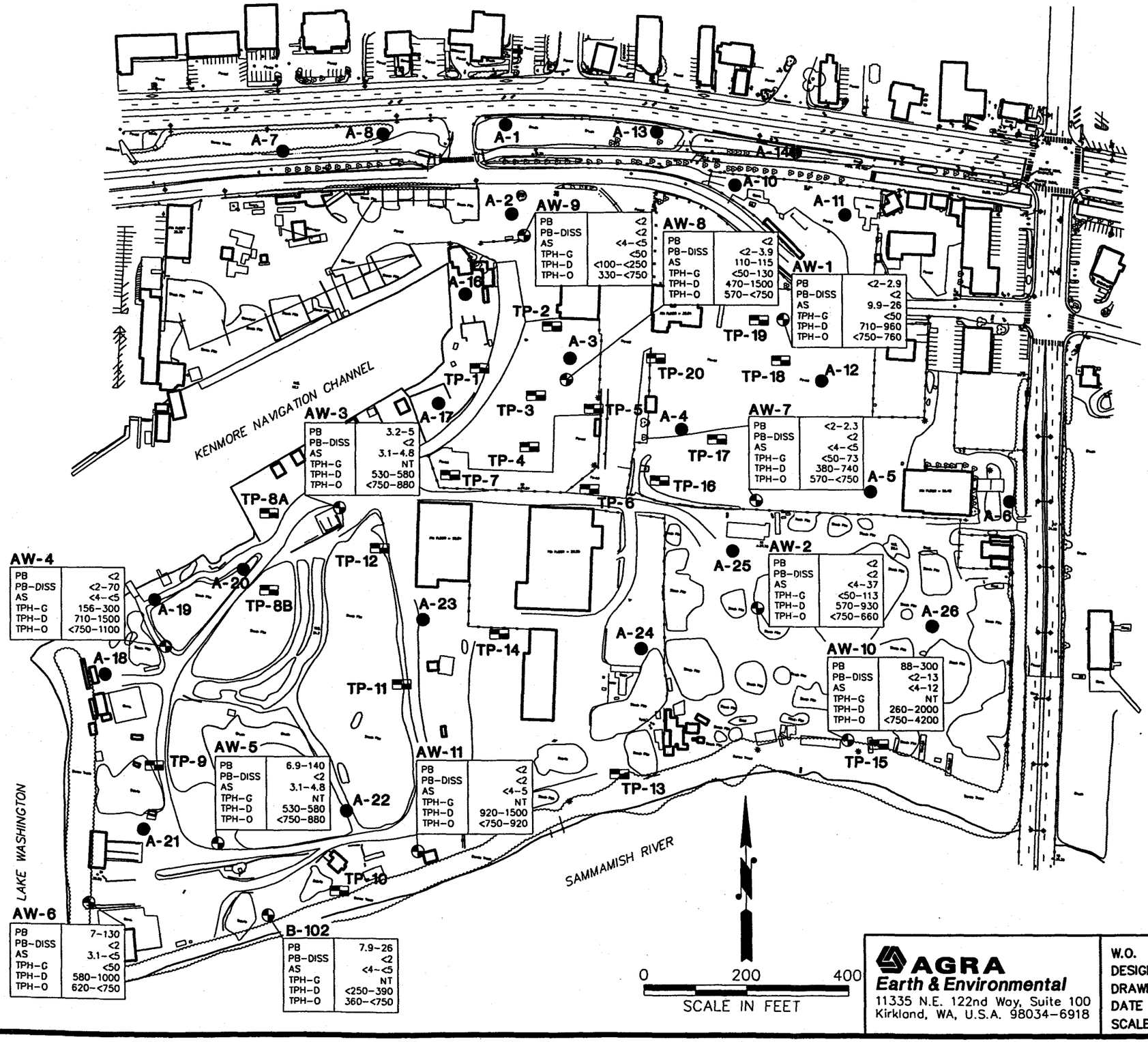
Kirkland, WA, U.S.A. 98034–6918

W.O.	6–91M–10459–E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	1"=200'

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

SOIL CONTAMINANT CONCENTRATIONS



LEGEND

AW-11 — GROUNDWATER MONITORING WELL NUMBER AND LOCATION

A-26 — GEOTECHNICAL BORING NUMBER AND LOCATION

TP-20 — TEST PIT NUMBER AND LOCATION

GROUNDWATER TEST RESULTS

CONCENTRATIONS IN PARTS PER BILLION (PPB)

ND — NOT DETECTED, BELOW METHOD DETECTION LIMIT

PB — TOTAL LEAD BY EPA METHOD 6010/7000
PB-DISS — DISSOLVED LEAD BY EPA METHOD 6010/7000
AS — TOTAL ARSENIC BY EPA METHOD 6010/7000
TPH-G — TOTAL PETROLEUM HYDROCARBONS – GASOLINE RANGE BY ECOLOGY METHOD WTPH-D EXT.
TPH-D — TOTAL PETROLEUM HYDROCARBONS – DIESEL RANGE BY ECOLOGY METHOD WTPH-D EXT.
TPH-O — TOTAL PETROLEUM HYDROCARBONS – HEAVY OIL RANGE BY ECOLOGY METHOD WTPH-D EXT.

PB	ND
PB-DISS	ND
AS	ND
TPH-G	ND
TPH-D	ND
TPH-O	ND

COMPOUNDS — CONCENTRATIONS IN PPB

NOTES:

1. EXCEPT FOR COLLECTION OF TPH-G SAMPLES, MICROPURGE TECHNIQUES WERE USED TO MINIMIZE TURBIDITY WHILE SAMPLING THE WELLS. CONCENTRATIONS ARE REPORTED AS A RANGE FROM TWO SAMPLING EVENTS.

2. TOTAL ARSENIC IS COMPARABLE TO DISSOLVED ARSENIC CONCENTRATIONS.

3. OTHER COMPOUNDS ARE PRESENT. PLEASE REFER TO TOXIC AND HAZARDOUS MATERIALS SECTION OF THIS REPORT, OR TO AEE'S PHASE II ENVIRONMENTAL ASSESSMENT DATED MAY 1996, FOR FURTHER DISCUSSION OF SAMPLING METHODOLOGY AND ANALYTICAL RESULTS. AUGUST 1996 SAMPLING RESULTS ARE PRESENTED IN AEE'S QUARTERLY GROUNDWATER MONITORING REPORT DATED 08 NOVEMBER 1996.

4. MONITORING WELL B-102 WAS INSTALLED BY OTHERS. REFER TO REVISED: PHASE II ENVIRONMENTAL STUDY – KENMORE PRE-MIX SITE, BY GEOTECH CONSULTANTS, INC., DATED 24 JANUARY 1991.

FIGURE 9

AGRA
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W.O.	6-91M-10459-E
DESIGN	DHG
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LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GROUNDWATER CONTAMINANT CONCENTRATIONS

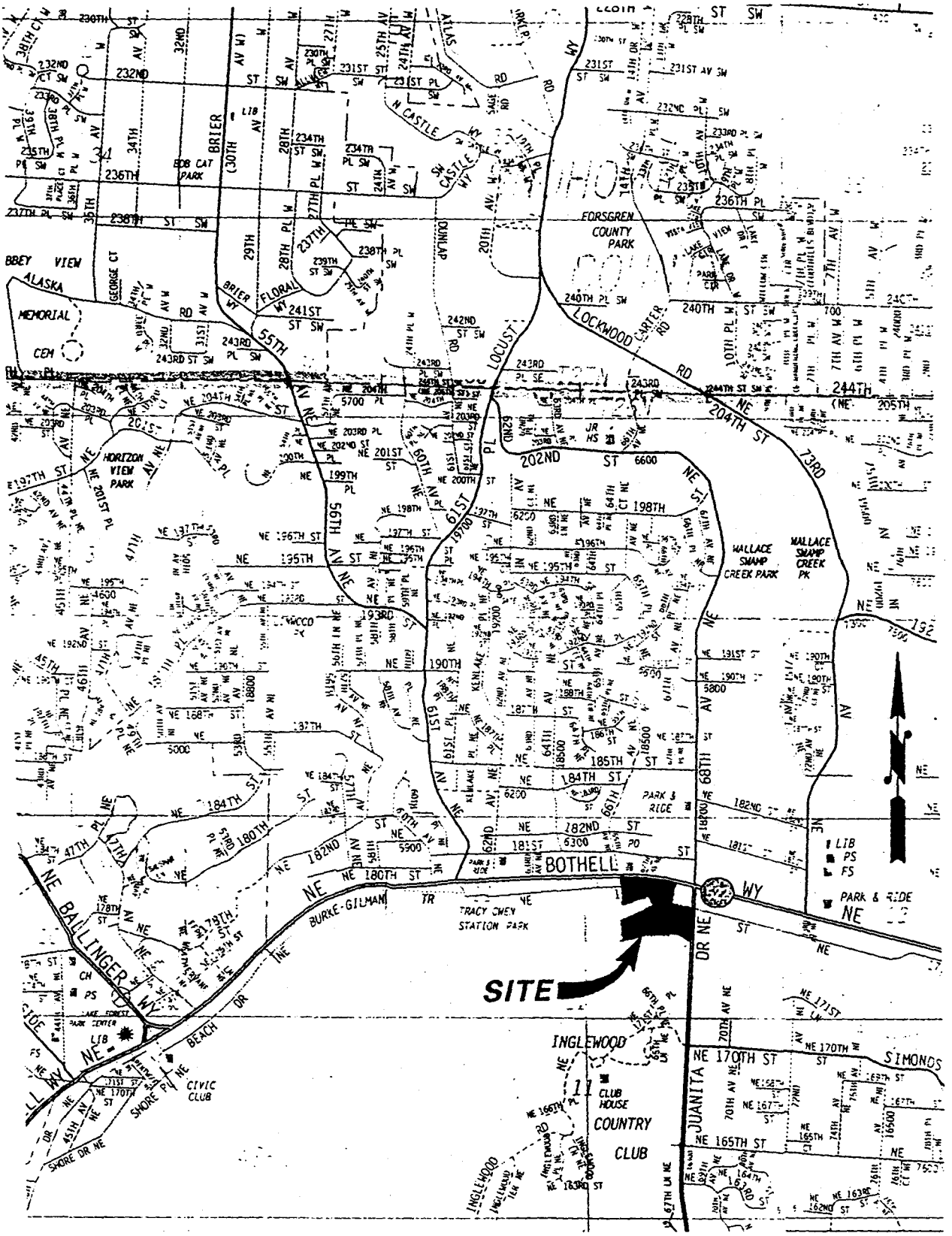

FIGURE 1

AGRA
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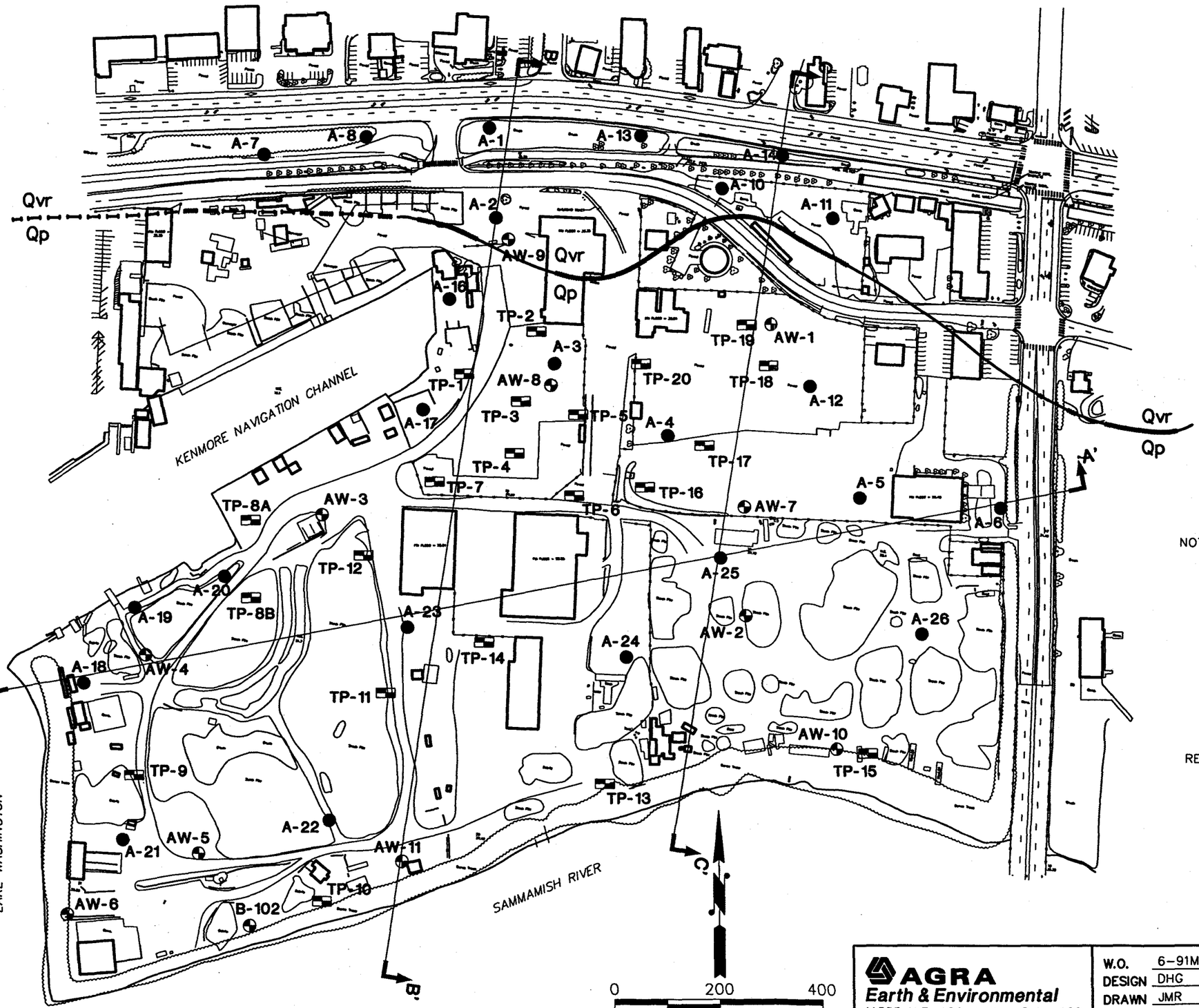
Kirkland, WA, U.S.A. 98034-6918

W.O.	6-91M-10459-C
DESIGN	DHG
DRAWN	JMR
DATE	NOV 1996
SCALE	N.T.S.

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

LOCATION MAP

AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. \91\10459-C\LOCATION.DWG



LEGEND

AW-11 ⊕	GROUNDWATER MONITORING WELL NUMBER AND LOCATION
A-26 ●	GEOTECHNICAL BORING NUMBER AND LOCATION
TP-20 ▬	TEST PIT NUMBER AND LOCATION
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LIGHT BROWN, LOOSELY COMPACTED SAND AND GRAVEL, WELL-ROUNDED FROM STREAM TRANSPORTATION. SORTING VARIES; PARTICLE SIZE VARIES FROM MEDIUM SAND TO COBBLES.

NOTES: INFORMATION REGARDING THE EXTENT OF PEAT SOILS WAS SUPPLEMENTED BY PREVIOUS STUDIES PERFORMED FOR RIGHT-OF-WAYS AND FOR METRO SEWER STATION, AND BY REVIEW OF AERIAL PHOTOGRAPHS OF THE SITE AND VICINITY.

THE GEOLOGIC DEPOSITS SHOWN REPRESENT NATIVE SOIL CONDITIONS BELOW ARTIFICIAL FILLS.

MONITORING WELL B-102 WAS INSTALLED BY OTHERS. REFER TO REVISED: PHASE II ENVIRONMENTAL STUDY – KENMORE PRE-MIX SITE, BY GEOTECH CONSULTANTS, INC., DATED 24 JANUARY 1991.

