

Foundation Investigation Proposed Portland Assisted Living Facility Phase II Portland, Maine

for

Curry Brandaw Architects 2260 McGilchrist Street SE, Suite 100 Salem, OR 97302

February 9, 2004

Sebago Technics Engineering Expensive You Can Build On



sebagotechnics.com

One Chabot Street P.O. Box 1339 Westbrook, Maine 04098-1339 Ph. 207-856-0277 Fax 856-2206

February 9, 2004 96592

Mr. Garth Brandaw Curry Brandaw Architects 2260 McGilchrist Street SE, Suite 100 Salem, OR 97302

<u>Foundation Investigation</u> Proposed Portland Assisted Living Facility, Phase II, Portland, Maine

Dear Garth:

-1

i

3

2

This report presents the results of our evaluation of the subsurface conditions and foundation requirements for the proposed Portland Assisted Living Facility – Phase II in Portland, Maine. As you may recall, Haley & Aldrich, Inc. performed a subsurface investigation for the facility. Results of their evaluation were presented in their report dated October 3, 1997. Kenneth Recker, our Geotechnical Engineering Manager, completed the original evaluation while at Haley & Aldrich.

In summary, it is our opinion that the buildings may be supported on spread and continuous footings bearing on undisturbed naturally-deposited soils, sound intact bedrock, or on compacted structural fill placed after removal of unsuitable soil. In addition, earth-supported slabs-on-grade may be used for the lowest floors. Specific recommendations regarding foundation design and construction considerations are presented below.

Introduction

The approximately 11.3-acre site of the Phase II construction is immediately south and east of the Phase I portion of the facility. The entire site is an approximately 20-acre parcel on the east side of Canco Road, between Torrey Road and Murray Street. Several bedrock exposures are located in the Phase II area. Ground surface elevations within the proposed building areas vary from approximately El. 70 to El. 80. Elevations in this report are in feet and referenced to National Geodetic Vertical Datum.

Phase II will consist of a two-story building containing 80 Assisted Living Suites and four one-story Cottage Suites in two buildings. In addition, there will be roadways and parking for 65 vehicles.

Proposed Construction

The buildings will be wood frame structures. The two-story building will have maximum column loads of 80 kips and wall loads of 3.5 kips per foot. The one-story buildings will have nominal loads. Ground floor elevation of the two-story building is El. 83.0 and the one-story buildings are El.77.5.

Subsurface Explorations

On September 17, 1997, nineteen test pits, TP29 and TP31 through TP49, except TP44, were excavated by W. H. Lavigne (WHL) of Standish, Maine at locations shown on Sheet 1, Site and Subsurface Exploration Plan. The proposed locations of test pit TP44 was on a bedrock exposure and TP44 was not excavated. WHL excavated test pits to depths below ground surface varying from 0.5 foot to 6.0 feet Haley & Aldrich prepared the logs included as Appendix A. Exploration results are summarized in Table I, Summary of Test Pits.

Sebago Technics determined the locations and ground surface elevations at test pits.

The test pits and related information depict subsurface conditions and water levels only at their specific locations at the time of excavation. Soil conditions at other locations may differ from conditions at these locations. Also, the passage **of** time may result in a change in groundwater conditions at exploration locations.

Subsurface liti

â

-

The test pits encountered four principal soil units overlying bedrock at the site: forest mat, topsoil, marine deposit, and glacial till. Encountered thickness and generalized descriptions of the soil units are presented below in order of increasing depth below ground surface.

Forest Mat - Forest mat consisting of leaves, pine needles, twigs and other organic debris was encountered at the surface of the test pits. Encountered thickness varies from 0.2 foot to 0.5 foot.

Topsoil - Topsoil consists of dark brown to rust-brown, loamy SILT; to loamy fine SAND with roots. Encountered thickness ranges from 0.3 foot to 1.4 feet.

Marine Deposit - The marine deposit consists of interbedded gray-brown to rust brown, silty fine SAND and sandy SILT; to gray-brown silty fine SAND; to clayey SILT; to gray-brown, mottled, silty CLAY. Encountered thickness of the marine deposit varies from 0.3 foot to 6.9 feet.

Glacial Till - Glacial till consisting of brown, silty, medium to fine SAND, with fractured rock fragments was encountered in several test pits. Encountered thickness ranges from 0.4 foot to 0.8 foot.

Bedrock was encountered in most of the test pits.

.

Groundwater was not encountered in the test pits. However, test pits were made over a short period of time and may not represent the stabilized groundwater level. It is likely that groundwater flows along the soil/bedrock interface, in the weathered portions of bedrock and upper bedrock, following the trend of the top of rock. In addition, water levels at the site will vary with precipitation, season, temperature and construction activity in the area. Therefore, groundwater levels during and following construction may differ from that observed in the explorations.

Recommendations for Foundation Design

Recommended Foundation Type and Design Criteria

The forest mat and topsoil are not considered suitable for support of the buildings. All forest mat and topsoil should be removed from within the limits of foundations. It is our opinion that the buildings may be supported on spread footings bearing on the undisturbed, naturally-deposited marine deposit and glacial till or bedrock or on compacted structural fill placed after removal of unsuitable soil (forest mat and topsoil).

We recommend that, for uniformity, the footings be proportioned for an allowable bearing stress, in pounds per square foot (psf), equal to 1,500 multiplied by the least lateral dimension of the footing in feet, up to a maximum of 4,500 psf. All footings should be at least 1.5 feet wide. In some areas, bedrock will likely be at or near the proposed bottom of footing. For footings bearing on bedrock, the maximum slope of the bedrock surface should not be steeper than **4** horizontal to **1** vertical. Steeper slopes should be benched or tapered to the above criteria.

Individual footings should be founded either on soil or bedrock. Continuous footings may span both soil and rock provided a transition from soil to rock is provided. Tapering the bedrock surface to a slope of $\mathbf{4}$ horizontal to 1 vertical and backfilling with structural fill to a minimum depth of 1 foot would be acceptable.

Exterior footings bearing on soil should be founded at least 4.5 feet below the lowest adjacent ground surface exposed to freezing. Interior footings, if required, should be founded a minimum of 1.5 feet below the ground floor slab. Exterior footings bearing on sound bedrock may be founded at least 2 feet below the lowest adjacent ground surface exposed to freezing.

Bedrock may be encountered above the proposed floor level and bearing level for foundations. Therefore, rock cuts may be required for foundation construction in some areas. Figure 3 of the Haley & Aldrich report may be used to estimate the required volume of rock excavation. The contours shown on Figure 3 are based on information from the explorations referenced therein. Actual top of rock between exploration locations will vary from the indicated contours.

Rock should be defined as "any material that is geologically classified as rock and requires drilling and blasting to excavate." Boulders and cobbles should not be classified as bedrock. Provisions should be made in the contract plans and payment items for adjusting bearing levels in the field to accommodate actual bedrock surface grades.

Compacted structural fill supporting footings should extend laterally from the footings to at least the limits defined by 1 horizontal to 1 vertical lines sloped outward and downward from points located at least 2 feet horizontally beyond the bottom edges of the footings.

At the recommended bearing stress, we anticipate that foundation settlement will be on the order of one inch, or less. We anticipate that more than 50 percent of this settlement will occur during the construction period. We anticipate that settlement of this magnitude is acceptable. However, the structural engineer should determine the final acceptability of settlement.

Ground Floor Slabs

We recommend that the lowest level floor slabs be designed as earth-supported slabs-on-grade bearing on a minimum 6-inch thickness of compacted structural fill. All forest mat and topsoil should be removed from within the building limits prior to placing fill. All fill placed below the floor slabs for raises-in-grade should consist of compacted structural fill. Normal dampproofing and vapor barriers should be used below floor slabs.