REFERENCE:

U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

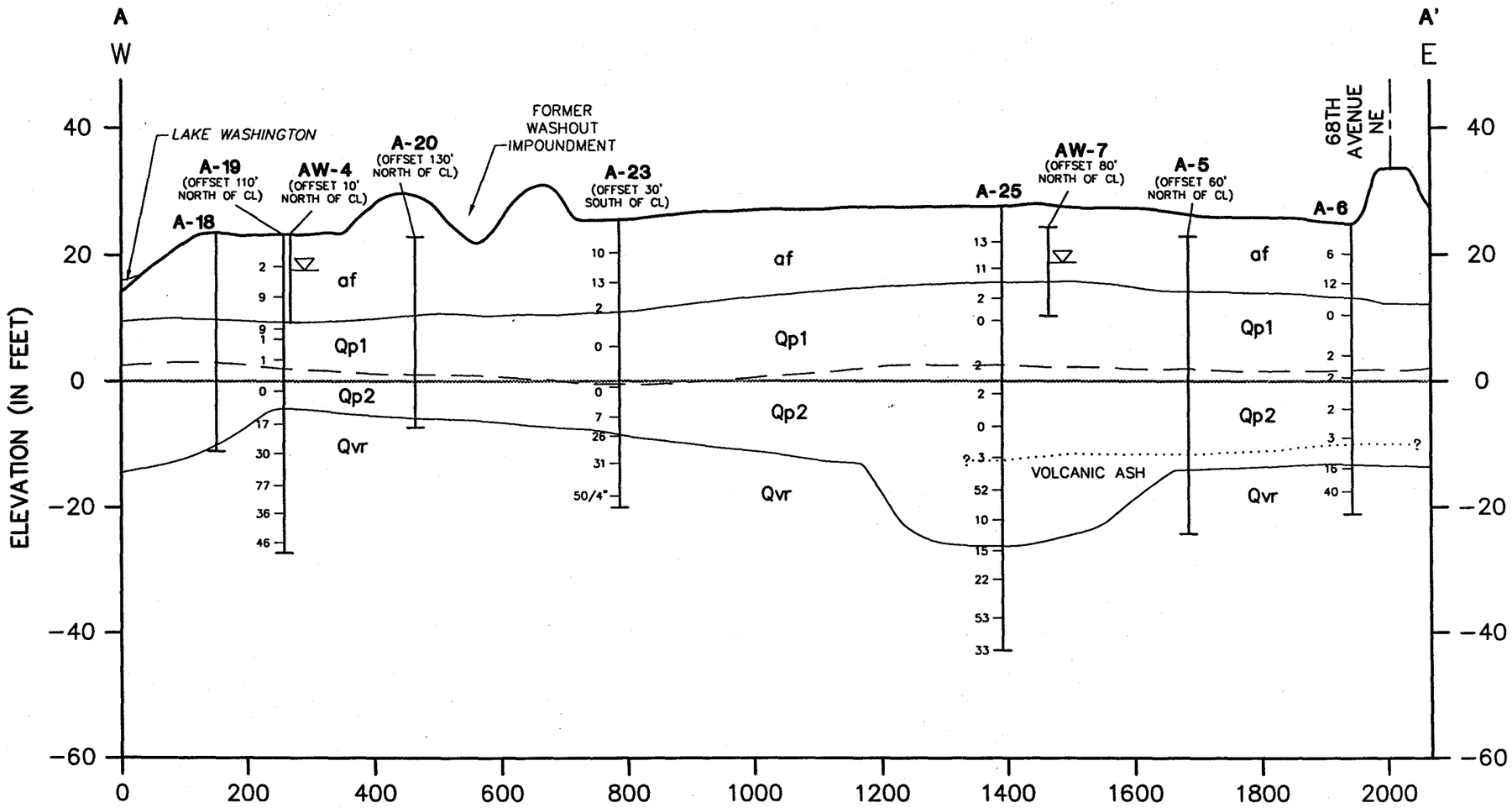
FIGURE 2

AGRA Earth & Environmental
11335 N.E. 122nd Way, Suite 100
Kirkland, WA, U.S.A. 98034-6918

W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	1"=200'

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

SITE AND EXPLORATION PLAN



mL – MODIFIED LAND

ORIGINAL TOPOGRAPHY DISTURBED BY REMOVAL OF SOME PLEISTOCENE DEPOSITS, GRADING AND ARTIFICIAL FILL OF UNKNOWN QUALITY.

af – ARTIFICIAL FILL

ORIGINAL TOPOGRAPHY MODIFIED BY PLACEMENT OF SIGNIFICANT THICKNESS OF ARTIFICIAL FILL. COMPRISES THE WOOD DEBRIS FILL DESCRIBED IN SUBSURFACE EXPLORATIONS.

Qp – PEAT

ACCUMULATION OF ORGANIC MATERIAL (Qp1)
LOOSE ALLUVIUM.
MAY CONTAIN SMALL AMOUNTS OF SAND, SILT, CLAY AND VOLCANIC ASH DEPOSITED IN SWAMPS AND BOGS (Qp2)

Qvr – VASHON RECESSIONAL OUTWASH

LIGHT BROWN, LOOSELY COMPACTED SAND AND GRAVEL, WELL-ROUNDED FROM STREAM TRANSPORTATION. SORTING VARIES; PARTICLE SIZE VARIES FROM MEDIUM SAND TO COBBLES. NOT DIFFERENTIATED FROM MORE RECENT ALLUVIUM, WHICH MAY CONTAIN SILT, CLAY AND ORGANIC MATTER.

Qvt – VASHON TILL

POORLY SORTED, NONSTRATIFIED LODGMENT TILL DEPOSITED AS GROUND MORAINE. MIXTURE OF CLAY, SILT, SAND, PEBBLES AND COBBLES WITH OCCASIONAL LARGE BOULDERS. STONES ARE SUBANGULAR TO ROUNDED.

LEGEND

A-25 SOIL BORING/MONITORING WELL NUMBER AND LOCATION

OBSERVED GROUNDWATER LEVEL

53 BLOW COUNT (BLOWS/FOOT)

APPROXIMATE BOUNDARY OF GEOLOGIC UNIT

APPROXIMATE BOUNDARY BETWEEN ORGANIC PEATS (Qp1) AND ALLUVIUM (Qp2)

ELEVATION 0 (KING COUNTY BENCHMARK "KC-B-16")

BOTTOM OF HOLE

0 20 40
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET

REFERENCE:
U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

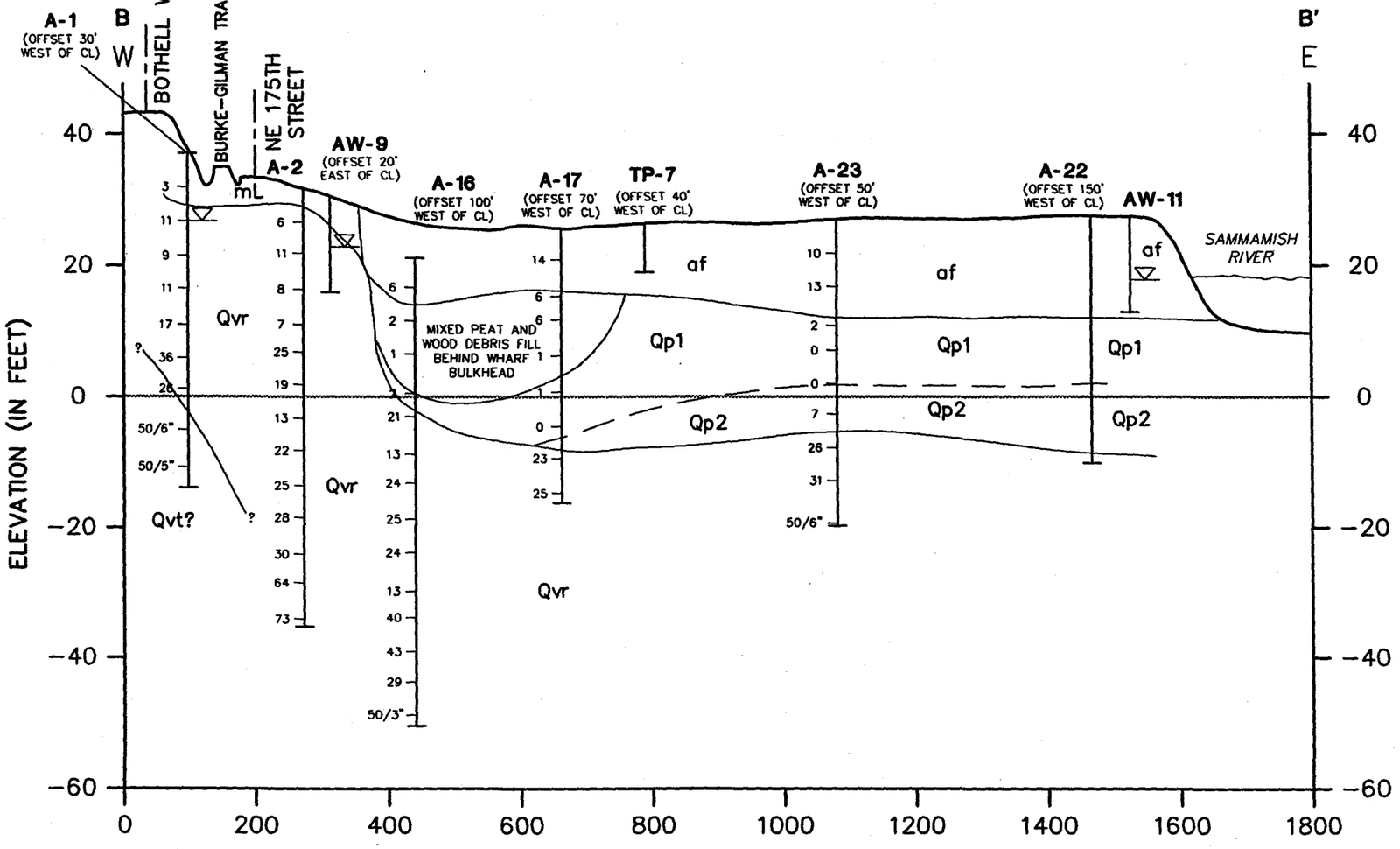
FIGURE 3

AGRA
Earth & Environmental
11335 N.E. 122nd Way, Suite 100
Kirkland, WA, U.S.A. 98034-6918

W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	V:1-20, H:1-200

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GENERALIZED GEOLOGIC CROSS SECTION
A - A'



LEGEND

A-25 — SOIL BORING/MONITORING WELL NUMBER AND LOCATION

OBSERVED GROUNDWATER LEVEL

53 — BLOW COUNT (BLOWS/FOOT)

APPROXIMATE BOUNDARY OF GEOLOGIC UNIT

APPROXIMATE BOUNDARY BETWEEN ORGANIC PEATS (Qp1) AND ALLUVIUM (Qp2)

ELEVATION 0 (KING COUNTY BENCHMARK "KC-B-16")

BOTTOM OF HOLE

0 20 40
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET

mL – MODIFIED LAND

ORIGINAL TOPOGRAPHY DISTURBED BY REMOVAL OF SOME PLEISTOCENE DEPOSITS, GRADING AND ARTIFICIAL FILL OF UNKNOWN QUALITY.

af – ARTIFICIAL FILL

ORIGINAL TOPOGRAPHY MODIFIED BY PLACEMENT OF SIGNIFICANT THICKNESS OF ARTIFICIAL FILL. COMPRISES THE WOOD DEBRIS FILL DESCRIBED IN SUBSURFACE EXPLORATIONS.

Qp – PEAT

ACCUMULATION OF ORGANIC MATERIAL (Qp1)
LOOSE ALLUVIUM.
MAY CONTAIN SMALL AMOUNTS OF SAND, SILT, CLAY AND VOLCANIC ASH DEPOSITED IN SWAMPS AND BOGS (Qp2)

Qvr – VASHON RECESSIONAL OUTWASH

LIGHT BROWN, LOOSELY COMPACTED SAND AND GRAVEL, WELL-ROUNDED FROM STREAM TRANSPORTATION. SORTING VARIES; PARTICLE SIZE VARIES FROM MEDIUM SAND TO COBBLES. NOT DIFFERENTIATED FROM MORE RECENT ALLUVIUM, WHICH MAY CONTAIN SILT, CLAY AND ORGANIC MATTER.

Qvt – VASHON TILL

POORLY SORTED, NONSTRATIFIED LODGMENT TILL DEPOSITED AS GROUND MORAINE. MIXTURE OF CLAY, SILT, SAND, PEBBLES AND COBBLES WITH OCCASIONAL LARGE BOULDERS. STONES ARE SUBANGULAR TO ROUNDED.

REFERENCE:
U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

FIGURE 4

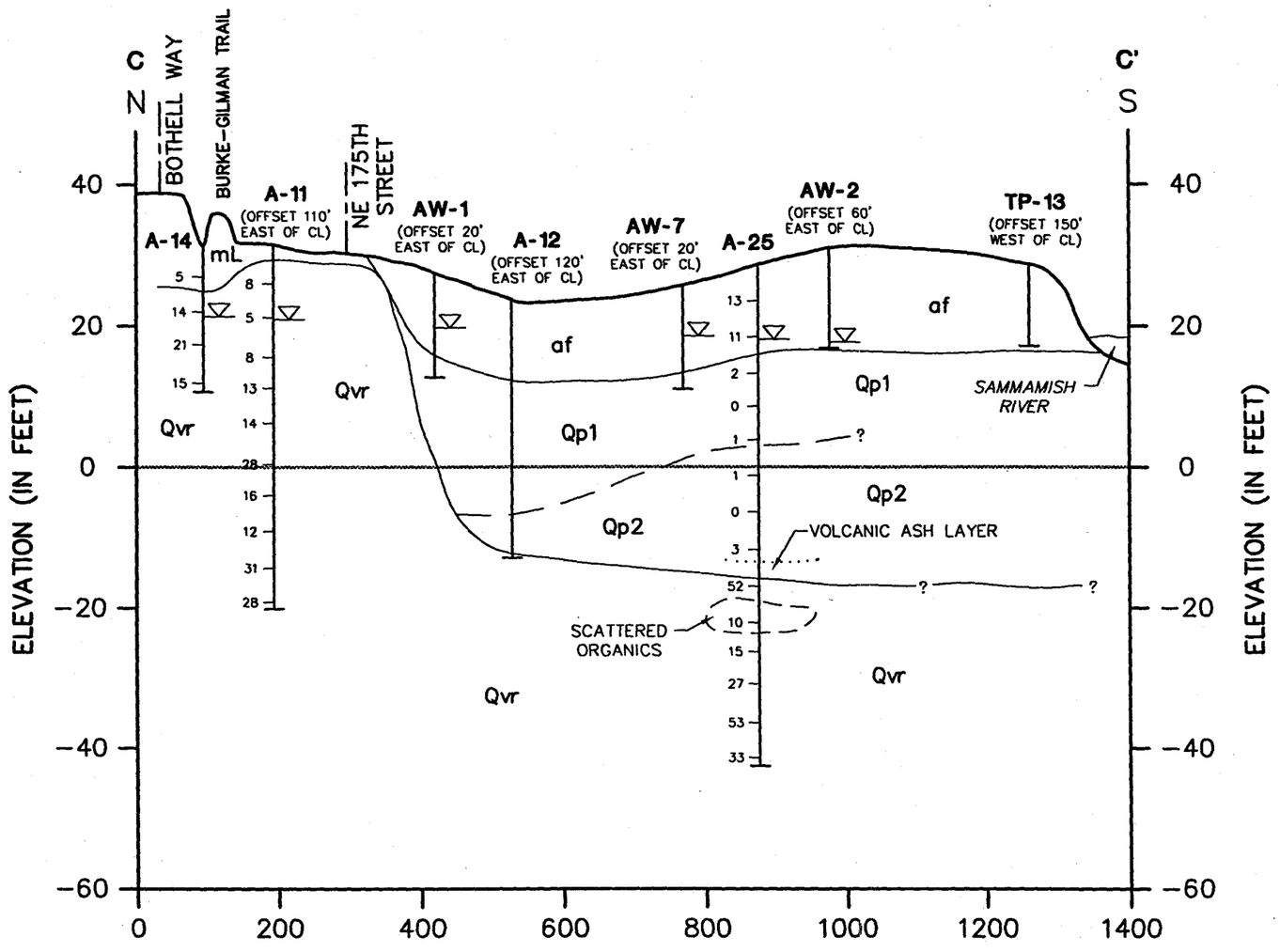
AGRA Earth & Environmental
11335 N.E. 122nd Way, Suite 100
Kirkland, WA, U.S.A. 98034-6918

W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	V:1-20, H:1-200

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GENERALIZED GEOLOGIC CROSS SECTION B - B'

AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. \91\10459-E\X-S-B.DWG



mL – MODIFIED LAND

ORIGINAL TOPOGRAPHY DISTURBED BY REMOVAL OF SOME PLEISTOCENE DEPOSITS, GRADING AND ARTIFICIAL FILL OF UNKNOWN QUALITY.

af – ARTIFICIAL FILL

ORIGINAL TOPOGRAPHY MODIFIED BY PLACEMENT OF SIGNIFICANT THICKNESS OF ARTIFICIAL FILL. COMPRISES THE WOOD DEBRIS FILL DESCRIBED IN SUBSURFACE EXPLORATIONS.

Qp – PEAT

ACCUMULATION OF ORGANIC MATERIAL (Qp1)
LOOSE ALLUVIUM.
MAY CONTAIN SMALL AMOUNTS OF SAND, SILT, CLAY AND VOLCANIC ASH DEPOSITED IN SWAMPS AND BOGS (Qp2)

Qvr – VASHON RECESSIONAL OUTWASH

LIGHT BROWN, LOOSELY COMPACTED SAND AND GRAVEL, WELL-ROUNDED FROM STREAM TRANSPORTATION. SORTING VARIES; PARTICLE SIZE VARIES FROM MEDIUM SAND TO COBBLES. NOT DIFFERENTIATED FROM MORE RECENT ALLUVIUM, WHICH MAY CONTAIN SILT, CLAY AND ORGANIC MATTER.

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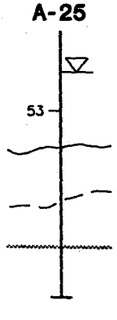
POORLY SORTED, NONSTRATIFIED LODGMENT TILL DEPOSITED AS GROUND MORAINE. MIXTURE OF CLAY, SILT, SAND, PEBBLES AND COBBLES WITH OCCASIONAL LARGE BOULDERS. STONES ARE SUBANGULAR TO ROUNDED.

LEGEND



SOIL BORING/MONITORING WELL NUMBER AND LOCATION

OBSERVED GROUNDWATER LEVEL

BLOW COUNT (BLOWS/FOOT)

APPROXIMATE BOUNDARY OF GEOLOGIC UNIT

APPROXIMATE BOUNDARY BETWEEN ORGANIC PEATS (Qp1) AND ALLUVIUM (Qp2)

ELEVATION 0 (KING COUNTY BENCHMARK "KC-B-16")

BOTTOM OF HOLE

0 20 40
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET

REFERENCE:
U.S. GEOLOGICAL SURVEY (USGS) GEOLOGICAL MAP OM-14, "PRELIMINARY SURFICAL GEOLOGIC MAP OF THE EDMONDS EAST AND EDMONDS WEST QUADRANGLES, SNOHOMISH AND KING COUNTIES, WASHINGTON (1975).

FIGURE 5

AGRA Earth & Environmental
11335 N.E. 122nd Way, Suite 100
Kirkland, WA, U.S.A. 98034-6918

W.O.	6-91M-10459-E
DESIGN	DHG
DRAWN	JMR
DATE	OCT 1996
SCALE	V:1-20, H:1-200

LAKEPOINTE DEVELOPMENT
KING COUNTY, WASHINGTON

GENERALIZED GEOLOGIC CROSS SECTION
C - C'

PROJECT: *Kenmore Lakepointe Development*

W.O. *11-10459-00*

[redacted] A-1

Page 1 of 2

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
	Location: *On Bench North of Detention Pond*			
	Approximate ground surface elevation: *36.5 feet*			
0	*Sod over loose, damp to moist, dark tan, silty, fine SAND with some gravel and medium sand (Fill)*			
5	*Grading into moist, mixed brown-tan, gravelly, silty SAND with scattered cobbles (Fill)*		S-1	
	Loose to medium dense, damp to moist, mottled orange in tan, silty, fine SAND			
10	*Becoming wet to saturated*		S-2	P/ATD
	Medium stiff, moist to wet, orangish tan, fine sandy SILT interbedded with loose, wet, tan, silty, fine to medium SAND			
15			S-3	
	Fractured lenses of stiff, moist to wet, orangish yellow, SILT with some clay, 1/4-inch fracture filled with silty, fine SAND 16.5 to 17 feet			
20			S-4	ATD
	Medium dense, wet to saturated, tan, silty, fine to medium SAND			
	Grades to gravelly at 23 feet			
25			S-5	
	Lens of stiff, moist to wet, yellowish tan, very fine sandy SILT at 26.5 feet			
	(continued)			
30				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- P/ATD — Perched groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: *HSA* Hammer type: *Cathead* Date drilled: *11, 12 September 1995* Logged by: *HWB*

PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00 BORING NO. A-1

Page 2 of 2

Location: On Bench North of Detention Pond

Approximate ground surface elevation: 36.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Dense, saturated tan, silty, gravelly SAND	X	S-6	
	Medium dense, saturated, gray, silty, gravelly SAND/sandy GRAVEL			
35			S-7	
	Very dense, wet, gray, gravelly, silty SAND			
40			S-8	
	Grades into a silty, gravelly SAND			
45			S-9	
50	Boring terminated at approximately 50 feet. No sample taken at 50 feet as the hole colapsed.			
55				
60				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

Washed out heave 50/6"

Could not washed out all heave 50/5"

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- X Sample not recovered
- ▼ ATD Groundwater level at time of drilling
- P/ ATD Perched groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA Hammer type: Cathead Date drilled: 11, 12 October 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-2

Page 1 of 3

Location: 10' South & 10' West from SW corner of Entry Planter

Approximate ground surface elevation: 31.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	2" Asphalt over 2" of 1-1/2 inch angular Base Course over medium dense, damp, medium to dark brown, silty, sandy GRAVEL (Fill)			
	Loose to medium dense, damp, orangish-tan, fine SAND with some silt and trace gravel			
5	Medium stiff, moist to wet, mottled yellow-tan-buff, very fine sandy SILT			
	Loose, damp, yellowish tan, silty, fine SAND		S-1	
	Becoming moist, tan, fine to medium SAND with some silt			
10	Medium dense, wet to saturated, tan SAND with trace to some gravel and silt		S-2	ATD
15	Loose, wet to saturated, yellowish tan, silty, fine SAND		S-3	
	Medium stiff, wet, yellowish tan, very fine sandy SILT			
	Loose, saturated, gray, fine to medium SAND with some silt			
20			S-4	
	Stiff, moist to wet, yellowish tan, SILT with some clay			
	Medium dense, saturated, yellowish tan, silty, fine SAND to fine SAND with some silt and interbeds of stiff, wet, yellowish tan, very fine sandy SILT			
25			S-5	
30	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- Grain size analysis
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 12 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-2

Location: 10' South & 10' West from SW corner of Entry Planter

Approximate ground surface elevation: 31.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Medium dense, saturated, yellowish tan, silty, fine SAND to fine SAND with some silt and interbeds of stiff, wet, yellowish tan, very fine sandy SILT (As Above)		S-6	
35			S-7	
40			S-8	
45	Interbed of SILT with some clay		S-9	
	Medium dense, saturated, tannish gray, gravelly SAND/sandy GRAVEL with some silt			
50			S-10	
55			S-11	
60	(continued)			

PENETRATION RESISTANCE

Standard ▲ Blows per foot △ Other

0 10 20 30 40 50

TESTING

0 20 40 60 80 100

MOISTURE CONTENT

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- Groundwater level at time of drilling (ATD)
- Grain size analysis
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 12 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-2

Page 3 of 3

DEPTH (feet)	SOIL DESCRIPTION 10' South & 10' West from SW corner of Entry Planter Location: Approximate ground surface elevation: 31.5 feet	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER	PENETRATION RESISTANCE ▲ Standard Blows per foot △ Other 0 10 20 30 40 50	TESTING
60	Very dense, saturated, yellowish tan, gravelly SAND with some silt		S-12		▲ 64	
65	Lens of hard, wet, yellowish tan, SILT with some fine sand		S-13		△ 73	
	Boring terminated at approximately 66.5 feet. Switched to mud rotary at 30 feet.					
70						
75						
80						
85						
90	(continued)					

0 20 40 60 80 100
MOISTURE CONTENT
Plastic limit Natural Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- Grain size analysis
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 12 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-3

Location: Building
90' South & 20' East from SW corner of
Approximate ground surface elevation: 27 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	2" Asphalt over 2" to 4" of Base Course over medium dense, moist to wet, tan, gravelly, silty SAND with some organics (Fill)			
5	Very loose to loose, wet, blackish gray to tannish gray, silty SAND with some gravel, organics and debris (treated wood, brick, concrete, etc.) (creosote-like odor - 1ppm on OVM) (Wood Debris Fill)		S-1	
10	Interbeds of medium dense to dense, moist, gray, silty, gravelly SAND to silty, sandy GRAVEL (Concrete Washout)		S-2	ATD
15	Very loose to loose, saturated, blackish gray to tannish gray, silty SAND with some gravel and wood debris (Fill)		S-3	
20			S-4	
25	Very loose, wet to saturated, dark brown, fibrous to amorphous PEAT with interbeds of brown, organic silts		S-5	
			S-6	
30	(continued)			

PENETRATION RESISTANCE
Standard ▲ Other △
Blows per foot
0 10 20 30 40 50

TESTING

MOISTURE CONTENT
0 20 40 60 80 100
Plastic limit Natural Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 11 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-8

Page 2 of 2

Location: 90' South & 20' East from SW corner of Building

Approximate ground surface elevation: 27 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Very loose, saturated, blackish-browish gray, gravelly, silty SAND with organics and PEAT interbeds		S-7	
35	Medium dense, saturated, gray, silty fine SAND with trace organics		S-8	
40			S-9	
45	Becoming very loose		S-10	
	Very soft, clayey SILT lens at 46.2 feet			
50	Dense, saturated, yellowish tan, fine to medium SAND with some silt		S-11	
	Boring terminated at approximately 51.5 feet. Switched to mud rotary at 45 feet.			
55				
60				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

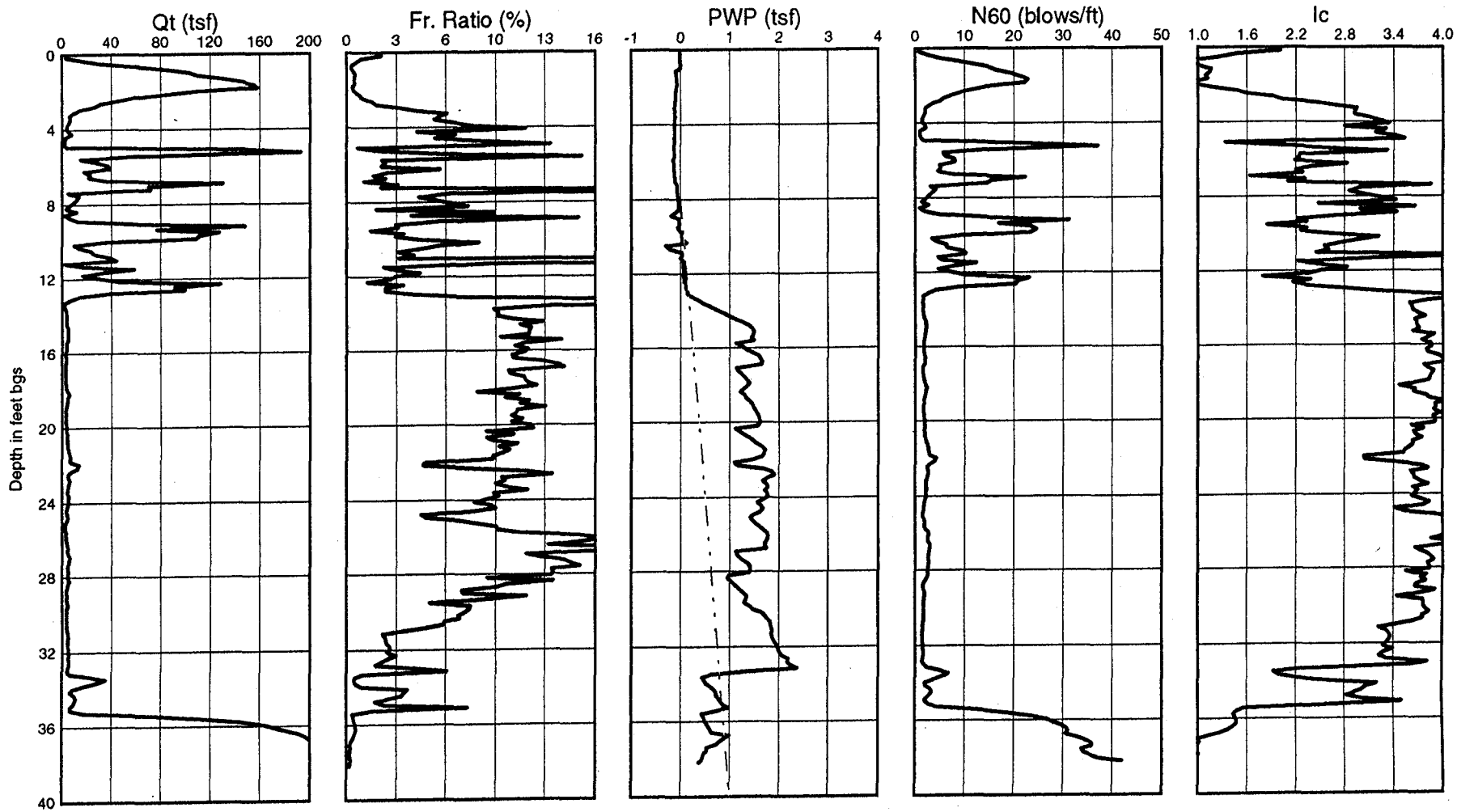
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 11 September 1995 Logged by: HWB

Cone Penetration Test - A4

Test Date : Sep 07, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 24.50
Water Table Depth : 8.00



Qt normalized for unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

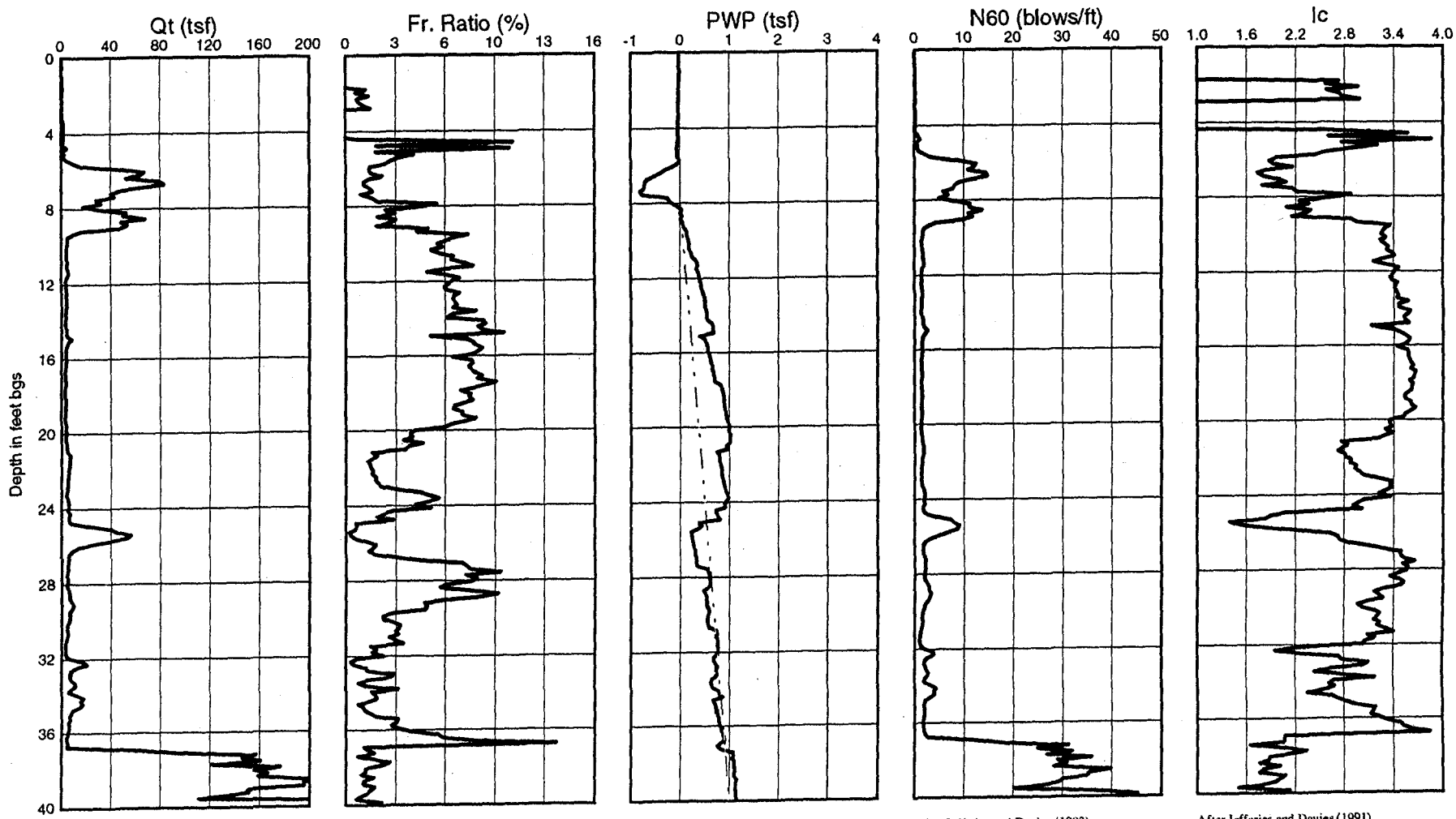
AGRA E & E, Inc.

Cone Penetration Test - A5

Test Date : Sept 07, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 24.50
Water Table Depth : 8.00



Qt normalized for
unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

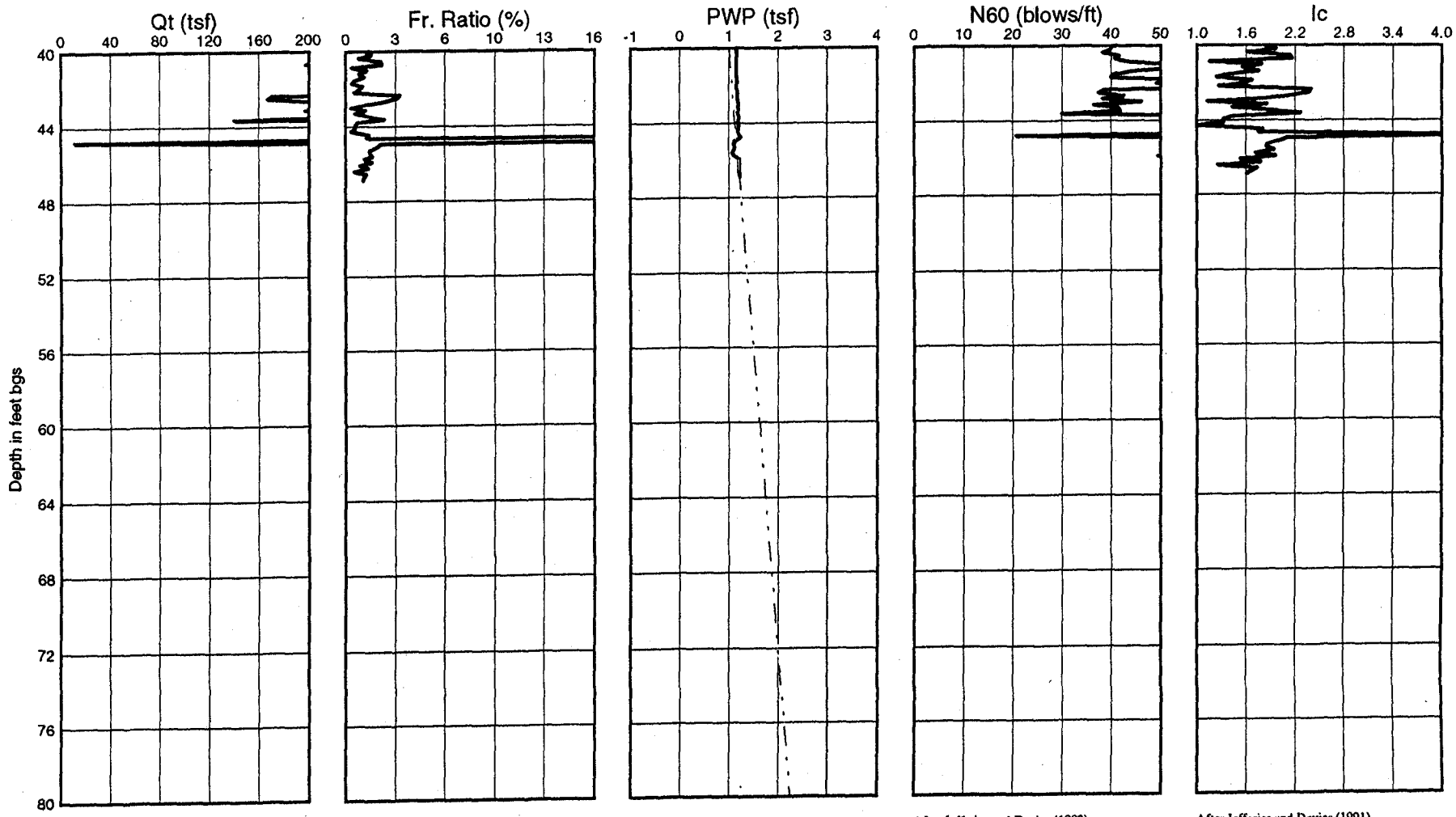
AGRA E & E, Inc.