Seismic Design Considerations

We recommend that the buildings be designed according to the seismic requirements of the latest edition of the International Building Code. The site classification is Class C; the site response coefficient F_a , is 1.2 for short period spectral response acceleration S_s of 0.37g; the site response coefficient F_v , is 1.7 for the one-second period spectral response acceleration S_1 of 0.10g. The soils are not considered liquefaction susceptible.

Lateral Foundation Loads

We recommend that lateral loads be resisted by bottom friction on footings. We recommend that a coefficient of friction equal to 0.40 be used for footings bearing on soil and a coefficient of friction equal to 0.70 for footings bearing on sound bedrock.

Lateral Soil Pressure

We recommend that foundation walls which are restrained at the top and backfilled be designed to resist a lateral earth pressure calculated on the basis of an equivalent fluid unit weight of 55 pounds per cubic foot. This fluid unit weight assumes an at rest earth pressure coefficient of 0.45 and a free-draining granular backfill. If any buildings will have below grade space, we recommend that a perimeter foundation drain consisting of a perforated pipe surrounded by crushed stone and filter fabric be constructed at the exterior base of the wall. Gravity drainage should be provided.

Retaining walls, if required, should be designed for an equivalent fluid unit weight of 40 pounds per cubic foot. Walls should be backfilled with free-draining structural fill, and gravity drainage should be provided.

Backfill Materials

Structural fill used below foundations and floor slabs and for backfill adjacent to walls should consist of sandy gravel to gravelly sand. It should be free of organic material, loam, trash, snow, ice, frozen soil and other objectionable material, and should conform to the following gradation:

Sieve Size	Percent Finer by Weight
6 inch	100
No. 4	30 to 90
No. 40	10 to 50
No. 200	0 to 8

Compacted structural fill should be placed in layers not exceeding eight inches in loose measure and compacted by self propelled vibratory equipment at the approximate optimum moisture content to a dry density of at least 95 percent of the maximum dry density, as determined in accordance with ASTM Test Designation D1557. In confined areas, the maximum particle size should be reduced to **3** inches and the loose layer thickness should be reduced to **6** inches and compaction performed by hand-guided equipment.

Compacted structural fill on the outside of the foundation walls and behind retaining walls should extend laterally a minimum of two feet from the wall. Backfill beyond this limit may consist of common fill. The top 12 inches of fill on the exterior of the buildings should consist of low permeability material to minimize water infiltration next to the building. Grading should provide for runoff away from the building.

Common fill may consist of inorganic mineral soil that can be placed in layers and compacted. Common fill should be placed and spread in layers not exceeding 12 inches in thickness and compacted with a minimum of two systematic passes of the equipment placing the fill.

In our opinion, the soil encountered in the test pits is not suitable for structural fill but would be suitable for common fill and for raises-in-grade in landscaped areas. The fine-grained soil (clayey silt and silty clay) will be moisture sensitive and may require moisture conditioning (drying) before being placed in layers and compacted.

Pavement on

The recommended pavement sections for roads and parking areas are as follows:

Roads

3 in. bituminous concrete, placed in two layers

3 in. screened or crushed gravel base course

18 in. sand or gravel subbase course

Automobile Parking Areas

3 in. bituminous concrete, placed in two layers 18 in. sand or gravel subbase course

Base and subbase course materials should conform to the following gradations:

Base Course

<u>Screened or Crushed Gravel</u> (Maine DOT Standard Specification, Highways and Bridges; Section 703.06a, Type A).

Sieve Size	Percent Finer by Weight
2 inch	100
112 inch.	45 to 70
114 inch	30 to 55
No. 40	0 to 20
No. 200	0 to 5

Subbase Course

3

i

Sand or Gravel (Maine DOT, Section 703.06b, Type D)

Sieve Size	Percent Finer by Weight
4 inch.	100
114 inch.	25 to 70
No. 40	0 to 30
No. 200	0 to 7

(Note: Type D aggregate should be modified to a maximum 4 inch size. Compacted structural fill may be substituted for gravel subbase course, but the maximum particle size should be reduced to 4 inches.)

All forest mat and topsoil should be removed from within the limits of pavement.

Subbase course material should be placed in maximum 8-inch thick loose lifts and compacted at approximately optimum moisture content to a dry density of at least 95 percent of maximum dry density, as determined in accordance with ASTM Test Designation D1557. Base course material should be placed in one lift and compacted with a minimum of two coverages with self-propelled vibratory compaction equipment.

Some portions of the access roads and parking areas may have relatively shallow depth of soil overlying bedrock. If proposed final pavement grades require the excavation of bedrock, we anticipate that rock excavation will require systematic drilling and blasting for removal. In pavement areas where subbase directly overlies bedrock, it is our opinion that the subbase thickness may be reduced to 6 inches.

Permanent slopes in bedrock may be as steep as 1 horizontal to 4 vertical. Permanent slopes in soil should be no steeper than 2 horizontal to 1 vertical. In areas where soil slopes overlie excavated bedrock slopes, we recommend that a 5-foot bench be provided at the top of the rock slope; that is, the toe of the soil slope be set back a minimum of 5 feet from the top of the bedrock slope.

-7-

It should be noted that the subgrade soils are considered frost-susceptible. Therefore, pavement roughness due to non-uniform frost movement may occur. To eliminate such non-uniform frost movement would require approximately **4.5** feet of structural fill subbase, except where bedrock is within the depth of freezing. However, it is common practice to tolerate seasonal movement to avoid the high cost of the added thickness of subbase.

Construction Considerations

General

The primary purpose of this section of the report is to comment on items related to excavation, earthwork, and related geotechnical aspects of proposed construction. It is written primarily for the engineer having responsibility for preparation of plans and specifications. Since it identifies potential construction problems related to foundations and earthwork, it will also aid personnel who monitor the construction activity. Prospective contractors for this project must evaluate the construction problems on the basis of their own knowledge and experience in the Portland, Maine area, and on the basis of similar projects in other localities, taking into account their proposed construction methods, procedures, equipment and personnel.

Excavation, Lateral Support and Control of Water

As discussed above, rock excavation may be required for foundation construction and roadway and parking areas. Based on observations of the character **d** bedrock revealed in the test pits and bedrock exposures on the site, we anticipate that excavation will require systematic drilling and blasting.

Normally, specifications require that the contractor is completely responsible for all damages resulting from blasting operations. In addition, specifications should require the contractor to control blasting vibrations measured at the locations of the nearest structures to not exceed the "safe limits" recommended by the **U.S.** Bureau of Mines in Appendix B of BUMINES RI 8507, attached; peak air over-pressure to less than 0,014 psi, measured at the location of the nearest structure, considering wind direction, and to provide protection against fly rock.

We anticipate that foundation excavation can be accomplished with sloped open excavation through the overburden soils provided safe side slopes can be maintained. Some sloughing and raveling should be anticipated in temporary slopes. Temporary excavations should be made in accordance with all OSHA and other applicable regulatory agency requirements.

We anticipate that groundwater may be encountered at proposed subgrade level or bearing level of footings. If encountered, groundwater can likely be controlled by open pumping from sumps. In general, the contractor should control groundwater and water from runoff and other sources by methods which prevent disturbance of bearing surfaces or adjacent soils and allow construction in-the-dry.

Construction Monitoring

The foundation recommendations contained herein are based on the known and predictable behavior of a properly engineered and constructed foundation. Monitoring of the foundation construction is required to enable the geotechnical engineer to keep in contact with procedures and techniques used in construction. Therefore, we recommend that a person qualified by training and experience be present to provide monitoring at the site during preparation of foundation bearing surfaces and placement of compacted structural fill.