Cone Penetration Test - A5

Test Date : Sept 07, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 24.50
Water Table Depth : 8.00



Qt normalized for
unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-6

Page 1 of 2

Location: 10' North & 30' East of South Lightpole

Approximate ground surface elevation: 27.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	2" of 1"-minus Base Course over medium dense, dry to damp, tan, silty, sandy GRAVEL (Fill)			
	Loose, moist, dark tan, silty, gravelly SAND matrix in debris (wood, brick, wire, metal, etc.) (Wood Debris Fill)			
5			S-1	
10	Medium dense, moist to wet, tan, gravelly, silty SAND (Till Fill)		S-2	
	Medium dense, wet, gray, silty SAND with trace to some gravel (Fill)			
	Very soft to soft, wet, brown, fibrous to amorphous PEAT with interbeds of organic SILT			
15			S-3	
20			S-4	ATD
			S-5	
	Very loose, saturated, bluish gray, silty, fine SAND to very fine sandy SILT			
25	Very soft to soft, wet, bluish gray, fine sandy SILT to SILT with some very fine sand and clay		S-6	
	Very loose, saturated, bluish gray, silty, very fine SAND with trace organics		S-7	
	(continued)			
30				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

264

In-place density 80 pcf

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- Consolidation test
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 13 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-6

SOIL DESCRIPTION

Location: 10' North & 30' East of South Lightpole

Approximate ground surface elevation: 27.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Interbedded very soft ot soft, wet to saturated, dark brown to brown, fibrous PEAT and organic SILT with some clay		S-8	
35	Volcanic ash layer at 35.8 feet		S-8	
	Very loose, saturated, bluish gray, silty, very fine SAND/very fine sandy SILT			
40	Medium dense, saturated, gray, sandy GRAVEL/ gravelly SAND with trace to some silt		S-10	
	Dense, saturated, gray, fine GRAVEL with trace sand and silt			
45			S-11	
	Boring terminated at approximately 46.5 feet. Switched to mud rotary at 40 feet.			
50				
55				
60				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- Groundwater level at time of drilling (ATD)
- Consolidation test
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 11 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-7

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION Location: 90' W & 9' N of Manhole Approximate ground surface elevation: 33.5 feet	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Sod over loose, moist, brown, gravelly, silty SAND (Topsoil)			
	Loose to medium dense, moist, tan, gravelly SAND with some silt (Fill)			
5			S-1	
	Medium dense, wet to saturated, tan, gravelly, silty SAND			ATD
10			S-2	
	Grading to a silty, gravelly SAND			
	Very dense, saturated, tan, silty, gravelly SAND/ silty, sandy GRAVEL			
15			S-3	
20	Very dense, moist to wet, tan, silty, gravelly SAND		S-4	
	Boring terminated at approximately 21 feet			
25				
30				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

S-3: 50/6"

S-4: 50/4.5"

TESTING

0 20 40 60 80 100

MOISTURE CONTENT

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA Hammer type: Mechanical Date drilled: 09 October 1995 Logged by: HWB

PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00 BORING NO. A-8

Page 1 of 1

Location: 120' E of Manhole & 20' N of Path

Approximate ground surface elevation: 36 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Grass over loose, moist, brown, silty, gravelly SAND (Fill)			
	Medium dense, moist, dark brown, gravelly, silty SAND (Fill)			
5	Medium dense, damp to moist, tan, silty, fine SAND		S-1	
10	Becomes wet to saturated			P/ATD
	Medium stiff, moist, yellowish tan, laminated SILT with trace organics		S-2	
	Dense, wet to saturated, tan, gravelly SAND with some silt		S-3	ATD
	Very dense, moist to wet, gravelly, silty SAND			
20			S-4	
	Boring terminated at approximately 21 feet			
25				
30				

PENETRATION RESISTANCE

Standard ▲ Blows per foot △ Other

0 10 20 30 40 50

50/4"

TESTING

0 20 40 60 80 100

MOISTURE CONTENT

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- P/ATD — Perched groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA Hammer type: Mechanical Date drilled: 09 October 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-10

Page 1 of 1

Location: 9' N of Corner Fence Post

Approximate ground surface elevation: 31.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	2" of 1 1/2-inch minus Crushed Rock over 4" of Asphalt over medium dense, moist, tan, sandy GRAVEL with some silt (Fill)			
	Loose, damp to moist, orangish tan, gravelly SAND/sandy GRAVEL with some silt (Recessional)			
5		X	S-1	
	Loose to medium dense, moist to wet, tan, SAND with some silt and trace gravel (by drilling action)			
10	Medium dense, saturated, tan, silty, fine SAND		S-2	ATD
15			S-3	
20	Grading to silty, fine to medium SAND with trace gravel		S-4	
	Boring terminated at approximately 21.5 feet			
25				
30				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

Blowcount Overstated gravel in shoe

TESTING

MOISTURE CONTENT

0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- X Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA Hammer type: Mechanical Date drilled: 09 October 1995 Logged by: HWB

PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00 BORING NO. A-11

Page 1 of 2

Location: 20' South & 55' West from Catch Basin In Boat Yard

Approximate ground surface elevation: 31 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	4" of 5/8 inch minus Gravel Fill over 1" Concrete over medium dense, damp, tan, sandy GRAVEL with some silt (Fill)			
	Loose, damp, orangish tan, sandy GRAVEL with some silt (Recessional)			
5			S-1	
	Becoming cobbly at 8.5 feet			
10	Loose, saturated, yellowish tan, silty, fine to medium SAND		S-2	ATD
	Loose, saturated, yellowish tan, silty, fine SAND			
15			S-3	
	Becoming mottled orange-tan-gray			
	Stiff, wet, yellowish tan, SILT with some clay and interbeds of silty, very fine SAND			
20			S-4	
	Medium dense, saturated, gray, silty, fine SAND			
	Interbedded medium stiff/medium dense, wet to saturated, tan, very fine sandy SILT with some clay to silty, very fine SAND			
25			S-5	
	Medium dense, saturated, gray, gravelly SAND with some silt			
	(continued)			
30				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- X Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 11 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-11

Page 2 of 2

Location: 20' South & 55' West from Catch Basin In Boat Yard

Approximate ground surface elevation: 31 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER	PENETRATION RESISTANCE ▲ Standard △ Other — Blows per foot (0, 10, 20, 30, 40, 50)	TESTING
30	Medium dense, saturated, gray, silty, fine SAND with some medium sand		S-6			
	Becoming gravelly at 32 to 33 feet					
35	Medium dense, saturated, gray, silty, fine SAND with trace gravel		S-7			
40			S-8			
	Becoming dense					
45			S-9			
50	Becoming medium dense		S-10			
	Boring terminated at approximately 51.5 feet. Switched to mud rotary at 30 feet.					
55						
60						

MOISTURE CONTENT (0, 20, 40, 60, 80, 100)

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

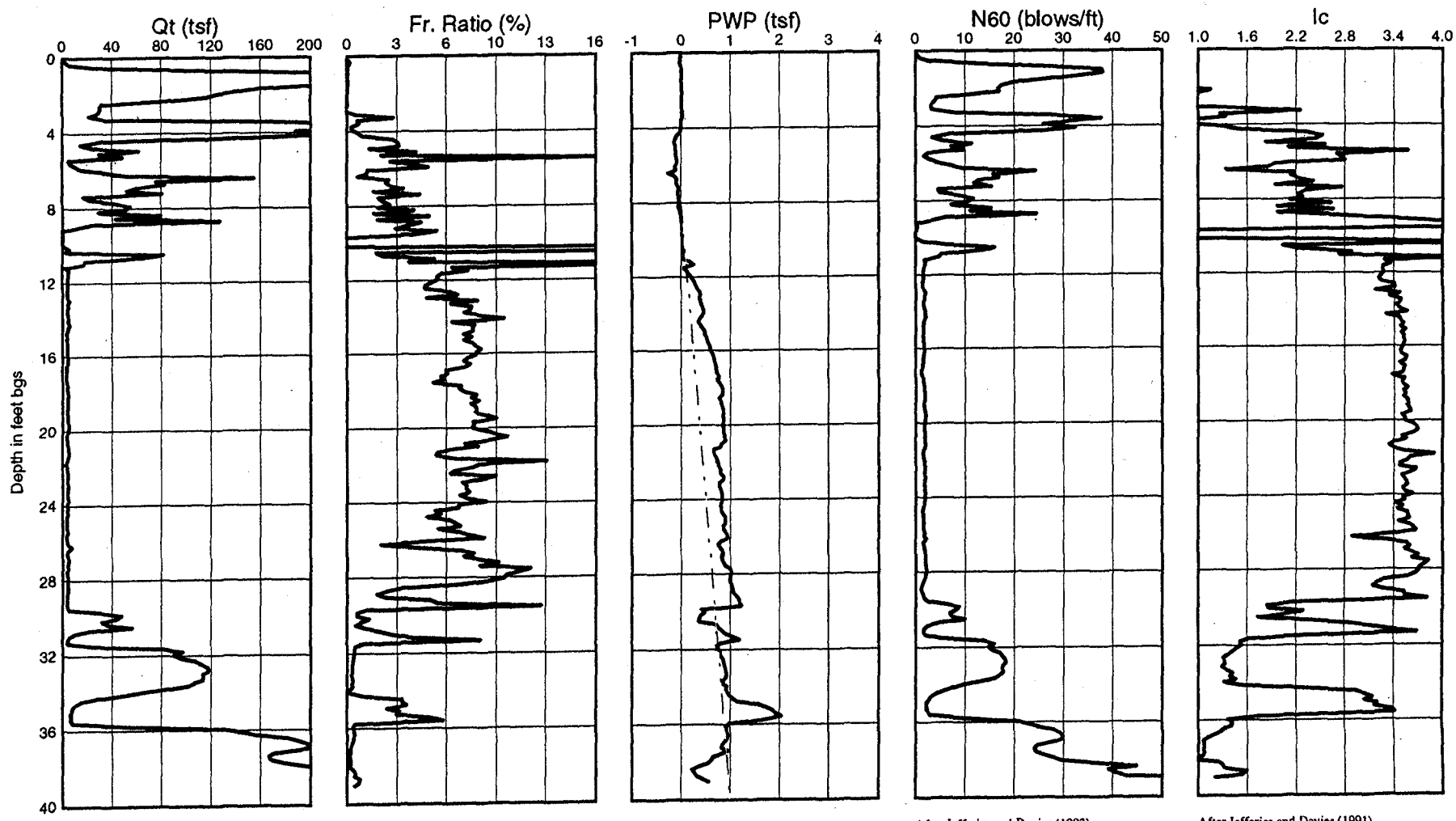
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 11 September 1995 Logged by: HWB

Cone Penetration Test - A12

Test Date : Sept 07, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 23.30
Water Table Depth : 8.00



Qt normalized for unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00

BORING NO. A-13

Page 1 of 1

Location: 55' West of Pole & 18' South of Curb

Approximate ground surface elevation: 38 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Sod over loose, moist, dark tan, silty, gravelly SAND to gravelly SAND with some silt and trace organics (Fill)			
5	Becoming mixed tan-brown, silty, gravelly SAND with scattered cobbles (Fill)		S-1	
	Medium dense, moist to wet, slight orange mottling in orangish tan, fine to medium SAND with some silt and trace gravel			
10			S-2	ATD
	Loose, saturated, slight orange mottling in orangish tan, silty, fine SAND			
15			S-3	
	Interbedded stiff, wet, some orange mottling in tan, fine sandy SILT/SILT with some silty, fine SAND and medium dense, saturated, tan, silty, fine SAND			
20			S-4	
	Boring terminated at approximately 21.5 feet			
25				
30				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

Drilling method: HSA Hammer type: Cathead Date drilled: 18 October 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-14

Page 1 of 1

Location: 45' East of Sanitary Sewer In Bottom of Ditch

Approximate ground surface elevation: 32 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Sod over loose, damp to moist, gray, PEA GRAVEL with trace sand and silt (Fill)			
5	Loose, moist, tan, gravelly, fine to medium SAND with some silt and scattered cobbles and organics (Fill)		S-1	
10	Medium dense, moist to wet, tan, silty, fine SAND with trace to some gravel and medium sand			ATD
	Becoming wet to saturated		S-2	
15	Slight orange mottling		S-3	
20	Stiff, wet, gray, SILT with interbeds of sandy SILT and medium dense, wet to saturated, silty, fine SAND		S-4	
	Boring terminated at approximately 21.5 feet			
25				
30				

PENETRATION RESISTANCE

Standard ▲ Other △

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

Drilling method: HSA Hammer type: Cathead Date drilled: 18 October 1995 Logged by: HWB

PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00

BORING NO. A-16

Page 1 of 3

Location: Halfway between Wharf and Storage Container

Approximate ground surface elevation: 21 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	2" to 3" of Broken Concrete over 2" to 4" Angular Rock with a silty sand matrix			
	Medium dense, moist, greenish gray, silty, sandy GRAVEL (Fill)			
	Loose to medium dense, moist, dark brown, gravelly, silty SAND with organics (Fill)			
5			S-1	ATD
	Very soft to soft, wet to saturated, brown, fibrous to amorphous PEAT with debris (wood, brick, wire, metal, concrete, etc.) (Wood Debris Fill)			
10			S-2	
15			S-3	
20			S-4	
	Medium dense, saturated, tannish gray, silty, gravelly SAND to sandy GRAVEL with some silt			
25			S-5	
30	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 13 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-16

Location: Halfway between Wharf and Storage Container

Approximate ground surface elevation: 24 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Stiff, wet, mottled yellowish tan, SILT with trace to some very fine sands		S-6	
	Medium dense, wet to saturated, bluish gray, silty, very fine SAND			
35	Grading to very fine sandy SILT		S-7	
	Grading to silty, very fine SAND			
40			S-8	
45			S-9	
50	Interbedded stiff/medium dense, wet to saturated, mottled orange-tan, very fine sandy SILT/silty, very fine SAND		S-10	
	Medium dense, saturated, tannish gray, gravelly SAND with some silt			
55			S-11	
	Dense, saturated, gray, medium SAND with trace to some gravel and silt			
60	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 13 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-16

Page 3 of 3

Location: Halfway between Wharf and Storage Container

Approximate ground surface elevation: 24 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER	PENETRATION RESISTANCE (Standard ▲, Other △; Blows per foot: 0, 10, 20, 30, 40, 50)	TESTING
60	Dense, saturated, bluish gray, silty SAND with trace gravel		S-12			
65	Medium dense, saturated, gray, GRAVEL with some sand and trace silt to sandy GRAVEL with trace silt		S-13			
70	Very dense, saturated, gray, sandy GRAVEL with some silt		S-14		50/3"	
	Boring terminated at approximately 71 feet. Switched to mud rotary at 55 feet.					
75						
80						
85						
90						

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 13 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-17

Page 1 of 2

Location: 30' NE from Ecology Block Wall

Approximate ground surface elevation: 25.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	4" Broken Concrete over medium dense, moist, silty, gravelly SAND with 2" to 4" Angular Rock and trace organics (Fill)			
	Loose to medium dense, wet, blackish gray, silty SAND with some gravel matrix and wood debris (brick, wire, concrete, etc.) (Wood Debris Fill)			
5			S-1	
10	Soft to medium stiff, wet, blackish brown -dark brown, fibrous to amorphous PEAT with wood debris (Fill)		S-2	
15			S-3	ATD
20			S-4	
	Very soft, wet to saturated, blackish brown-brown, fibrous to amorphous PEAT			
25			S-5	
30	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 08 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-17

Page 2 of 2

Location: 30' NE from Ecology Block Wall

Approximate ground surface elevation: 25.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Very soft, wet to saturated, blackish brown-brown, fibrous to amorphous PEAT (As Above)		S-6	
	Soft, wet, dark gray, sandy SILT with organics			
	Medium dense, saturated, greenish gray, silty, sandy GRAVEL to sandy GRAVEL with some silt			
35			S-7	
40	Very stiff, wet, greenish gray, SILT with some clay and silty sand lens at 41.1 to 41.3 feet		S-8	
	Boring terminated at approximately 41.5 feet			
45				
50				
55				
60				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT

0 20 40 60 80 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- X Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

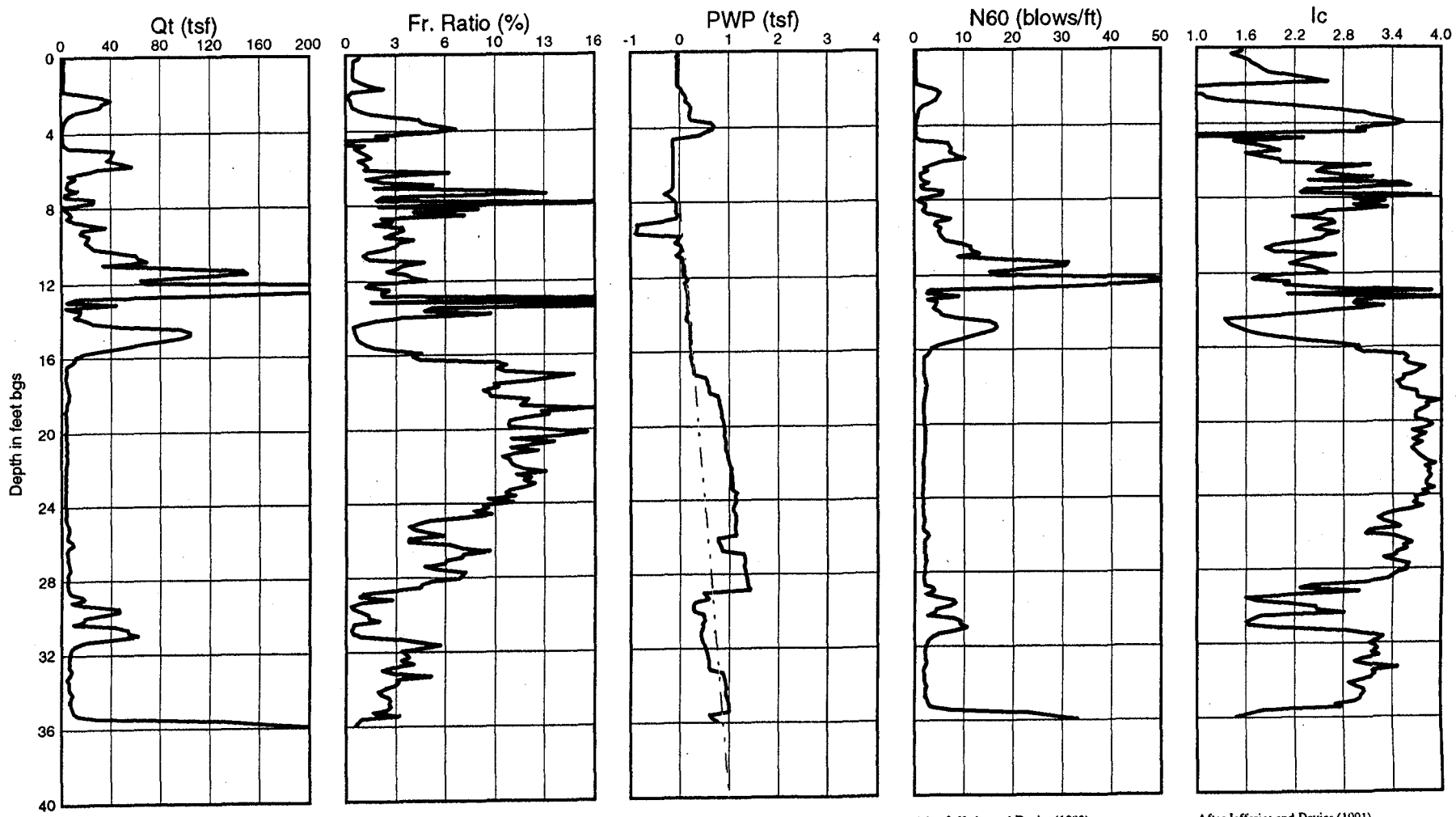
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 08 September 1995 Logged by: HWB

Cone Penetration Test - A18

Test Date : Sept 08, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 25.00
Water Table Depth : 8.00



Qt normalized for unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-19

Page 1 of 2

SOIL DESCRIPTION
5' N & 15' NE from Corner of Ecology Block Wall
Location:
Approximate ground surface elevation: 24 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Loose, damp to moist, brown, silty SAND with some gravels, quarry spalls and organics (Fill)			
5	Very loose to loose, moist to wet, blackish gray to blackish brown, silty SAND with some gravels and debris (wood, plastic, concrete, wire, etc.) (Wood Debris Fill)		S-1	
	Becoming wet to saturated			ATD
10			S-2	
	Wood log 14 to 15 feet			
15	Very soft, wet to saturtaed, brown, fibrous to amorphous PEAT		S-3	
			S-4	
20			S-5	
	Very soft, wet, brown, organic SILT with some clay and interbeds of PEAT			
25			S-6	
	Very soft, wet to saturated, brown, fibrous to amorphous PEAT			
	Medium dense, saturated, tannish gray, sandy GRAVEL with some silt (continued)			
30				

PENETRATION RESISTANCE
Standard ▲ Other △
Blows per foot
0 10 20 30 40 50

Blowcount Overstated wood in shoe

TESTING

0 20 40 60 80 100
MOISTURE CONTENT
Plastic limit Natural Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 07 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-19

Page 2 of 2

Location: 5' N & 15" NE from Corner of Ecology Block Wall

Approximate ground surface elevation: 24 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER	PENETRATION RESISTANCE (Standard ▲, Other △; Blows per foot 0–50)	TESTING
30	Medium dense, saturated, tannish gray, sandy GRAVEL with some silt (As Above)		S-7			
35	Medium dense to dense, saturated, light gray, fine to medium SAND with some silt to silty, fine to medium SAND		S-8			
40	Very dense, saturated, greenish gray, silty, sandy GRAVEL		S-9		77	
45	Dense, saturated, tannish gray to gray, sandy GRAVEL to gravelly SAND with trace to some silt		S-10			
50			S-11			
55	Boring terminated at approximately 51.5 feet. Switched to mud rotary at 20 feet.					
60						

MOISTURE CONTENT: 0 20 40 60 80 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

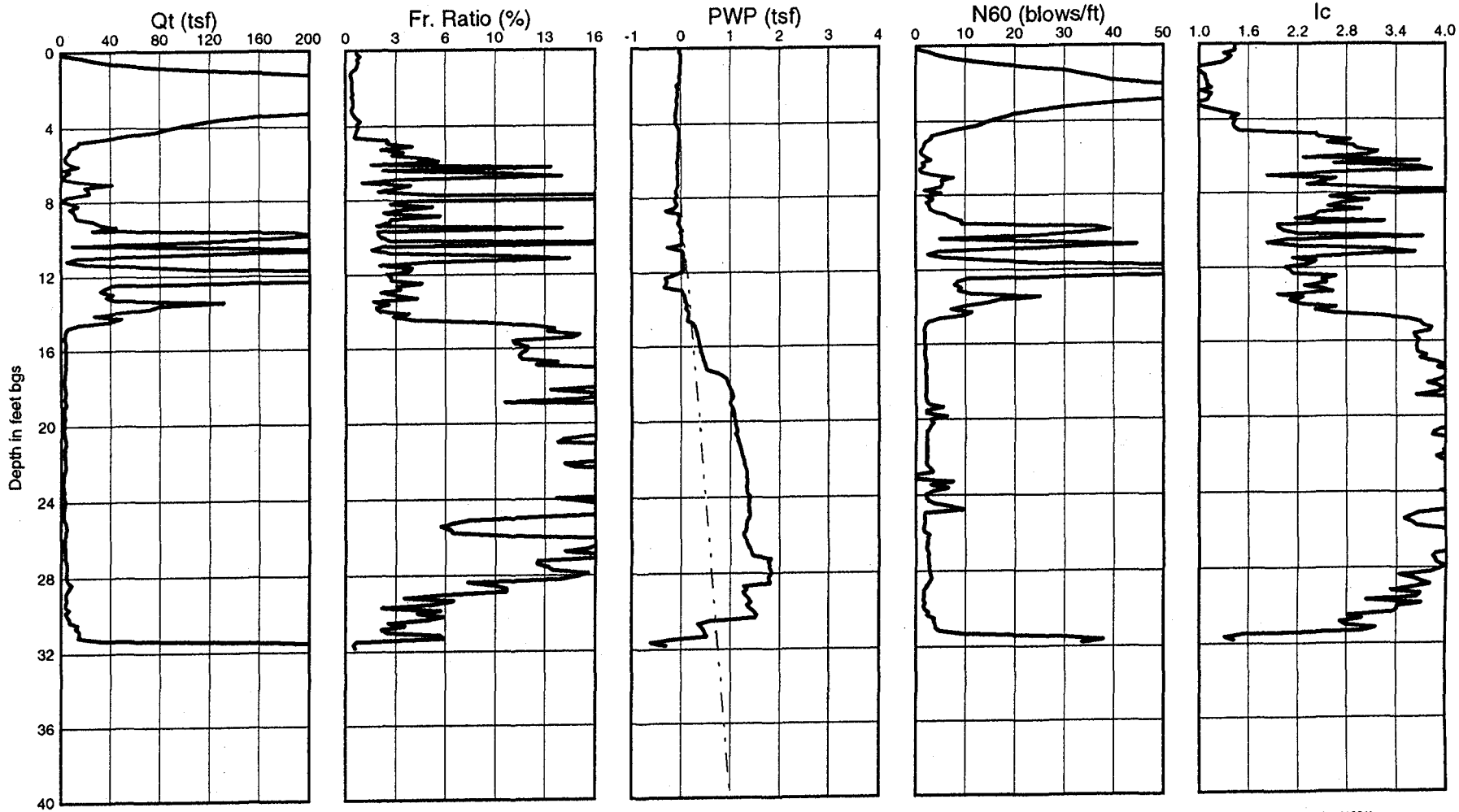
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 07 September 1995 Logged by: HWB

Cone Penetration Test - A20

Test Date : Sept 07, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 23.80
Water Table Depth : 8.00



Qt normalized for
unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-21

Page 1 of 3

Location: 75' SW of SW Corner of Asphalt Pad

Approximate ground surface elevation: 26.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Medium dense to dense, damp, tan, silty SAND matrix around 2" to 4" Angular Rock (Fill)			
	Loose to medium dense, moist to wet, blackish brown-brown-tan, silty, sandy matrix with some gravel in debris fill (wood, brick, metal, wire, concrete, etc.) (Wood Debris Fill)			
5			S-1	
10	Becoming wet to saturated		S-2	ATD
15			S-3	
	Very soft to soft, wet to saturated, brown, fibrous to amorphous PEAT			
20			S-4	
25			S-5	
	Very loose, saturated, gray, silty, very fine SAND			
			S-6	
	Soft, wet, gray, clayey SILT			
30	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0 10 20 30 40 50

TESTING

MOISTURE CONTENT: 0 20 40 60 80 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 08 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-21

Page 2 of 3

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
	Location: 75' SW of SW Corner of Asphalt Pad Approximate ground surface elevation: 26.5 feet			
30	Very loose, saturated, gray, silty, fine to medium SAND		S-7	
35	Interbedded soft, wet, brown PEAT with soft to medium stiff, wet, clayey SILT, loose, saturated, gray, coarse SAND with trace silt and loose, saturated, blackish gray, silty, fine SAND with some medium and coarse sand and organics (Heave?)		S-8	
40	Dense, saturated, greenish gray, silty, sandy GRAVEL		S-9	
45	Grading to a gray, medium SAND with some gravel and silt		S-10	
50	Dense, saturated, gray, medium SAND with trace to some silt and trace gravel		S-11	
55			S-12	
60	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 08 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-21

Page 3 of 3

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER	PENETRATION RESISTANCE (▲ Standard, △ Other; Blows per foot: 0, 10, 20, 30, 40, 50)	TESTING
60	Location: 75' SW of SW Corner of Asphalt Pad Approximate ground surface elevation: 26.5 feet					
	Dense, saturated, gray, gravelly SAND/sandy GRAVEL with trace to some silt		S-12			
65						
	Silty lens in tip of sampler shoe		S-13			
	Boring terminated at approximately 66.5 feet. Switched to mud rotary at 50 feet.					
70						
75						
80						
85						
90						

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD — Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

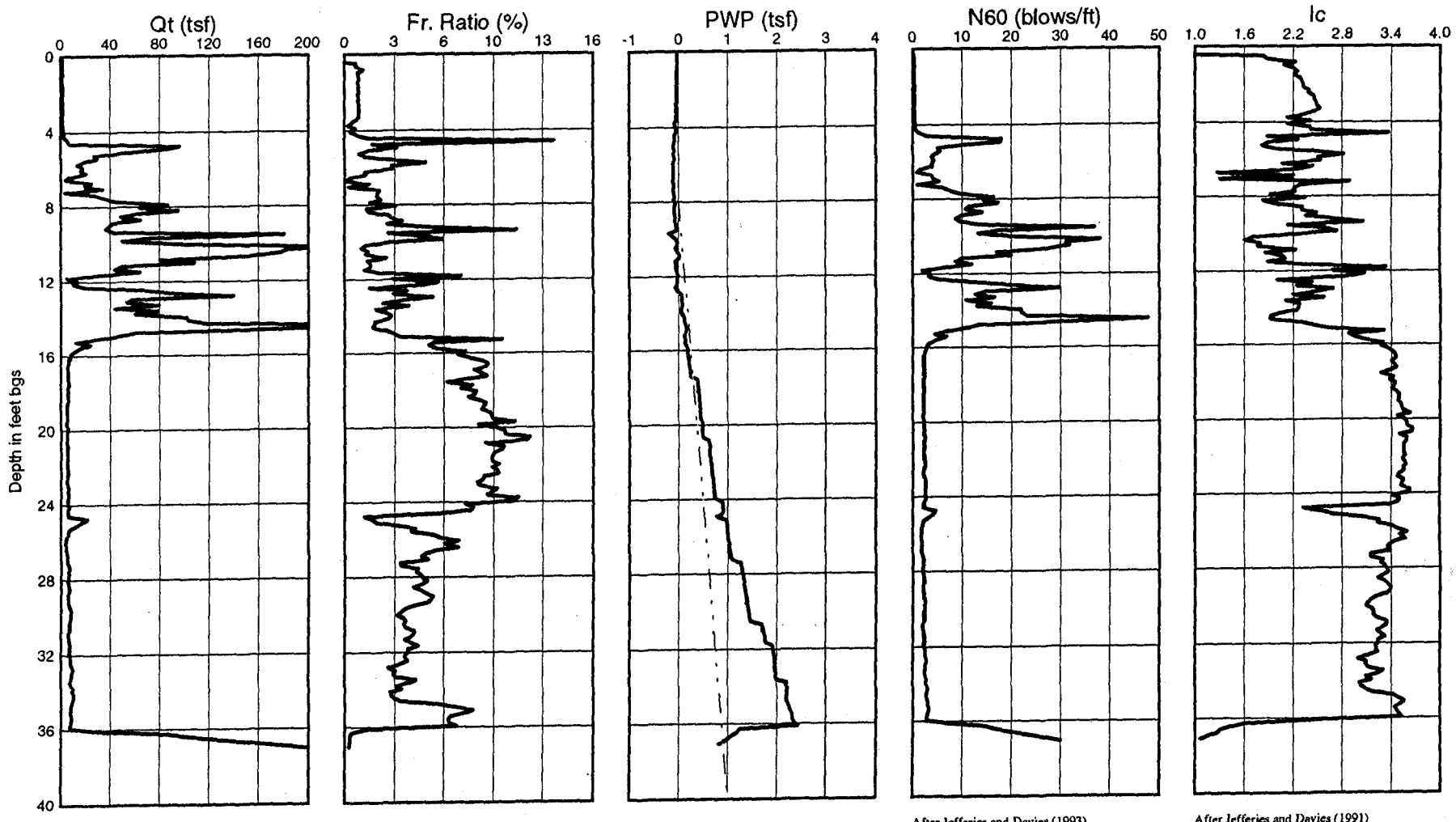
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 08 September 1995 Logged by: HWB

Cone Penetration Test - A22

Test Date : Sept 08, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 27.30
Water Table Depth : 8.00



Qt normalized for
unequal end area effects

Fr Ratio = 100*Ff/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-23

Page 1 of 2

Location: 7' N & 36' W from Fence Corner

Approximate ground surface elevation: 27 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Medium dense, damp, tan, GRAVEL and ROCK with silty sand matrix			
	Loose to medium dense, moist to wet, blackish tan, brown, silty sand matrix with some gravel in debris fill (concrete, wood, brick, metal, wire, etc.) (Wood Debris Fill)			
5			S-1	
10	Becoming wet to saturated		S-2	ATD
15	Very soft, wet to saturated, brown with some blackish brown, fibrous to amorphous PEAT with some organic silt		S-3	
20			S-4	
25	Very soft, wet, gray, clayey SILT/SILT with some clay and trace organics		S-5	
			S-6	
30	(continued)			

PENETRATION RESISTANCE

Standard ▲ Blows per foot △ Other

0 10 20 30 40 50

TESTING

225 In-place Density 53 pcf

0 20 40 60 80 100

MOISTURE CONTENT

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental

11335 NE 122nd Way, Suite 100

Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 12 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-23

Page 2 of 2

Location: 7' N & 36' W from Fence Corner

Approximate ground surface elevation: 27 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
30	Soft to medium stiff, wet, gray, clayey SILT to SILT with some clay		S-7	
	Interbedded loose, saturated, gray, fine to medium SAND with some silt and medium stiff, wet, gray, SILT with some fine sand with a silty, fine sand lens		S-8	
35	Medium dense, saturated, gray, gravelly SAND with trace to some silt		S-9	
40	Dense, saturated, greenish gray, sandy GRAVEL with some silt to silty, sandy GRAVEL		S-10	
45	Very dense, saturated, greenish gray, cobbly GRAVELS with silty sand matrix		S-11	
	Boring terminated at approximately 46.5 feet. Switch to mud rotary at 40 feet.			
50				
55				
60				

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

50/6"