Limitations of Recommendations

This report has been prepared for specific application to the subject project in accordance with generally accepted geotechnical engineering practices. In the event that any changes in the nature, design or location of the buildings are planned, the conclusions and recommendations contained in this report should not be considered valid, unless the changes are reviewed and the conclusions of this report modified or verified in writing.

The recommendations presented herein are based in part on the data obtained from the referenced test pits. The nature and extent of variations between the explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

We request that we be provided the opportunity for a general review of final design and specifications in order to determine that our earthwork and foundation recommendations have been interpreted and implemented in the design and specifications as they were intended.

It has been a pleasure to work with you on this project. Please do not hesitate to contact us if you have any questions or require additional information.

Sincerely,

SEBAGO TECHNICS, INC.

Table I

Sheet 1

Kenneth L. Recker, P.E. Geotechnical Engineering Manager

KLR/OAM :klr/jc Enclosures:



- Site and Subsurface Exploration Plan

- Summary of Test Pits

Appendix A - Logs of Test Pits

Owens A. McCullough P.F. Project Manager



96592

.

ال الم معدم ي ال

TABLE I SUMMARY OF TEST PITS PORTLAND ASSISTED LIVING FACILITY – PHASE II PORTLAND, MAINE

ş

Approx.	El. Top of	Rock (Ft.)	81.1	78.4	74.1	74.5	69.6		72.2	80.1	75.6	1	9.99	76.6	83.2	70.0	83.0	64.2	70.5	60.7	62.2	82.7
	-	Bedrock	0.0*	0.0*	0.0*	0.0*	0.0*	1	0.0*	0.0*	0.0*	}	0.0*	0.0*	0.0*	0.0*	0.0*	*0.0	0.0*	0.0*	0.0*	0.0*
	Glacial	Till	ł	1	0.8	ł	0.5	1	1	1	1			0.4		-	ł	ł	1	l	1	1
sss (Ft.)		Clay		1	-	1	1	$2.5/1.0^{(5)}$	-	-	-	1	-	1	ł	1	-	1	1	1	1	ł
ita Thickne		Silt		0.7	1		1.9	1.9	1	0.7	2.0	3.5*	1	1		4.0	1	1.0	1	2.9	1	1
Stra		Sand	1.5	2.0		1	1	ł	6.0	1	0.8	1	0.4		2.5	2.9		3.0	0.3	1	2.0	1.0
		Topsoil	0.8	1.0	0.9	1	0.8	0.4	1.4	0.6	0.0	1.3	0.4	0.8	0.9	0.3	-	1.0	0.5	0.6	0.7	1.3
	Forest	Mat	0.2	0.3	0.3	0.5	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.	0.3	0.3	1	0.5	0.3	0.5	0.3	0.2
Depth to	Water	(Ft.)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	Depth	(Ft.)	2.5	4.0	2.0	0.5	3.5	6.0	2.5	1.5	4.0	5.0	1.0	1.4	3.7	7.5	0.0	5.5	1.3	4.0	3.0	2.5
Ground	Surface	El. (Ft.)	83.6	82.4	76.1	75.0	73.1	70.8	74.7	81.6	79.6	69.7	67.6	78.0	86.9	77.5	83.0	2.69	71.8	64.7	65.2	85.2
	Test Pit	No.	TP29	TP31	TP32	TP33	TP34	TP35	TP36	TP37	TP38	TP39	TP40	TP41	TP42	TP43	TP44	TP45	TP46	TP47	TP48	TP49

96592

ź

1

à

Ì New Accession

NOTES:

- Elevations referenced to National Geodetic Vertical Datum. NE Indicates water not encountered within depth of test pit.
- Indicates stratum not encountered within depth of exploration.* Indicates depth of penetration into stratum.
- Sand encountered below the clay in TP35. Test Pit TP44 was on a bedrock exposure and no excavation was required.

Appendix A

Logs of Test Pits

1

Æ	HALE	Y & ALDRI DUTH PORT MAINE	,		TEST PIT REPORT	TEST	TPIT NO. TP29
PROJE	CT	PROPOS	ED PORTL	AND	RETIREMENT COMMUNITY	FILE	NO. 80635000
LOCA	TION	CANCO	ROAD, PC	RTLA	ND, MAINE	LOCA	TION SEE PLAN
CLIEN	IT	CURRY	BRANDAU	ARCI	HITECTS	ELEV	ATION 83.6
CONTR	RACTOR	W.H. L	AVIGNE,	INC.		DATE	17 September 1997
EQUIP	MENT USE	D FORD 5	558 RUBE	BER T	IRE BACKHOE	н&	A REP K. RECKER
DEPTH (FT)	SAMPLE NUMBER	SAMPLE DEPTH RANGE	ELEV./ DEPTH (FT)		VISUAL DESCRIPTION		REMARKS
2 -			83.4 0.2 82.6 1.0 81.1 2.5		-FOREST MAT- Dark brown, Loamy SILT with roots -TOPSOIL- Brown silty fine SAND with fractured rock fragments -MARINE DEPOSIT- Refusal on bedrock at 2.5 ft. Bottom of exploration at 2.5 ft.		
LATED							
D	ATE	TIME*	DEPTH	\vdash	ENGTH: 9.0 FEET WIDTH: 3.0 FFFT		
—		(nours)	(ieet)		BOULDERS	{	UEPIH (TT) 25
				80		\neg	JAR SAMPLES
				ov	ER 18" DIAMETER: = VOLUME:		UATER LEVEL (ft) NE
<u> </u>	* AFTER	COMPLETE	D	L_	(number) (cu.ft.)		

AGA HALE'S	Y & ALDRICH, INC. OUTH PORTLAND, MAINE	TEST FIT REPORT	TEST PIT NO. TP31
PROJECT	PROPOSED PORTLAN	D RETIREMENT COMMUNITY	FILE No. 80635000
.OCATION	CANCO ROAD, PORT	LAND, MAINE	LOCATION SEE PLAN
LIENT	CURRY BRANDAW AR	CHITECTS	
CONTRACTOR	WH LAVIGNE, IN	с.	ELEVATION 82.4
ON PMENT USE	E FORD 5558 RUBBER		H & A REP K. RECKER
(FT)	DEPTH DEPTH RANGE (FT)	VISUAL DESCRIPTION	REMARKS
0	82.1	-FOREST MAT-	
	0.3	Brown, Loamy SAND with roots	
	81 1		
	1.3	Gray-brown sandy SILT	
2 -	80.4		and
		fractured rock fragments	
		-MARINE DEPOSIT-	
4 -	78.4	Refusal on weathered rock at 4.0 ft.	—
		Bottom of exploration at 4.0 ft.	
JATER LEVEL FR	ROM GROUND SURFACE	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
DATE	TIME' DEPTH (hours) (feet)	LENGTH: 9.0 FEET WIDTH: 3.0 FEET	DEPTH (ft) 4.0
		BOULDERS	JAR SAMPLES
		8" TO 18" DIAMETER: = VOLUME:	BAG SAMPLES
		OVER 18" DIAMETER: = VOLUME:	WATER LEVEL (ft) MF
* AFTER	COMPLETED	(number) (cu.ft.))