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

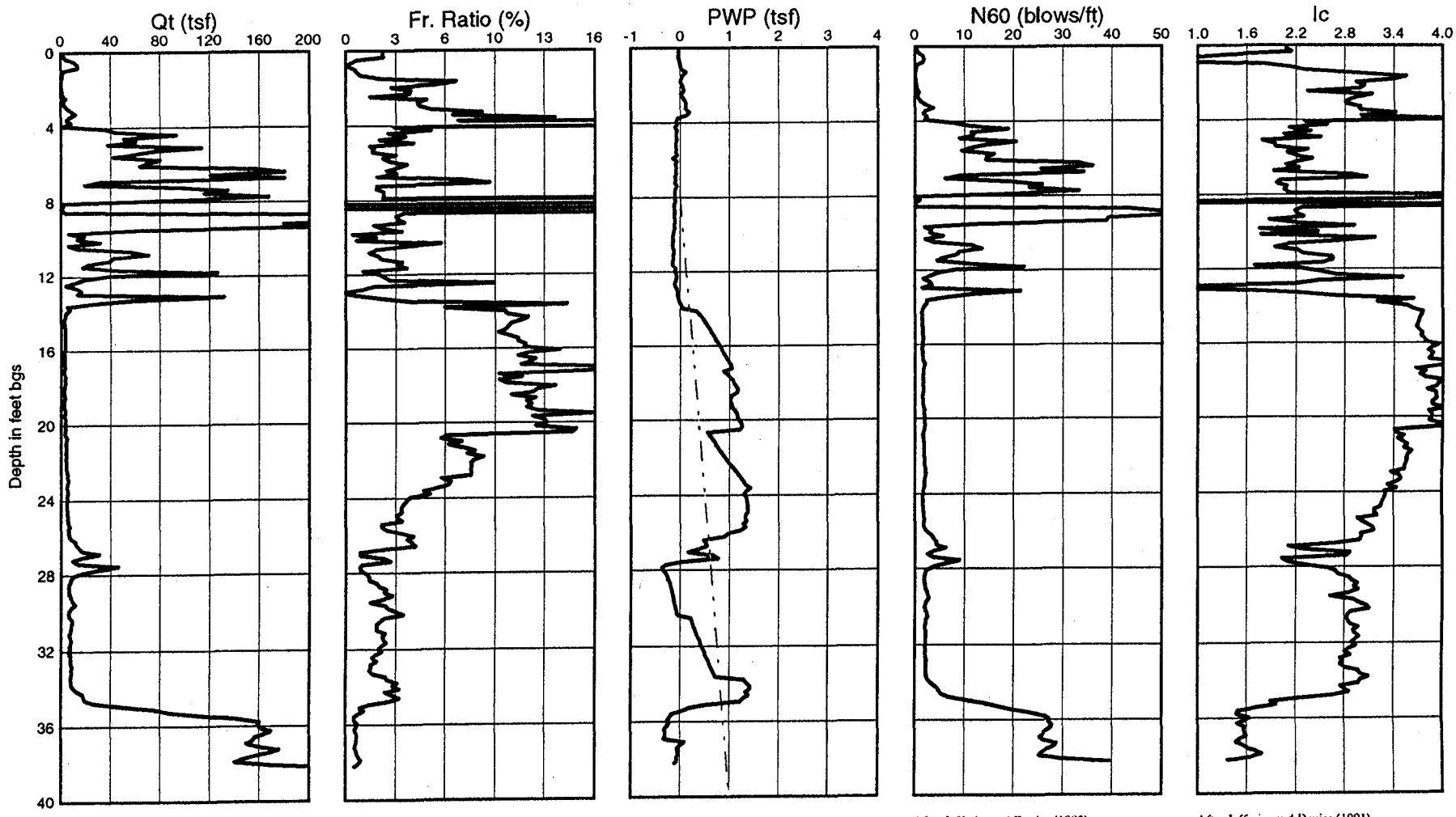
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 12 September 1995 Logged by: HWB

Cone Penetration Test - A24

Test Date : Sep 06, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 28.90
Water Table Depth : 8.00



Qt normalized for
unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00 BORING NO. A-25

Page 1 of 3

Location: 35' s & 15' W from SW Corner of Structure

Approximate ground surface elevation: 29.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
0	Medium dense to dense, moist to wet, tan, sandy GRAVEL with some silt (Fill)			
5	Loose to medium dense, wet, blackish brown-brown, silty SAND with some gravel matrix in debris fill (wood, concrete, brick, pile butts, metal wire, etc.) (strong organic odor, sheen on water, 5ppm on OVM)		S-1	
10	Becoming wet to saturated		S-2	ATD
	Very soft, wet to saturated, brown, fibrous to amorphous PEAT with some organic silts		S-3	
15			S-5	
20	Becoming blackish brown, amorphous PEAT lens with roots		S-4	
25	Very soft to soft, wet, bluish gray, SILT with some very fine sand, trace of clay and organics and interbeds of PEAT		S-6	
30	(continued)			

PENETRATION RESISTANCE

▲ Standard △ Other

Blows per foot: 0, 10, 20, 30, 40, 50

TESTING

MOISTURE CONTENT: 0, 20, 40, 60, 80, 100

Plastic limit — Natural — Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- X Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 06 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-25

Page 2 of 3

DEPTH (feet)	SOIL DESCRIPTION Location: 35' S & 15' W of SW Corner of Structure Approximate ground surface elevation: 29.5 feet	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER	PENETRATION RESISTANCE ▲ Standard △ Other Blows per foot 0 10 20 30 40 50	TESTING
30	Very soft to soft, wet to saturated, blackish brown, amorphous PEAT to fibrous PEAT		S-7			
	Interbeds of very loose, saturated, gray, silty, fine SAND at 31.5 feet					
	Very soft to soft, wet, bluish gray, clayey SILT/silty CLAY with trace very fine sand and organics					
35			S-8			
	Soft, wet, bluish gray, very fine sandy SILT with trace organics					
40	Volcanic ash layer at 40.5 feet		S-9			
	Dense to very dense, saturated, gray, sandy GRAVEL with trace to some silt					
45			S-10		Blowcount may be Overstated due to gravels 52	
	Loose/stiff, wet to saturated, bluish gray, silty, fine SAND/very fine sandy SILT with scattered organics					
50			S-11			
	Grading into medium dense, saturated, gray, silty, fine SAND					
55			S-12			
	Medium dense, saturated, light gray, fine to medium SAND with some silt and trace gravel					
	(continued)					
60						

0 20 40 60 80 100
MOISTURE CONTENT
Plastic limit Natural Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 06 September 1995 Logged by: HWB

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 BORING NO. A-25

Page 3 of 3

Location: 35' S & 15' W of SW Corner of Structure

Approximate ground surface elevation: 29.5 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND WATER
60	Medium dense to dense, saturated, light gray, fine to medium SAND with some silt and trace gravel (As Above)		S-13	
	Hard, moist to wet, bluish gray, clayey SILT to SILT with some clay			
65			S-14	
	Very dense, wet to saturated, tan, gravelly SAND/sandy GRAVEL with some silt			
70	Grades to dense, sandy GRAVEL		S-15	
	Boring terminated at approximately 71.5 feet. Switched to mud rotary at 65 feet.			
75				
80				
85				
90				

PENETRATION RESISTANCE

▲ Standard Blows per foot △ Other

0 10 20 30 40 50

53

TESTING

0 20 40 60 80 100

MOISTURE CONTENT

Plastic limit Natural Liquid limit

LEGEND

- 2.00-inch OD split-spoon sample
- X Sample not recovered
- ATD Groundwater level at time of drilling
- 3.00-inch OD Shelby tube sample

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

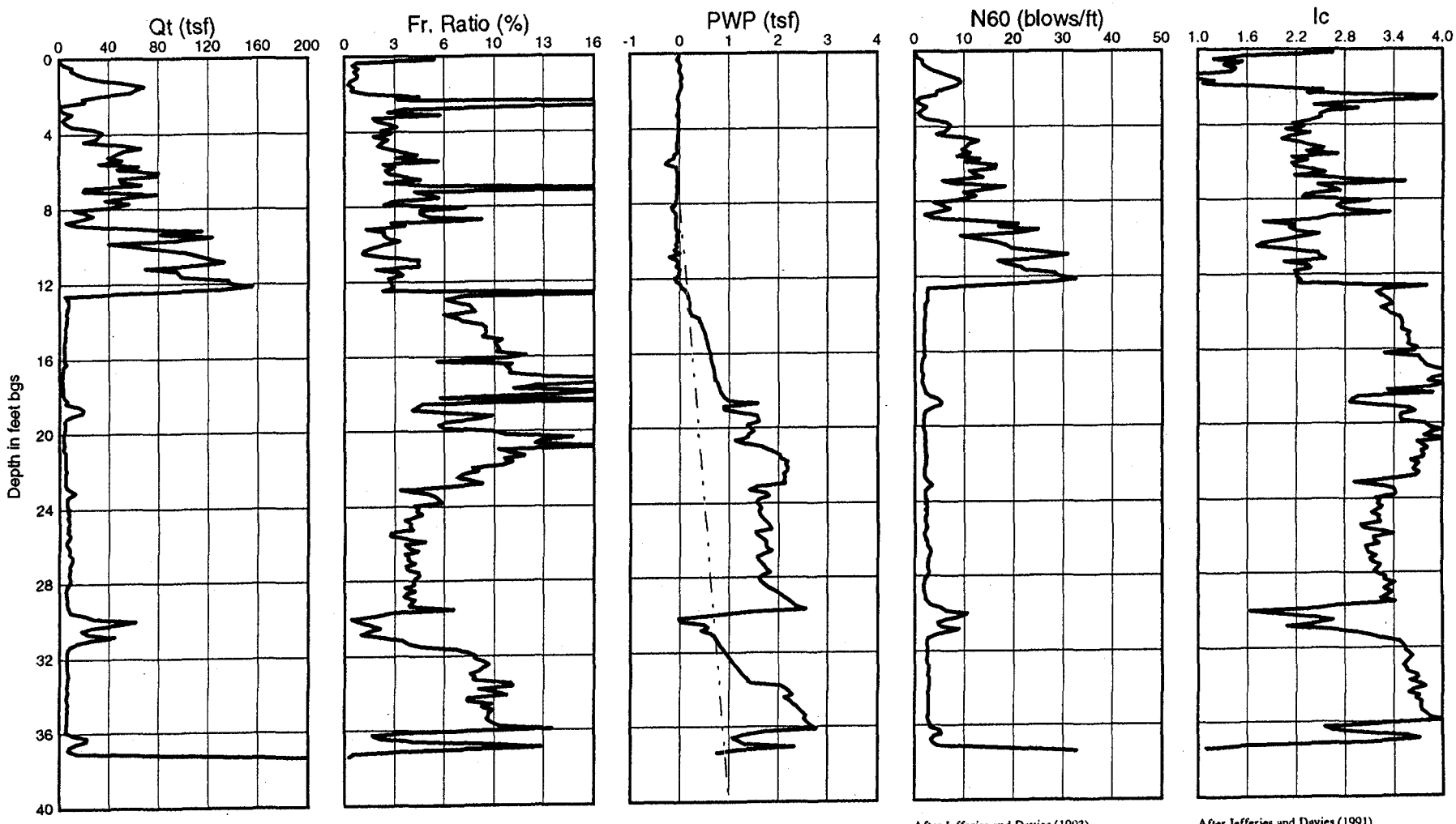
Drilling method: HSA/Mud Rotary Hammer type: Mechanical Date drilled: 06 September 1995 Logged by: HWB

Cone Penetration Test - A26

Test Date : Sep 06, 1995
Location : Kenmore LakePointe Development

Operator : Northwest Cone Exploration

Ground Surf. Elev. : 28.00
Water Table Depth : 8.00



Qt normalized for unequal end area effects

Fr Ratio = 100*F/(Qt-Sigmav)
Gamma = 120 pcf

After Jefferies and Davies (1993)

After Jefferies and Davies (1991)
Ic < 1.25 - Gravelly sands
1.25 <Ic < 1.90 - Clean to silty sand
1.90 <Ic < 2.54 - Silty sand to sandy silt
2.54 <Ic < 2.82 - Clayey silt to silt clay
2.82 <Ic < 3.22 - Clays

PROJECT NO. 11-10459-01 DATE: Sept. 8, 1995 DRAWN BY: Keith Brown

AGRA E & E, Inc.

PROJECT: Kenmore Lakepointe Development

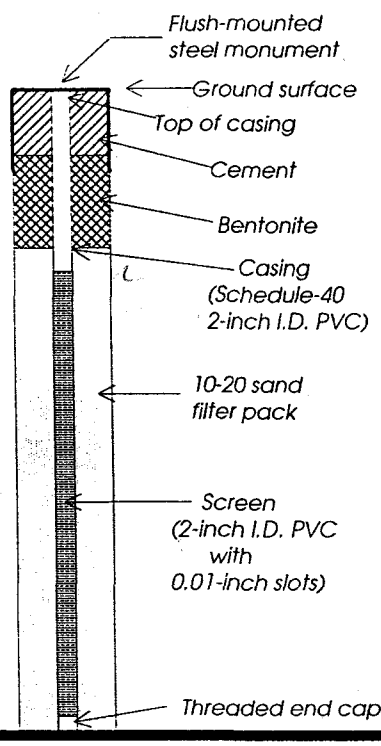
W.O. 11-10459-00 WELL NO. AW-1

Elevation reference: King County Datum NAD 1983
Ground surface elevation: 27 feet
Well completed: 22 September 1995
Casing elevation: 26.76 feet

AS-BUILT DESIGN

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
0	2" Asphalt over 2" Angular Base Course Loose, moist, dark brown, wood debris with 0-25% silty SAND (Wood Debris Fill)		S-1	5	0		
5	Soft to very soft, wet, dark gray, fine sandy, organic SILT with plant matter (no odor)		S-2	3	0 6.5'	10/2/95	
			S-3	0	0		
10	Very stiff, wet, dark brown, peaty SILT with sand (no odor)		S-4	22	0		
	Very loose, moist, dark brown, peaty, fine SAND (no odor)		S-5	0	0		
15	Bottom of boring at 14 feet.						
20							
25							
30							



Unique Ecology Well No. ABN 249.

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 22 September 1995 Drilling completed: 22 September 1995 Logged by: DHG

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 WELL NO. AW-2

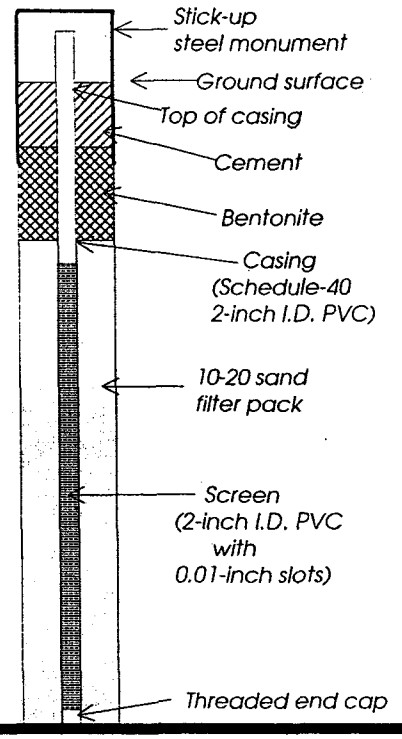
Elevation reference: King County Datum NAD 1983 | Well completed: 20 September 1995

Ground surface elevation: 29 feet | Casing elevation: 31.32 feet

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Very dense, damp to moist, gray, silty, sandy, angular GRAVEL (no odor) (Fill)		S-1	50/5"	0	
	Dense to very loose, wet to saturated, wood debris with 0-25% black, sandy, organic SILT (Wood Debris Fill)					
5			S-2	9	0	
	With brick fragments		S-3	32	0	
10			S-4	46	0	
	With angular gravel		S-5	4	0	10/2/95
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 247.

TESTING

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 20 September 1995 Drilling completed: 20 September 1995 Logged by: DHG

PROJECT: Kenmore Lakepointe Development

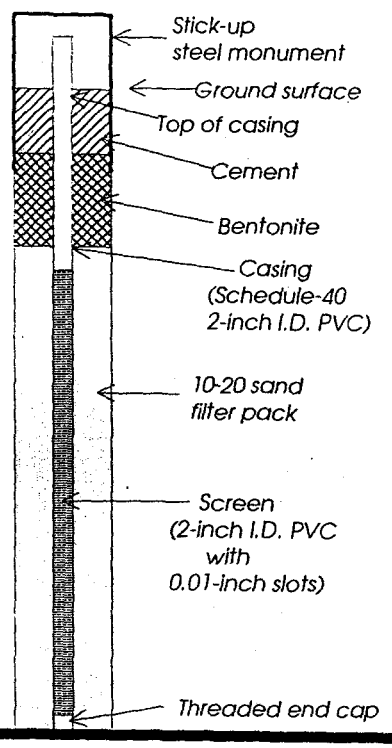
W.O. 11-10459-00 WELL NO. AW-3

Elevation reference: King County Datum NAD 1983
Ground surface elevation: 25.5 feet
Well completed: 19 September 1995
Casing elevation: 28.23 feet

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Medium dense, wet, white to gray, silty SAND with gravel, concrete wash (Fill)					
	Medium dense to very loose, wet to water-bearing, brown, wood debris with 0-50% gray, silty SAND with gravel (no odor) (Wood Debris Fill)		S-1	12	0	
5			S-2	3	0	
			S-3	1	0	
					9.5	10/2/95
10			S-4	10	0	
	Soft, wet, dark brown, amorphous PEAT (no odor)					
			S-5	2	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 244.

TESTING

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 19 September 1995 Drilling completed: 19 September 1995 Logged by: DHG

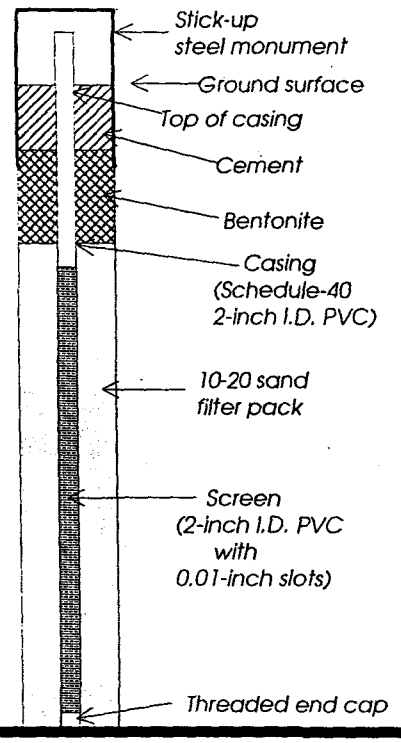
Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 WELL NO. AW-4

Elevation reference: King County Datum NAD 1983
Ground surface elevation: 25 feet
Well completed: 19 September 1995
Casing elevation: 27.61 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Medium dense, wet to damp, brown and gray mixed, silty, fine to medium SAND and fine GRAVEL with sand and silt (no odor) (Fill)		S-1	24	0	
5			S-2	10	0	
	Very loose to very dense, saturated, brown, wood debris with 0-25% silty SAND (no odor) (Wood Debris Fill)		S-3	1	0	
10			S-4	50/3"	9.7 0	10/2/95
			S-5	50/2"	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 243.

TESTING

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level
0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 19 September 1995 Drilling completed: 19 September 1995 Logged by: DHG

PROJECT: Kenmore Lakepointe Development

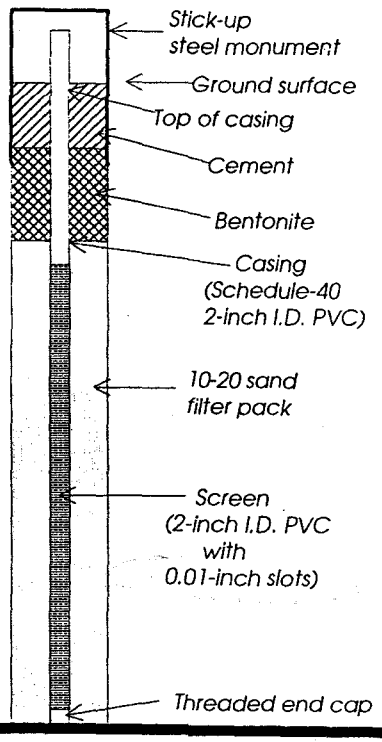
W.O. 11-10459-00 WELL NO. AW-5

Elevation reference: King County Datum NAD 1983
Ground surface elevation: 27 feet
Well completed: 19 September 1995
Casing elevation: 29.71 feet

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Very dense, moist, brown, silty, medium SAND with gravel and 50% wood debris (no odor) (Fill)		S-1	50/4"	0	
5	Loose to medium dense, wet to saturated, brown, wood debris with 0-25% silty SAND, brick and concrete fragments (creosote like odor) (Wood Debris Fill)		S-2	6	0	
			S-3	6	0	
10			S-4	16	0	
			S-5	6	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 242.

TESTING

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 19 September 1995 Drilling completed: 19 September 1995 Logged by: DHG

Kenmore Lakepointe

PROJECT: Development

W.O. 11-10459-00 WELL NO. AW-6

Elevation reference: King County Datum NAD 1983

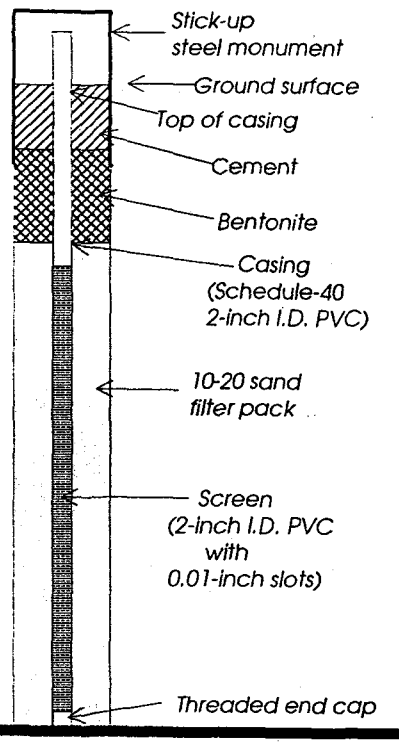
Ground surface elevation: 26.5 feet

Well completed: 19 September 1995

Casing elevation: 28.46 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Loose, moist, tan, silty, gravelly SAND (Fill)					
	Loose, wet, brown, silty SAND with 50% wood debris (no odor) (Fill)		S-1	5	0	
5			S-2	3	0	
	Loose to very loose, saturated, brown, wood debris with 0-25% sandy SILT (no odor) (Wood Debris Fill)		S-3	0	0	
10			S-4	22	0	10/2/95
			S-5	0	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 241.

TESTING

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 19 September 1995

Drilling completed: 19 September 1995

Logged by: DHG

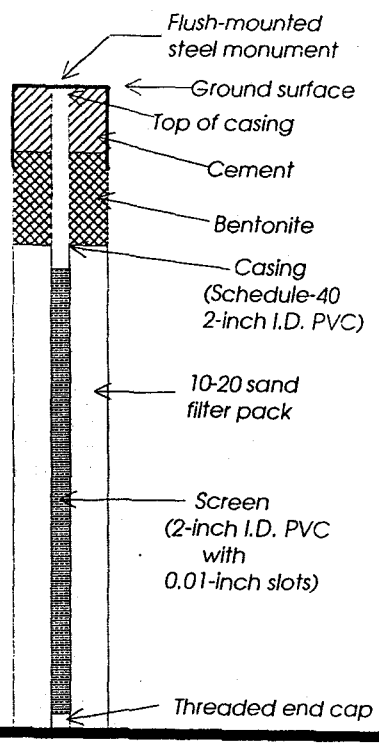
PROJECT: Kenmore Lakepointe Development

W.O. 11-10459-00 WELL NO. AW-7

Elevation reference: King County Datum NAD 1983
Ground surface elevation: 25.5 feet
Well completed: 20 September 1995
Casing elevation: 25.18 feet

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Medium dense, moist, tan, silty SAND with gravel (Fill)					
	Loose to very loose, wet to saturated, brown to black, wood debris with 0-25% black, silty SAND (no odor) (Wood Debris Fill)		S-1	8	0	
5			S-2	4	0	
					7.35	10/2/95
			S-3	6	0	
10			S-4	3	0	
	Very soft, wet, brown, amorphous PEAT (no odor)		S-5	0	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						



TESTING

Unique Ecology Well No. ABN 248.

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 20 September 1995
Drilling completed: 20 September 1995
Logged by: DHG

AGRA Earth and Environmental, Inc.

Kenmore Lakepointe

PROJECT: Development

W.O. 11-10459-00 WELL NO. AW-8

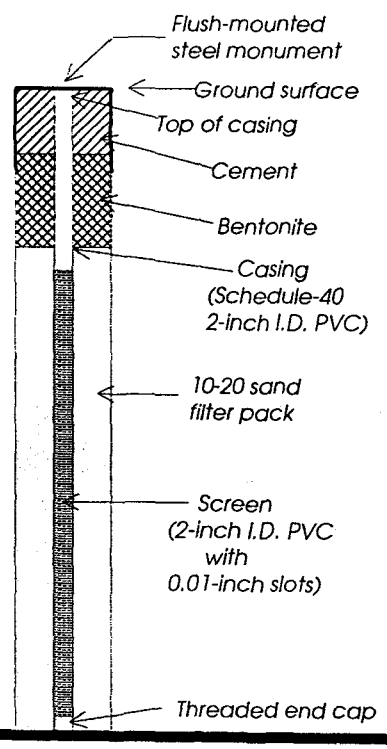
Elevation reference: King County Datum NAD 1983
Ground surface elevation: 26 feet

Well completed: 20 September 1995
Casing elevation: 26.16 feet

AS-BUILT DESIGN

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
0	2" Asphalt over 2" Angular Base Course						
	Loose, moist, brown and gray, silty SAND with 50% wood debris (creosote like odor) (Fill)		S-1	7	0		
5	Loose to medium dense, wet to saturated, brown and black, wood debris with 25-50% silty GRAVEL and sandy, organic SILT (creosote like odor) (Wood Debris Fill)		S-2	10	0		
			S-3	12	0	10/2/95	
10	With concrete washout		S-4	18	0		
			S-5	50/3"	0		
15	Bottom of boring at 14 feet.						
20							
25							
30							



Unique Ecology Well No. ABN 245.

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 20 September 1995 Drilling completed: 20 September 1995 Logged by: DHG

Kenmore Lakepointe

PROJECT: Development

W.O. 11-10459-00 WELL NO. AW-9

Elevation reference: King County Datum NAD 1983

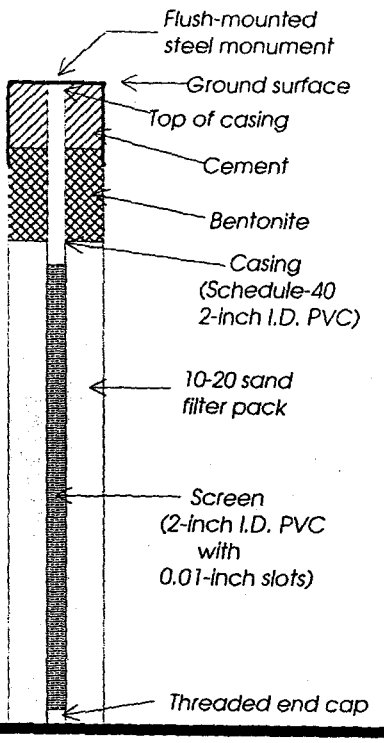
Ground surface elevation: 30 feet

Well completed: 20 September 1995

Casing elevation: 30.22 feet

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	3" Asphalt over 2" Angular Base Course Medium dense, damp, light brown, silty, medium SAND (no odor) (Fill)		S-1	15	0	
5	Loose to medium dense, wet to saturated, gravelly, fine to coarse SAND with some silt (no odor)		S-2	10	0	
			S-3	12	0	10/2/95
10			S-4	6	0	
	Very loose, saturated, red-tan, silty, fine SAND (no odor)		S-5	3	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						



TESTING

Unique Ecology Well No. ABN 246.

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental

11335 NE 122nd Way, Suite 100

Kirkland, Washington 98034-6918

Drilling started: 20 September 1995

Drilling completed: 20 September 1995

Logged by: DHG

Kenmore Lakepointe

PROJECT: Development W.O. 11-10459-00 WELL NO. AW-10

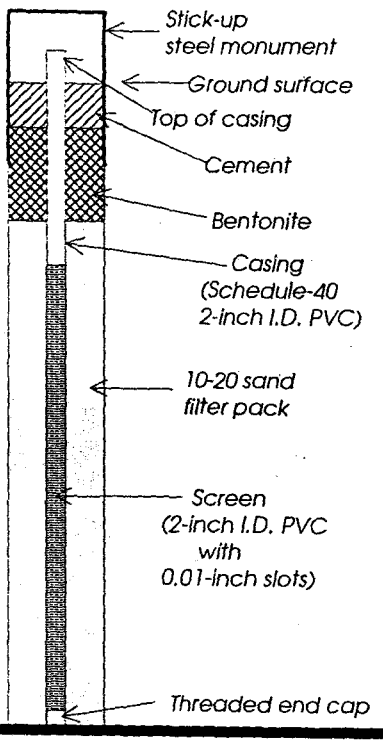
Elevation reference: King County Datum NAD 1983 Well completed: 27 February 1996

Ground surface elevation: 27 feet Casing elevation: 31.12 feet

Page 1 of 1

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Very loose, wet, brown, silty, fine SAND with wood fragments (Fill)		S-1	1	0	
5	Loose to very loose, wet, brown to black, wood debris, 0-25% silty SAND with gravel (creosote-like odor) (Wood Debris Fill)		S-2	9	0	
			S-3	22	0	
10			S-4	7	0	
			S-5	1	0	2/29/96
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 297.

TESTING

LEGEND

2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 27 February 1996 Drilling completed: 27 February 1996 Logged by: DHG

Kenmore Lakepointe

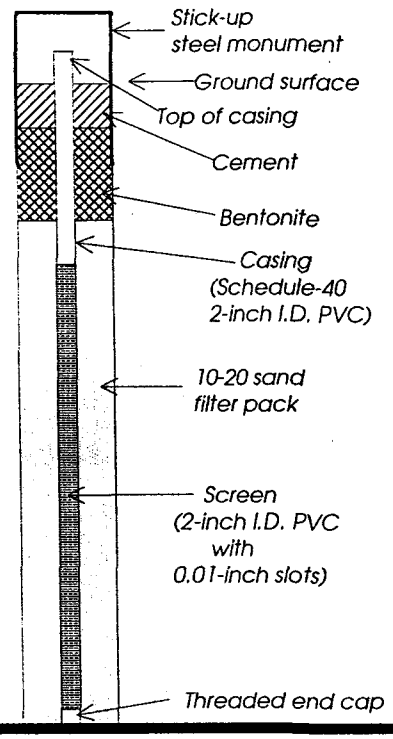
PROJECT: Development W.O. 11-10459-00 WELL NO. AW-11

Elevation reference: King County Datum NAD 1983 Well completed: 27 February 1996

Ground surface elevation: 27 feet Casing elevation: 29.59 feet

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	Loose to very loose, wet, brown, silty SAND to sandy SILT with wood fragments (decomposition odor) (Fill)					
			S-1	4	0	
5	Loose to very loose, wet to saturated, brown to black, wood debris, 0-25% silty SAND with some brick and copper wire (no odor) (Wood Debris Fill)		S-2	4	0	
			S-3	2	0	
10			S-4	2	0	2/29/96
	(creosote-like odor)		S-5	7	0	
15	Bottom of boring at 14 feet.					
20						
25						
30						

AS-BUILT DESIGN



Unique Ecology Well No. ABN 269.

TESTING

LEGEND

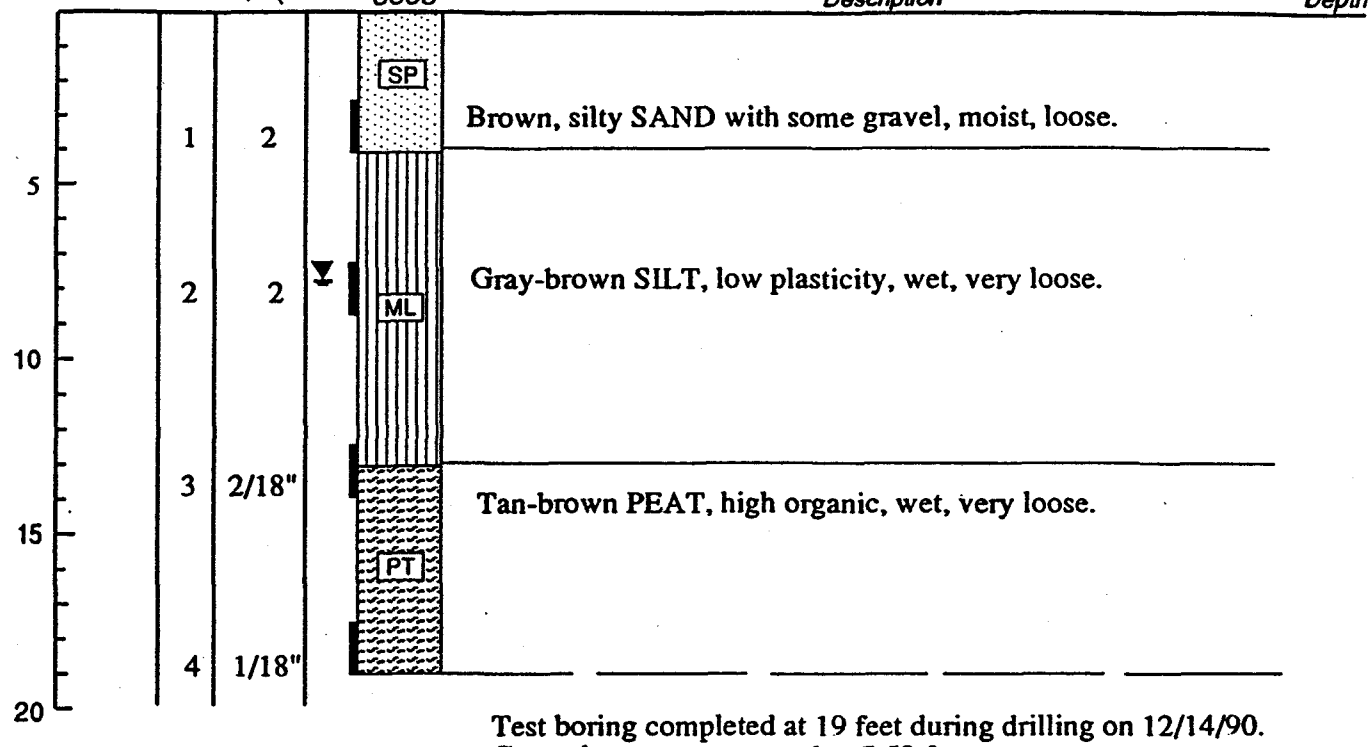
2-inch O.D. split-spoon sample

Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 27 February 1996 Drilling completed: 27 February 1996 Logged by: DHG