Æ	A HALEY	ALDRIC CUTH PORT MAINE	CH, INC. L and ,		TEST	ΡΙΤ	REP	ORT	TEST PIT /	NO. TP32	2
PROJE LOCAT	CT	PROPOS CANCO	SED PORTL ROAD, PO	AND RET PRTLAND,	TIREMENT COM MAINE	MUNITY			FILE No. Location	80635000 SEE PLAN	
CLIEN CONTF EQUIP	IT RACTOR MENT USE	CURRY W.H. L D FORD 5	BRANDAW AVIGNE, 558 RUBB	ARCHITE INC. ER TIRE	ECTS				ELEVATION DATE H & A REP	76.1 17 Septemb K. RECKER	er 1997
DEPTH (ft)	SAMPLE NUMBER	SAMPLE DEPTH RANGE	ELEV./ DEPTH (FT)			VISUAL DESC	CRIPTION			REMARKS	
- 0			75.8 0.3 74.9 1.2 74.1 20		Brown loamy S	-FORES SILT with ro -TOP nedium to fi	T MAT- ots SO L- ne SAND wit	h fracture	d		
WATER	LEVEL FR	om ground	SURFACE		APPROXIMA		NSIONS AT SI	URFACE		SUMMARY	
D	ATE	TIME* (hours)	DEPTH (feet)	LEN	GTH: 6.0	FEET BWLDE	WIDTH: :	3.0 FEET	DEPTH JAR S	I (ft) GAMPLES	2.0
				8" TC OVER	18" DIAMETI 18" DIAMETEI	ER: R: (number)	= VOLUM = VOLUM	E: E: (cu.ft.)	BAG S WATER	CAMPLES	NE

Æ	A HALE'	Y & ALDRI OUTH PORT MAINE	GH, INC. L and ,	TEST PIT REPORT	TEST PIT NO. TP33
PROJE	ECT	PROPO	SED PORTL	AND RETIREMENT COMMUNITY	FILE No. 80635000
LOCA	TION	CANCO	ROAD, PO	RTLAND, MAINE	LOCATION SEE PLAN
CLIEN	IT	CURRY	BRANDAW	ARCHITECTS	
CONT	RACTOR	U.H. I	_AVIGNE,	INC.	DATE 17 September 1997
EQUIP	MENT USE	D FORD	558 RUBBI	ER TIRE BACKHOE	H & A REP K. RECKER
DEPTH (FT)	SAMPLE Number	SAMPLE DEPTH RANGE	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION	REMARKS
- 0				-FOREST MAT-	
			74.5 0.5	Refusal on bedrock et 0.5 ft.	
				Bottom of exploration at U.5 ft.	
ATER	LEVEL FR	OM GROUNE	SURFACE	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
D	ATE	(hours)	DEPTH (feet)	LENGTH: 6.0 FEET WIDTH: 3.0 FEET	DEPTH (ft) 0.5
				BOULDERS	JAR SAMPLES
				8" TO 18" DIAMETER: VOLUME:	BAG SAMPLES
	* AFTER	COMPLETE	ED	OVER 18" DIAMETER: = VOLUME: (number) (cu.ft.)	UATER LEVEL (ft) NE

Æ	A HALE'	Y & ALDRI DUTH PORT MAINE	CH, INC. LAND,		TEST PIT REPORT	TES	T PIT NO. TP34
PROJECT PROPOSED PORTLAND LOCATION CANCO ROAD, PORTLA CLIENT CURRY BRANDAU ARCI CONTRACTOR U.H. LAVIGNE, INC.				AND PRTLAI ARCH INC.	RETIREMENT COMMUNITY ND, MAINE ITECTS	FILE LOC ELE ^Y DATE	E No. 80635000 ATION SEE PLAN /ATION 73.1 E 17 September 1997
EQUIP	MENT USE SAMPLE	D FORD 5	558 RUBB	ER T		Η&	A REP K. RECKER
(FT) - 0 -		RANGE	(FT) 72.8 0.3 72.0 1.1 70.1 3.0 69.6 3.5		-FOREST MAT- Brown Loamy SILT with roots -TOPSOIL- Gray-brom mottled sandy SILT -MARINE DEPOSIT- Brown silty coarse to fine SAND with fract rock fragments -GLACIAL TILL- Refusal on weathered bedrock at 3.5 ft. Bottom of exploration at 3.5 ft.	ured	
WATER	LEVEL FR	OM GROUND	SURFACE		APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY
D	ATE	TIME* (hours)	DEPTH (feet)	ل 8'' 0VI	ENGTH: 9.0 FEET UIDTH: 3.0 FEI BWLDERS TO 18" DIAMETER: = VOLUME: ER 18" DIAMETER: = VOLUME:	ΞT	DEPTH (ft) 3.5 JAR SAMPLES BAG SAMPLES
	* AFTER	COMPLETE	D		(number) (cu.f	t.)	UNIER LEVEL (IL) NE

PROJECT PROPOSED PORTLAND RETIREMENT COMMUNITY FILE No. 80635000 LOCATION CANCO ROAD, PORTLAND, MAINE LOCATION SEE PLAN CLIENT CURRY BRANDAU ARCHITECTS ELEVATION 70.8 CONTRACTOR W.H. LAVIGNE, INC. DATE 17 September 1997 EQUIPMENT USED FORD 5558 RUBBER TIRE BACKHOE H & A REP K. RECKER DEPTH NUMBER DEPTH RANGE ELEV./ DEPTH CFT) VISUAL DESCRIPTION REMARKS 0 70.6 -FOREST NAT- Gray-brown mottled clayey SILT Gray-brown mottled clayey SILT - - 2 68.3 - - - - - 2 68.3 - - - - -
LOCATION CANCO ROAD, PORTLAND, MAINE LOCATION SEE PLAN CLIENT CURRY BRANDAU ARCHITECTS ELEVATION 70.8 CONTRACTOR W.H. LAVIGNE, INC. DATE 17 September 1997 EQUIPMENT USED FORD 555B RUBBER TIRE BACKHOE H & A REP K. RECKER DEPTH SAMPLE ELEV./ DEPTH VISUAL DESCRIPTION REMARKS 0 70.6 -FOREST NAT- 0.2 -FOREST NAT- 0.2 - 0 70.6 -FOREST NAT- 0.6 - - 2 68.3 - - - - 2 68.3 - - - - 2 68.3 - - - -
CLIENT CURRY BRANDAU ARCHITECTS ELEVATION 70.8 CONTRACTOR W.H. LAVIGNE, INC. DATE 17 September 1997 EQUIPMENT USED FORD 555B RUBBER TIRE BACKHOE H & A REP K. RECKER DEPTH SAMPLE ELEV./ VISUAL DESCRIPTION REMARKS 0 70.6 -FOREST MAT- - - 0 70.6 -FOREST MAT- - - 0.6 70.2 - - - - 0.6 68.3 - - - - 0.6 68.3 - - - - 0.70.6 - - - - - 0.6 70.2 - - - - 0.6 67ay-brown mottled clayey SILT - - - - 0.6 67ay-brown silty CLAY - - - - -
CONTRACTOR W.H. LAVIGNE, INC. DATE 17 September 1997 EQUIPMENT USED FORD 555B RUBBER TIRE BACKHOE H & A REP K. RECKER DEPTH SAMPLE DEPTH ELEV./ DEPTH VISUAL DESCRIPTION REMARKS 0 70.6 - FOREST NAT- 0.2 0.6 - FOREST NAT- 0.2 0.6 - Gray-brown loamy SILT with roots - 0.6 68.3 2 68.3 2 - 68.3 2 - 68.3
EQUIPMENT USED FORD 5555B RUBBER TIRE BACKHOE EQUIPMENT USED FORD 5555B RUBBER TIRE BACKHOE H & A REP K. RECKER H & A REP K. RECKER REMARKS O O 70.6 70.6 70.6 70.2
DEPTH (FT) SAMPLE NUMBER SAMPLE DEPTH RANGE ELEV./ DEPTH (FT) VISUAL DESCRIPTION REMARKS 0 70.6 -FOREST MAT- 0.2 -FOREST MAT- 0.2 -TOPSOIL- 0.6 -TOPSOIL- Gray-brown nottled clayey SILT 2 - 68.3 - - 2 - 68.3 - -
O O O FOREST MAT- CFT) VISUAL DESCRIPTION REMARKS 0 70.6 0.2 70.2 70.2 0.6 70.6 0.2 70.2 70.2 0.6 -FOREST MAT- Cray-brown loamy SILT with roots - Cray-brown silt with roots 0 70.6 0.6 - Cray-brown mottled clayey SILT -TOPSOIL- Gray-brown mottled clayey SILT -MARINE DEPOSIT- - - - - - - 2 68.3 2.5 - - Gray-brown silty CLAY - - -
70.6 -FOREST MAT- 0.2 Gray-brown loamy SILT with roots 70.2 -TOPSOIL- 0.6 Gray-brown mottled clayey SILT Gray-brown mottled clayey SILT - MARINE DEPOSIT- 68.3 2.5 Gray-brown silty CLAY
70.2 0.6 Gray-brown mottled clayey SILT -MARINE DEPOSIT- 68.3 2.5 Gray-brom silty CLAY
- 2 - 68.3
68.3
68.3
2.5 Grav-brom silty CLAY
65.8
5.0 Brown silty fine SAND
-MARINE DEPOSIT-
6.0 Bottom of exploration at 6.0 ft. No refusal
JATER LEVEL FROM GROUND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY
DATE TIME* DEPTH LENGTH: 9.0 FEET WIDTH: 3.0 FEET DEPTH (ft) 6.0
BOULDERS JAR SAMPLES
8" TO 18" DIAMETER: DVOLUME: BAG SAMPLES
* AFTER COMPLETED OVER 18" DIAMETER: (Display) VOLUME: (Display) WATER LEVEL (ft) NE