BORING 102

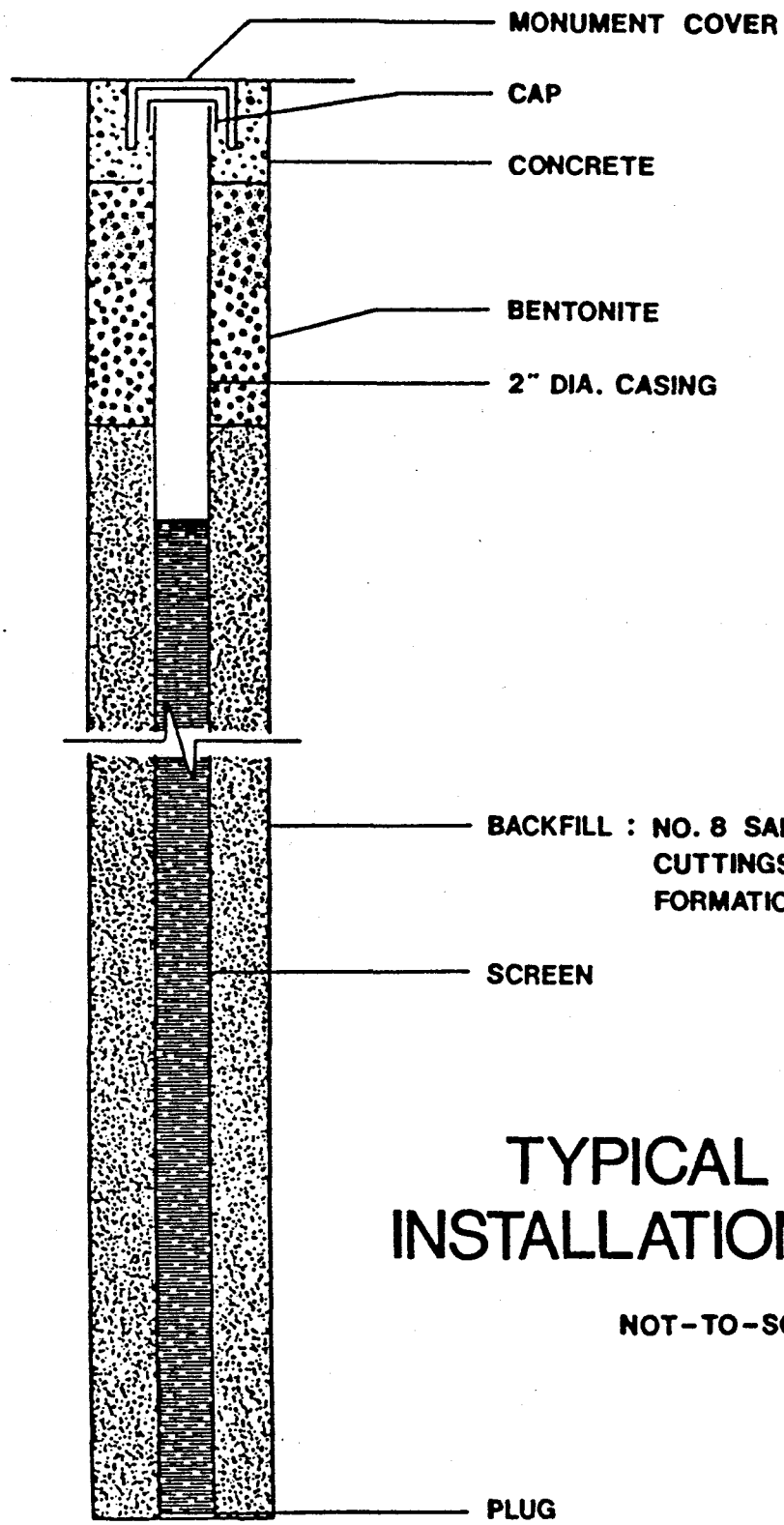


Test boring completed at 19 feet during drilling on 12/14/90.
Groundwater encountered at 7.52 feet.

GEOTECH
CONSULTANTS, INC.

TEST BORING LOG
38 ACRES
KENMORE, WASHINGTON

Job No:	Date:	Logged by:	Plate:
0260-3	DEC 1990	AMC	9



TYPICAL WELL INSTALLATION DESIGN

NOT-TO-SCALE

GEOTECH
CONSULTANTS

38 ACRES
KENMORE, WASHINGTON

Job No.:	Date:		Plate:
0260-3	JAN 1991	N.T.S	11

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-1	Elev. 25	0-1.5	Medium dense, moist, brown, silty, sandy angular GRAVEL. No odor. (Fill)
		1.5-1.8	Asphalt Paving
		1.8-2.5	Dense to very dense, moist, brown, silty, fine to medium SAND with gravel. No odor. (Fill)
		2.5-6	Dense, moist, brown, angular GRAVEL and boulders (1-12" quarry spalls) with concrete slabs, dimensioned wood, and matrix of silty fine sand. No odor. (Fill)
			Test Pit TP-1 terminated at 6 feet due to boulder obstructions. No groundwater seepage encountered. Minor caving of sidewalls below 3 feet. **Collected sample TP-1/4' (Gravel Fill Matrix)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-2	Elev. 28	0-1.7	Very dense, moist, brown and grey mixed, silty, sandy angular GRAVEL with asphalt chunks. Many wood fragments below depth of 1 foot. No odor. (Fill)
		1.7-6	**Wood Debris Fill** - Dense to loose, moist to wet, dark brown • 95% wood shards and dimensioned lumber with steel pipe, metal casting. Oily coating on debris, petroleum odor. • 5% silty SAND and pea gravel. Wet below 5.5'.
		6-6.2	Concrete wash-out layer.
			Test Pit TP-2 terminated at 6.2 feet due to concrete obstruction. No groundwater seepage encountered. Moderate caving of sidewalls below 4 feet.

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-3	Elev. 25	0-0.2	**Asphalt Pavement**
		0.2-1.3	Medium dense to dense, wet, grey, silty, sandy angular GRAVEL. No odor. (Fill)
		1.3-7.6	**Wood Debris Fill** - Dense to loose, moist to wet, dark brown • 90% wood shards and dimensioned lumber with steel pipe, metal casting. Oily coating on debris, petroleum odor. • 5% asphalt roof shingles • 5% silty SAND and pea gravel. Wet below 5.5'. Increasing debris below 7 feet - plastic, glass, styrofoam, brick
		7.6-7.8	**Concrete wash-out layer.**
			Test Pit TP-3 terminated at 7.8 feet due to concrete obstruction. Light groundwater seepage encountered in gravel base beneath pavement. No caving of sidewalls while test pit remained open. **Collected sample TP-3/5' (Wood Debris Fill Matrix Soil)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-4	Elev. 26.5	0-0.2	**Asphalt Pavement**
		0.2-2.8	Dense, moist to wet, dark grey, silty, sandy angular GRAVEL, to silty, gravelly SAND. No odor. (Fill)
		1.3-7.6	**Wood Debris Fill** - Dense to loose, moist to wet, dark brown • 90% wood shards and dimensioned lumber with steel pipe, metal casting. Oily coating on debris, petroleum odor. • 5% asphalt roof shingles • 5% silty SAND and pea gravel. Wet below 5.5'. Increasing debris below 7 feet - plastic, glass, styrofoam, brick
		7.6-7.8	**Concrete wash-out layer.**
			Test Pit TP-4 terminated at 7.8 feet due to concrete obstruction. Light groundwater seepage encountered in gravel base beneath pavement. No caving of sidewalls while test pit remained open. **Collected sample TP-4/2' (Gravel Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-5	Elev. 25	0-0.2	Asphalt Pavement
		0.2-1.4	Dense, moist to wet, grey and brown mixed, silty, fine to medium SAND with gravel. No odor. (Fill)
		1.4-3.3	Very dense, damp, grey, angular GRAVEL with silt and sand over dense, moist to wet, brown, silty SAND with gravel, some asphalt fragments. No odor. (Fill)
		3.3-7.5	Wood Debris Fill - Dense, moist to wet, dark brown • 80% wood shards and dimensioned lumber • 15% silty SAND, loose, wet • 5% brick, gravel, concrete rubble, trace drywall and fiberglass
			Test Pit TP-5 terminated at 7.5 feet. Static groundwater level encountered at 7.3 feet. No caving of sidewalls while test pit remained open. **Collected sample TP-5/2.5' (Fill Soil)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-6	Elev. 27	0-0.3	Asphalt Pavement
		0.3-1.5	Medium dense to loose, wet, red-brown, silty SAND with gravel, rock spalls, brick and asphalt fragments over pea gravel layer. No odor. (Fill)
		1.5-7	Very dense, wet, black, silty, sandy, angular GRAVEL with concrete rubble (30%) and wood fragments (20%). Wood content increases to 40-50% below 3 feet. No odor. (Fill)
		7-7.4	Wood Debris Fill - Very dense, moist to wet, dark brown • 90% wood shards and dimensioned lumber • 10% silty SAND, loose, wet
			Test Pit TP-6 terminated at 7.4 feet due to bulk lumber. Light groundwater seepage encountered from 2.5 to 3 feet. No caving of sidewalls while test pit remained open. **Collected sample TP-6/6' (Gravel Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-7	Elev. 27	0-0.3	**Asphalt Pavement**
		0.3-2.3	Medium dense to very dense, moist to wet, brown, silty SAND with angular gravel, and some pea gravel. No odor. (Fill)
		2.3-7	**Wood Debris Fill** - Dense, moist to wet, dark brown • 90% wood shards, dimensioned lumber and beams, logs • 10% silty SAND, loose, wet, trace copper wiring, metal pipe, wire cables.
			Test Pit TP-7 terminated at 7 feet due to bulk lumber. No groundwater seepage encountered. No caving of sidewalls while test pit remained open. **Collected sample TP-7/2' (Fill Soil)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-8A	Elev. 27	0-0.8	Very dense, wet, grey, silty, sandy, angular GRAVEL. No odor. (Fill)
		0.8-1.0	**Asphalt Pavement**
			Test Pit TP-8A terminated at 1 foot due refusal on asphalt. No groundwater seepage encountered.

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-8B	Elev. 26	0-1.0	**Concrete wash-out layer**
		1.0-1.2	**Asphalt Pavement**
			Test Pit TP-8B terminated at 1.2 foot due refusal on asphalt. No groundwater seepage encountered.

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-9	Elev. 27	0-1.2	Dense to very dense, wet, grey, silty, sandy, angular GRAVEL. No odor. (Fill)
		1.2-5	**Wood Debris Fill** - Dense, moist to wet, dark brown • 90% wood shards, dimensioned lumber • 10% silty SAND
		5-9.8	**Wood Debris Fill** - Dense, moist to wet, dark brown • 70% wood shards, dimensioned lumber • 20% auto body panels, steel I-beams, wire cables, tires, brick • 10% silty SAND with gravel
			Test Pit TP-9 terminated at 9.8 feet due to metal obstructions. No groundwater seepage encountered. No caving of sidewalls while test pit remained open. **Collected sample TP-9/6' (Wood Debris Fill Matrix Soil)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-10	Elev. 26	0-1.1	Dense, wet, brown, silty, sandy, angular GRAVEL. No odor. (Fill)
		1.1-9.5	**Wood Debris Fill** - Loose to medium dense, moist to wet, dark brown • 50% wood shards, dimensioned lumber • 50% silty SAND
			Test Pit TP-10 terminated at 9.5 feet. Static groundwater level encountered at 8.8 feet. Moderate caving of sidewalls. **Collected sample TP-10/5' (Wood Debris Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-11	Elev. 27	0-1	Very loose, wet, grey, silty SAND. No odor. (Concrete wash-out)
		1-3.5	Dense, moist, brown, silty, sandy, rounded GRAVEL. No odor. (Fill)
		3.5-4	Dense, moist, brown, silty, gravelly SAND with hay and clumps of roots.
		4.5-5	**Concrete Obstruction**
		5-6	**Wood Debris Fill** - Dense, moist to wet, dark brown • 80% wood shards, dimensioned lumber • 20% silty SAND
			Test Pit TP-11 terminated at 6 feet on wire cable obstruction. No groundwater seepage encountered. Moderate caving of upper 2 feet of sidewalls.

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-12	Elev. 25	0-1	Very loose, wet, grey, silty fine to medium SAND with rounded gravel. No odor. (Concrete wash-out)
		1-3.5	**Wood Debris Fill** - Medium dense, wet, brown • 90% wood shards • 5% silty SAND • 5% brick, gravel, concrete and asphalt rubble
		3.5-5.5	**Asphalt**
		5.5-6.5	**Wood Debris Fill** - Medium dense, wet, brown • 90% wood shards, dimensioned lumber, logs • 5% silty SAND with gravel • 5% concrete and asphalt rubble
		6.5-9.5	Loose, wet to waterbearing, grey, fine to coarse sandy, rounded GRAVEL with silt.
			Test Pit TP-12 terminated at 9.5 feet. Static groundwater level encountered at 9 feet. Moderate caving of sidewalls below 6 feet. **Collected sample TP-12/7' (Gravel Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-13	Elev. 26	0-2.3	Dense, moist, grey, sandy, rounded GRAVEL with silt, grading to wet, brown, silty, sandy, angular GRAVEL with rock spalls, wood shards (10%) . No odor. (Fill)
		2.3-5.5	**Wood Debris Fill** - Loose, wet, brown, decomposing • 50% shredded wood • 30% silty SAND with gravel • 15% concrete and brick rubble, some concrete slabs • 5% plastic hangers and sheeting
		5.5-8	Medium dense, wet, grey, silty, fine to medium SAND with gravel, concrete rubble (20%), wood fragments (10%).
		8-10.5	**Wood Debris Fill** - Loose, wet, brown • 70% wood shards • 30% silty SAND
			Test Pit TP-13 terminated at 10.5 feet. Static groundwater level encountered at 9.9 feet. Minor caving of sidewalls. **Collected sample TP-13/6.5' (Fill Soil)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-14	Elev. 28	0-0.5	**Asphalt Shingles**
		0.5-3.7	**GP-GM**-Very dense, moist, brown, sandy, angular GRAVEL with silt, with rock spalls, concrete rubble, wood fragments below 2 feet. No odor. (Fill)
		3.7-10.8	**Wood Debris Fill** - Loose, wet, brown • 60% wood shards • 20% silty SAND with gravel • 15% concrete rubble and slabs, brick • 5% sheet metal, auto body parts
			Test Pit TP-14 terminated at 10.8 feet. Light groundwater seepage from 0-1 and 7-8 feet. Minor caving of sidewalls. **Collected sample TP-14/8' (Wood Debris Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-15	Elev. 27	0-0.3	Dense, wet, grey, clean, fine to medium SAND with gravel. No odor. (Fill)
		0.3-2.7	Medium dense, wet, brown, fine to medium SAND with gravel, with wood fragments, concrete rubble. No odor. (Fill)
		2.7-9	**Wood Debris Fill** - Loose, wet, brown • 80% wood shards • 15% silty SAND with gravel • 5% concrete rubble, brick, wire cables
			Test Pit TP-15 terminated at 9 feet. Moderate groundwater seepage below 4 feet. Static groundwater level encountered at 8.5 feet. Moderate caving of sidewalls in upper 3 feet. Sheen visible on water table. **Collected sample TP-15/7' (Wood Debris Fill Matrix)**

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-16	Elev. 25	0-4.6	Dense, moist, grey, clean, fine to medium SAND with gravel, grading to silty, gravelly SAND. No odor. (Fill)
		4.6-9.5	**Wood Debris Fill** - Loose, wet, brown • 50% wood shards • 40% silty SAND with gravel • 10% carpeting and foampadding, glass, plastic
			Test Pit TP-16 terminated at 9.5 feet. Static groundwater level encountered at 8.5 feet. No caving of sidewalls while test pit remained open. Sheen visible on water table. **Collected sample TP-16/6' (Wood Debris Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-17	Elev. 23.5	0-3.0	Very dense, moist, grey, silty, sandy, angular GRAVEL, with concrete rubble (10%), trace wood fragments. No odor. (Fill)
		3.0-8.0	Debris Fill - Dense, wet, brown • 30% wood shards • 40% silty SAND with gravel • 20% tire retreads, rubber scraps • 5% concrete rubble, brick, steel rebar
			Test Pit TP-17 terminated at 8.0 feet. Static groundwater level encountered at 7.2 feet. No caving of sidewalls while test pit remained open. Sheen visible on water table.
			Collected sample TP-17/3' (Gravel Fill Matrix)

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-18	Elev. 24	0-1.5	Very dense, moist to wet, dark brown, silty, sandy, angular GRAVEL, with asphalt rubble. No odor. (Fill)
		1.5-3.0	Rock Mat-Quarry spalls (2-4") over rockery boulders
		3.0-4.5	Very dense, moist, grey mottled, silty, fine to medium SAND with gravel. No odor. (Fill)
		4.5-7.1	Wood Debris Fill - Loose, wet, black • 50% tree roots, dimensioned lumber • 40% silty SAND • 10% tires, wire hangers
			Test Pit TP-18 terminated at 7.1 feet. Static groundwater level encountered at 6.7 feet. Moderate caving of sidewalls below 4.5 feet. Sheen visible on water table.

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-19	Elev. 28	0-0.5	**Asphalt Pavement**
		0.5-1.3	Dense, moist, brown, silty, sandy, angular grading to rounded GRAVEL. No odor. (Fill)
		1.3-1.8	**Concrete Slab**
		1.8-4.3	**Wood Debris Fill** - Loose, wet, black • 90% dimensioned timbers • 10% silty SAND
		4.3-10.4	Medium dense, wet, grey, silty, fine SAND with gravel and trace organics, grading to medium stiff, clayey SILT with sand and gravel, scattered plant matter.
			Test Pit TP-19 terminated at 10.4 feet. No groundwater seepage encountered while test pit remained open. No caving of sidewalls while test pit remained open. **Collected sample TP-19/2' (Wood Debris Fill Matrix)**

TEST PIT LOGS/ 29 February and 1 March 1996 11-10459-00
Kenmore Lakepointe Development
King County, Washington

Test Pit No.	Approx. Elev.	Depth (ft)	Soil Description
TP-20	Elev. 28	0-0.3	**Asphalt Paving**
		0.3-1.4	Dense, moist to wet, brown, silty, sandy, angular GRAVEL, with rock spalls. No odor. (Fill)
		1.4-2.9	Dense, moist to wet, grey, fine to medium SAND with silt. No odor (Fill)
		2.9-6	**Wood Debris Fill** - Loose, wet, black • 60% dimensioned timbers • 30% silty SAND with gravel • 10% wire, pipe, scrap metal
		6-8.9	**Wood Debris Fill** - Loose, wet, black • 90% dimensioned timbers • 10% silty SAND with gravel

Test Pit TP-20 terminated at 8.9 feet. No groundwater seepage encountered while test pit remained open. No caving of sidewalls while test pit remained open. Collected sample **TP-20/8' (Wood Debris Fill Matrix)**