HALEY & ALDRICH, INC. SWTH PORTLAND, MAINE	TEST PIT REPORT	TEST PIT NO. TP36
'ROJECT PROPOSED PORTLA .OCATION CANCO ROAD, POR 'LIENT CURRY BRANDAW A :ONTRACTOR U.H. LAVICNE, I :CHURMENT LISED FORD 5558 RUBBE	ND RETIREMENT COMMUNITY RTLAND, MAINE RCHITECTS NC.	FILE No. 80635000 LOCATION SEE PLAN ELEVATION 74.7 DATE 17 September 1997 H & A REP K. RECKER
DEPTH SAMPLE SAMPLE ELEV./ DEPTH NUMBER SAMPLE ELEV./ CFT) CFT	VISUAL DESCRIPTION	REMARKS
0 74.5 02 73.1 1.6 72.2 2.5 2.5	-FOREST MAT- Dark brown loamy SILT with roots -TOPSOIL- Rust-broun silty fine SAND with fractured root fragments and cobles -MARINE DEPOSIT- Refusal on bedrock at 2.5 ft. Bottom of exploration at 2.5 ft.	
TER LEVEL FROM CRWND SURFACI	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
DATE TIME* DEPTH (hours) (feet)	LENGTH: 9.0 FEET WIDTH: 3.0 FEET BOULDERS BOULDERS E VOLUME: VOLUME: <t< td=""><td>DEPTH (ft) 2.5 JAR SAMPLES BAG SAMPLES WATER LEVEL (ft) NE</td></t<>	DEPTH (ft) 2.5 JAR SAMPLES BAG SAMPLES WATER LEVEL (ft) NE

÷

HALEY SO	& ALDRICH, INC. WITH PORTLAND, MAINE	TEST PIT REPORT	TEST PIT NO. TP37
PROJECT	PROPOSED PORTLA	AND RETIREMENT COMMUNITY	FILE NO. 80635000
LOCATION	CANCO ROAD, POI	RTLAND, MAINE	LOCATION SEE PLAN
CLIENT	CURRY BRANDAU	ARCHITECTS	ELEVATION 81 .6
CONTRACTOR	U.H. LAVIGNE,	INC.	DATE 17 September 1997
EQUIPMENT USE	D FORD 555B RUBBE	ER TIRE BACKHOE	H & A REP K. RECKER
DEPTH SAMPLE (FT)	SAMPLE ELEV./ DEPTH DEPTH RANGE (FT)	VISUAL DESCRIPTION	REMARKS
	81.4	-FOREST MAT-	
	80.8	Dark brown, loamy SILT uith roots	
	0.8	Brown sandy SILT -MARINE DEPOSIT-	
	1.5	Refusal on bedrock at 15 ft. Bottom of exploration at 1.5 ft.	
WATER LEVEL FR	OM GROUND SURFACE	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
DATE	TIME* DEPTH	LENGTH: 9.0 FEET WIDTH: 3.0 FEET	DEPTH (ft) 15
		BOULDERS	
		OVER 18" DIAMETER: VOLUME:	
* AFTER	COMPLETED	(number) (cu.ft.)	UATER LEVEL (IC) NE

Æ	HALE'S	Y & ALDRIG DUTH PORT MAINE	CH, INC. LAND,		TEST PIT REPORT	TEST	ГРІТ NO. ТРЗВ і
PROJE LOCAT	CT TON	PROPOS	SED PORTL ROAD, PC	AND DRTLA	RETIREMENT COMMUNITY ND, MAINE	FILE	No. 80635000 TION SEE PLAN
CLIEN CONTR EQUIP	IT RACTOR MENT USEI	CURRY U.H. L D FORD 5	BRANDAU AVIGNE, 5558 RUBB	ARCH INC. BER T	ITECTS	ELEV DATE H &	ATION 79.6 17 September 1997 A REP K. RECKER
DEPTH (FT)	SAMPLE NUMBER	SAUPLE DEPTH RANGE	ELEV./ DEPTH (FT)		VISUAL DESCRIPTION		REMARKS
- 0 -			79.3 0.3 78.4 1.2 77.6 20 75.6 4.0		-FOREST MAT- Dark brown loamy SILT with roots -TOPSOIL- Brown silty fine SAND Gray-brown sandy SILT -MARINE DEPOSIT- Refusal on bedrock at 4.0 ft. Bottom of exploration at 4.0 ft.		
WATER	LEVEL FR	OM GROUND	SURFACE		APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY
MATER LEVEL FROM GROUND SURFACE DATE TIME* DEPTH (hours) (feet)			DEPTH (feet)	۲ ۲ ۵۳	ENGTH: 8.0 FEET WIDTH: 3.0 FEET BOULDERS TO 18" DIAMETER: = VOLUME: ER 18" DIAMETER: = VOLUME:		DEPTH (ft) 4.0 JAR SAMPLES BAG SAMPLES WATER LEVEL (ft) NE
ļ	* AFTER	COMPLETE	D	[(number) (cu.ft.)		

HALEY & ALDRICH, INC. SOUTHMHORELAND,					TEST PIT REPORT	TES	T PIT, NO. TP39
PROJE	СТ	PROPOS	ED PORTLA	AND	RETIREMENT COMMUNITY	FILE	No. 80635000
LOCAT	ION	CANCO	LOCA	TION SEE PLAN			
CLIEN	т	CURRY	FLEV	ATION 69.7			
CONTR	ACTOR	UH. L	AVICNE, I	INC.		DATE	17 September 1997
EQUIPI	MENT USEI	D FORD 5	558 RUBBE	ER T	IRE BACKHOE	н&	A REP K. RECKER
DEPTH	SAMPLE NUMBER	SAMPLE DEPTH	ELEV./ DEPTH		VISUAL DESCRIPTION		REMARKS
(FT) - 0		RANGE	(FT)				
			69.5 0.2		Brown loamy SILT uith roots		
			68.2 1.5		Gravebourn mottled claver SUT		
- 2					diay-biown aberted crayey sith		
					-MARINE DEPOSIT-		
- 4							
			64.7				
			5.0	- 1 0 0	Bottom of exploration at 50 ft. No refusal		
WATER							
D.	ATE	TIME*	DEPTH		ENGTH: 8.0 FEET WIDTH: 3.0 FFFT		
		(nours)	(leet)				
				811			JAK SAIVIFLES BAG SAMPIFS
				ov	ER 18" DIAMETER: = VOLUME:		WATER EVEL (ft) UF
1	* AFTER	COMPLETE	D		(number) (cu.ft.)		

	Υ & ALDRICH, ΙΝC. NTH PORTLAND, MAINE	TEST PIT REPORT	TEST PIT NO. TP40		
PROJECT	PROPOSED PORTLA	ND RETIREMENT COMMUNITY	FILE NO. 80635000		
LOCATI ON	CANCO ROAD, POF	RTLAND, MAINE	LOCATION SEE PLAN		
CLIENT	CURRY BRANDAU A	RCHITECTS	ELEVATION 676		
CONTRACTOR	W.H. LAVIGNE, I	NC.	DATE 17 September 1997		
EQUIPMENT USE	D FORD 5558 RUBBE	R TIRE BACKHOE	н&А REP K. RECKER		
DEPTH SAMPLE NUMBER	SAMPLE ELEV./ DEPTH DEPTH RANGE (FT)	VISUAL DESCRIPTION	REMARKS		
0	67.4 0.2 67.0 0.6 66.6 1.0	-FOREST MAT- Brown loamy SILT with roots -TOPSOIL- Brown silty fine SAND -MARINE DEPOSIT- Refusal on bedrock at 1.0 ft. Bottom of exploration at 1.0 ft.			
DATE		LENGTH: 6.0 FEET UIDTH: 3.0 FFFT			
	(nours) (feet)	BOULDERS			
			JAK SAMPLES		
		OVER 18" DIAMETER: = VOLUME:	UATER LEVEL (ft) NE		
AFTER	COMPLETED	(number) (cu.ft,)			

Æ		Y & Aldri Duthmadrie	CH INC.	TEST PIT REPORT	TEST PIT NO. TP41
PROJE	CT	PROPOS	SED PORTLA	AND RETIREMENT COMMUNITY	FILE No. 80635000
LOCAT	ROM	CANCO	ROAD, POI	RTLAND, MAINE	LOCATION SEE PLAN
CLIEN	IT	CURRY	ERANDAU A	ARCHITECTS	ELEVATION 78.0
CONTR	RACTOR	U.H. L	AVIGNE,	INC.	DATE 17 September 1997
EQUIP	MENT USE	d ford 5	558 RUBB	ER TIRE BACKHOE	H & A REP K RECKER
DEPT} (FT)	SAMPLE NUMBER	SAMPLE DEPTH RANGE	ELEV./ DEPTH (FT)	VISUAL DESCRIPTION	REMARKS
- 0			77.8	-FOREST MAT-	
			0.2	Dark brom loamy SILT uith roots -TOPSOIL-	
			77.0 1.0	Brown silty fine SAND with fractured rock	
			76.6 1.4	Refusal on bedrock at 1.4 ft.	/
				Bottom of exploration at 1.4 ft.	
ATER	LEVEL FR	OM GROUNE	D SURFACE	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
Ð	ATE	TIME* (hours)	DEPTH (feet)	LENGTH: 6.0 FEET WIDTH: 3.0 FEET	DEPTH (ft) 1.4
				BOULDERS	JAR SAMPLES
				8" TO 18" DIAMETER: = VOLUME:	BAG SAMPLES
				OVER 18" DIAMETER: = VOLUME:	WATER LEVEL (ft) NE
 AFTER COMPLETED 				(number) (cu.ft.)	

HALEY & ALDRICH, INC SOUTH PORTLAND, MAINE	TEST PIT REPORT	TEST PIT NO. TP42
PROJECT PROPOSED POR LOCATION CANCO ROAD, I CLIENT CURRY BRANDAU CONTRACTOR WH LAVIGNE EQUIPMENT USED FORD 5558 RU	LAND RETIREMENT COMMUNITY ORTLAND, MAINE / ARCHITECTS INC. BER TIRE BACKHOE	FILE No. 80635000 LOCATION SEE PLAN ELEVATION 86.9 DATE 18 September 1997 H & A REP M. SNOW
DEPTH SAMPLE SAMPLE :LEV. NUMBER DEPTH DEPTH (FT) RANGE (FT)	VISUAL DESCRIPTION	REMARKS
- 0 - 2 - - 2 - - 2 - - 84.1 - 3.7 - 83.1 - 3.7	Rust brown loamy fine SAND, little gravel, ro	ots
UATER LEVEL FROM GROUND SURFA	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
DATE TIME' DEPTH (hours) (feet)	LENGTH: 11.0 FEET UIDTH: 3.0 FEET BOULDERS 8" TO 18" DIAMETER: = VOLUME: OVER 18" DIAMETER: = VOLUME: (Dumber) (Cut ft)	DEPTH (ft) 3.7 JAR SAMPLES BAG SAMPLES WATER LEVEL (ft) NE

AGA HALE	Y & ALDRICH, INC. OUTH PORTLAND, MAINE	TEST PIT REPORT	TES	TEST PIT NO. TP43			
PROJECT LOCATION CLIENT CONTRACTOR	PROPOSED PORTI CANCO ROAD, PO CURRY BRANDAU U.H. LAVIGNE,	AND RETIREMENT COMMUNITY DRTLAND, MAINE ARCHITECTS INC.	FILE LOC/ ELE\ DATE	FILE No.80635000LOCATIONSEE PLANELEVATION77.5DATE18 September 1997			
DEPTH SAMPLE (FT)	SAMPLE DEPTH RANGE (FT)	VISUAL DESCRIPTION		REMARKS			
- 2 -	77.2 0.3 76.9 0.6 75.3 2.2 74.0 3.5 70.0 7.5	-FOREST ((AT- Dark brom loamy SILT, roots Rust brom fine SAND, little silt, little gravel, roots -MARINE DEPOSIT- Light brown fine SAND, little silt, little coarse to mediun sand and gravel, feu cobbles -MARINE DEPOSIT- Stiff olive-brown to gray-brown mottled claye SILT, Little fine sand -MARINE DEPOSIT- MARINE DEPOSIT-					
ATER LEVEL FR	OM GROUND SURFACE	APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY			
DATE AFTER	TIME* DEPTH (hours) (feet)	LENGTH: 13.0 FEET BOULDERS 8" TO 18" DIAMETER: = VOLUME: OVER 18" DIAMETER: = VOLUME: (number) (cu.ft.)		DEPTH (ft) 7.55 JAR SAMPLES BAG SAMPLES WATER LEVEL (ft) NE			

Æ	A HALE	Y&Laldri Outhmpadnre	CH, INC. Fland,		TEST	ΡΙΤ	REPOR	Τ	T PIT NO.	TP45
PROJE	СТ	PROPO	SED PORTL	AND	RETIREMENT COMM	IUNITY		FIL	E No. 80635	5000
LOCAT	ION	CANCO	ROAD, PO	RTLA	ND, MAINE	ATION SEE F	PLAN			
CLIEN	T	CURRY	BRANDAW	ARCH	HITECTS			ELE	VATION 69.7	
CONTR	ACTOR	U.H. L	AVIGNE,	INC.				DAT	E 17 §	September 1997
EQUIPI	MENT USE	D FORD	558 RUBE	ER T	IRE BACKHOE			н &	A REP K. RE	CKER
DEPTH (FT)	SAMPLE Number	SAMPLE DEPTH RANGE	ELEV./ DEPTH (FT)		\	/ISUAL DESC	CRIPTION		RE	MARKS
- 0 -			69.2			-FORES	T MAT-			
			0.5		Dark brown <i>lo</i> a	±ong∕SILT ui	th roots			
			68.2			- TOPS	SOIL -			
2			1.5		Gray-brown sar	ndy SILT	DEDOSIT			
			67.2			-MARINE				
			2.5		Interbedded br gray-brown san	own, silty ndy SILT	fine SAND and	-		
- 4 -						-MARINE	DEPOSIT-			
			64.2 5.5		Refusal on bec	lrock at 5.5	ft.			
					Bottom of expl	oration at	5.5 ft.			
			t I							
					=					
WATER	LEVEL FR	OM GROUND	SURFACI		APPROXIMATE	E PIT DIMEN	ISIONS AT SURFAC	E	SUM	MMARY
DA	TE	TIME* (hours)	DEPTH (feet)	L	ENGTH: 9.0 FE	ET	WIDTH: 3.0	FEET	DEPTH (ft)	5.5
						BOULDEF	RS		JAR SAMPLES	
				8"	TO 18" DIAMETER	: :	= VOLUME:		BAG SAMPLES	
	* AFTER	COMPLETE	D	OVE	OVER 18" DIAMETER: = VOLUME: (number) (cu.ft.)				UATER LEVEL	(ft) NE

Æ	HALEY & ALDRICH, INC. SOUTH PORTLAND, MAINE				TEST PIT REPORT	TEST	TPIT NO. TP46
PROJE	CT	PROPOS	SED PORTL	AND.	RETIREMENT COMMUNITY	FILE	No. 80635000
LDCAT	ION	CANCO	ROAD, PC	LOCA	TION SEE PLAN		
CLIEN	т	CURRY	BRANDAW	ARCH	IITECTS		ATION 71.0
CONTR	ACTOR	W.H. L	AVICNE,	INC.		DATE	17 September 1997
EQUIP	MENT USE	D FORD 5	5558 RUBB	ER T	IRE BACKHOE	н & ,	A REP K. RECKER
DEPTH	SAMPLE	SAMPLE	FLEV. /			-	
(FT)	NUMBER	DEPTH RANGE	DEPTH (FT)		VISUAL DESCRIPTION		REMARKS
- 0 -			71.5		-FOREST MAT-		
			0.3		Dark brown loamy SILT with roots -TOPSOIL-		
			70.8	t t	Brown silty fine SAND		
			70.5 1.3		-MARINE DEPOSIT- Refusal on bedrock at 1.3 ft.	_/	
					Bottom of exploration at 1.3 ft.		
JATER	LEVEL FR	OM GRWND) SURFACE		APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY
D	ATE	TIME* (hours)	DEPTH (feet)	L	ENGTH: 6.0 FEET WIDTH: 3.0 FEET		DEPTH (ft) 1.3
					BOULDERS		JAR SAMPLES
				8"	TO 18" DIAMETER: = VOLUME:		BAG SAMPLES
			L	OV	ER 18" DIAMETER: = VOLUME:		WATER LEVEL (ft) NE
					(number) (cu.ft.)		

PROJECT PROPOSED PORTLAND. RETIREMENT COMMUNITY FILE No. \$0635000 LOCATION OKNO ROAD. PORTLAND. MAINE LOCATION SEE PLAN CLIENT OURY BRANDAU ARCHTECTS ELEVATION 64.7 CONTRACTOR UH. LAVIGNE, INC. REMOVELY REMOVELY REMARKS CONTRACTOR UH. LAVIGNE, INC. VISUAL DESCRIPTION K.A.RECKER REMARKS CONTRACTOR UH. LAVIGNE, INC. VISUAL DESCRIPTION REMARKS REMARKS CONTRACTOR UH. LAVIGNE, INC. VISUAL DESCRIPTION REMARKS REMARKS CONTRACTOR MARE CONTRACTOR VISUAL DESCRIPTION REMARKS REMARKS CONTRACTOR G.G.G.G. Dark brown Latry SILT UIT rotosit	Æ	HALEY	Y & ALDRIC WTH PORT MAINE	CH, INC. LAND,		TEST	ΡΙΤ	REPORT	TEST	PIT, NO.	ТР47
LOCATION CANOD ROAD, PORTLAND, MAINE LOCATION SEE PLAN CULENT CURRY BRANDAU ARCHITECTS LEVATION 64.7 CONTRACTOR UK. LAVIGNE, INC. REAMINE REAMINE EQUIPMENT USE PLAN VISUAL DESCRIPTION REAMINE PEPT MARKE SAMPLE SAMPLE ELEV.T PARTER LEV.T PARTER PORST MAT- CONTRACTOR REMARKS 001 30 0.5 64.2 0.5 Dark brown Loopy SLL* UIT in sitty fine SAMD 1.1 Herman Loopy SLL* UIT in sitty fine SAMD 1.1 Herman Loopy SLL* UIT in sitty fine SAMD 1.1 Herman Loopy SLL* UIT in sitty fine SAMD 1.1 01 30 0.5 60.7 0.7 Botion of exploration at 4.0 ft. Herman Loopy SLL* UIT in sitty fine SAMD 1.1 Herman Loopy SLL* UIT in sitty fine SAMD 1.1 Herman Loopy SLL* UIT in sitty fine SAMD 1.4 64.7 Dark brown Loopy SLL* UIT in sitty fine SAMD Herman Loopy SLL* UIT in sitty fine SAMD Herman Loopy SLL* UIT in sitty fine SAMD 1.4 60.7 4.0 Herman Destrock at 4.0 ft. Herman Loopy SLL* UIT in sitty fine SAMD 1.4 60.7 4.0 Herman Loopy SLL* UIT in sitty fine SAMD Herman Loopy SLL* UIT in sitty fine SAMD	PROJE	СТ	PROPOS	ED PORTL	AND	RETIREMENT COMML	JNITY		FILE	No. 80635	000
CLIENT CURRY BRANAU ARCHITECTS ELEVATION 64.7 CONTRACTOR U.H. LAVIGNE, INC. DATE 17 September 1997 EQUIPMENT USED FORD 5568 RUBBER THE BACKNOE 8 & A REP X. RECKER DEPTH (FT) SAMPLE RANGE SAMPLE BEPTH RANGE LEW/T (TT) VISUAL DESCRIPTION REMARKS 0	LOCAT	ION	CANCO	ROAD, PO	RTLA	ND, MAINE	LOCAT	FION SEE F	PLAN		
CONTRACTOR U.H. LAVIENE, INC. DATE 17 September 1987 EQUIPMENT USED FORD 5568 RUBBER TIRE BACKIDE X & A REP X, RECKER 0 AREPTI NUMBER ELEVIT RANGE -FOREST MAT- -TOPSOLL REMARKS 0	CLIEN	Т	CURRY	BRANDAU	ARCH	ITECTS			FLEVA	TION 64.7	
EQUIPMENT USED FORD 5568 RUBBER TIRE EACKHOE EQUIPMENT USED FORD 5568 RUBBER TIRE EACKHOE PPTN SAMPLE SAMPLE SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE SERVICE PPTN RUBBER SAMPLE	CONTR	ACTOR	U.H. L	AVIGNE,	INC.				DATE	17 S	eptember 1997
DEPTH (FT) NUMBER NUMBER SAMPLE DEFTH DEFTH (FT) ELEV,/ USUAL DESCRIPTION REMARKS 0	EQUIP	MENT USE	D FORD 5	558 RUBB	ER T	IRE BACKHOE			н & А	REP K. RE	CKER
0 -642 FOREST MAT- 	DEPTK (FT)	SAMPLE NUMBER	SAMPLE DEPTH RANGE	ELEV./ DEPTH (FT)		V	ISUAL DESCRI	PTION		RE	MARKS
A 01 3.0 0.1<	- 0 -						-FOREST	MAT-			
A 63.6 Crey-brown sandy SILT to silty fine SAND 01 30				64.2 0.5	*	Dark brown Loa	my SILT uith	roots			-
- Z - I - I - MARINE DEPOSIT- - 4 - OI 30 - MARINE DEPOSIT- - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4 - A - A - A - A - 4				63.6 1.1		Gray-brown san	dy SILT to s	ilty fine SAND			
OI 30 3.5 OI 3.0 3.5 60.7 Refusal on bedrock at 4.0 ft. Bottom of exploration at 4.0 ft. Bottom of exploration at 4.0 ft.											
AARINE DEPOSIT-											
01 3.0 3.5 60.7 4.0 Refusal on bedrock at 4.0 ft. Bottom of exploration at 4.0 ft. Atter Level from growth Surface Summary Date Time* DATE Time* Others: Depth (ft) Bottoms: Stressen Bottoms: Stressen Bottoms: Bottoms: Atter Level (ft) NE Bottoms: Watter Level (ft) Bottoms: Watter Level (ft)							-MARINE DE	POSIT-			
A - 4 60.7 Refusal on bedrock at 4.0 ft. Bottom of exploration at 4.0 ft. Bottom of exploration at 4.0 ft. Bottom of exploration at 4.0 ft. MATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE MATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE DATE TIME* MATER LENGTH: 8.0 FEET UDATE TIME* B* TO 18* DIAMETER: = VOLUME: OVER 18* DIAMETER: = VOLUME: OVER 18* DIAMETER: = VOLUME: WATER LEVEL (ft) ME		01	3.0 3.5								
AATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATER EWILDERS JAR SAMPLES BWLDERS JAR SAMPLES B* TO 18* DIAMETER: = VOLUME: WATER LEVEL (ft) NE	- 4 -			60.7		Pofusal on bod	rock at 1.0	f +			
AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY AATER LEVEL FROM GRWIND SURFACE OVER 18" TO 18" DIAMETER: = VOLUME: BAG SAMPLES UNER 18" TO 18" DIAMETER: = VOLUME: BAG SAMPLES UNER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) WE				4.0		Bottom of expl	oration at 4	.0 ft.			
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH LENGTH: 8.0 FEET DIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE TO 18" DIAMETER: = VOLUME: JAR SAMPLES BAG SAMPLES MATER E VOLUME: = VOLUME: WATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH (frours) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE TIME* DEPTH (frours) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE SWLDERS JAR SAMPLES JAR SAMPLES JAR SAMPLES MATE S" TO 18" DIAMETER: = VOLUME: WATER LEVEL (ft) NE * AFTER COMPLETED COMPLETER: = VOLUME: WATER LEVEL (ft) NE											
AATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATER Image: Summary of the summary		1									
MATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWIND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 DATE TIME* (hours) Cfeet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATER MULDERS JAR SAMPLES JAR SAMPLES JAR SAMPLES MATER Import OVER 18" DIAMETER: = VOLUME: VATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 JATE TIME* BWLDERS JAR SAMPLES BAG SAMPLES BAG SAMPLES MATER LEVEL COMPLETED OVER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 DATE TIME* BWLDERS JAR SAMPLES BAG SAMPLES BAG SAMPLES MATER LEVEL COMPLETED OVER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (freet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATER MATER BWLDERS JAR SAMPLES JAR SAMPLES BAG SAMPLES MATER MATER SUMMARY MATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH (hours) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATER Image: Summary Image: Summary Image: Summary Jar Samples Jar Samples Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Mater Level (ft) Image: Summary Image: Summary Image: Summary Image: Summary Ima											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary MATE Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary Image: Summary											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 JATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 JAR SAMPLES BWLDERS JAR SAMPLES BAG SAMPLES BAG SAMPLES BAG SAMPLES * AFTER COMPLETED (number) (cumber) (cumber) MATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE Image: Summary state BWLDERS JAR SAMPLES JAR SAMPLES Matter Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Summary state Matter Image: Summary state Summary state Summary state Summary state Summary state											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 JATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 JAR SAMPLES BWLDERS BWLDERS JAR SAMPLES BAG SAMPLES BAG SAMPLES VOLUME: OVER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) NE											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE Image: Summary											
MATER LEVEL FROM GRWND SURFACE APPROXIMATE PIT DIMENSIONS AT SURFACE SUMMARY DATE TIME* DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0 MATE Image: Summary Image: S											
DATE TIME* (hours) DEPTH (feet) LENGTH: 8.0 FEET UIDTH: 3.0 FEET DEPTH (ft) 4.0	ATER	LEVEL FR	OM GRWNE) SURFACE		APPROXIMATE	E PIT DIMENS	ONS AT SURFACE		SUI	MMARY
BWLDERS JAR SAMPLES BWLDERS JAR SAMPLES BAG SAMPLES BAG SAMPLES OVER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) NE	D	ATE	TIME* (hours)	DEPTH (feet)		LENGTH: 8.0 FE	ET	JIDTH: 3.0 FEET		DEPTH (ft)	4.0
8" TO 18" DIAMETER: = VOLUME: BAG SAMPLES VOLUME: 0VER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) * AFTER COMPLETED (number) (cu.ft-) WATER LEVEL (ft)							BWLDERS			JAR SAMPLES	
• AFTER COMPLETED OVER 18" DIAMETER: = VOLUME: WATER LEVEL (ft) NE					8"	TO 18" DIAMETER	: =	VOLUME:		BAG SAMPLES	
		* AFTER		D	ov	ER 18" DIAMETER:	(number)	VOLUME:	,	WATER LEVEL	(ft) NE

AGA HALEY SO	& ALDRICH, INC UTH PORTLAND, MAINE	TEST PIT REPORT	TEST PIT, NO. TP48
PROJECT	PROPOSED PORT	LAND RETIREMENT COMMUNITY	FILE No. 80635000
LOCATION	CANCO ROAD, P	ORTLAND, MAINE	LOCATION SEE PLAN
CLIENT	CURRY BRANDAW	ARCHITECTS	
CONTRACTOR	WH. LAVICNE,	INC.	DATE 17 September 1997
EQUIPMENT USED	FORD 5558 RUB	BER TIRE BACKHOE	H & A REP K. RECKER
DEPTH SAMPLE NUMBER	SAMPLE ELEV./ DEPTH DEPTH RANGE (FT)	VISUAL DESCRIPTION	REMARKS
- 0	64.9 0.3 64.2	-FOREST MAT- Dark brown loamy SILT with roots -TOPSOIL-	
- 2 -	1.0	Gray-brown silty fine SAND with pieces of fractured rock	
	62.2 3.0	Refusal on apparent bedrock at 3.0 ft. Bottom of exploration at 3.0 ft.	
WATER LEVEL FRO	M GROUND SURFAC	APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
DATE	TIME* DEPTH (hours) (feet)	LENGTH: 9.0 FEET WIDTH: 3.0 FEET	DEPTH (ft) 3.0
		EWLDERS	JAR SAMPLES
		8" TO 18" DIAMETER: = VOLUME:	BAG SAMPLES
* AFTER		OVER 18" DIAMETER: = VOLUME: (number) (cu.ft.)	WATER LEVEL (ft) NE

HALEY & ALDRICH, INC. SOUTHMADRELAND,					TEST PIT REPORT	TEST	PIT NO. TP49	
PROJECT PROPOSED PORTLA					RETIREMENT COMMUNITY	FILE	No. 80635000	
LOCAT	ION	CANCO I	ROAD, POR	RTLA	ND, MAINE	LOCA	TION SEE PLAN	
CLIEN	Т	CURRY I	BRANOAU A	ARCH	ITECTS	ELEV/	ATION 85.2	
CONTR	ACTOR	U.H. L/	AVIGNE, I	NC.		DATE	17 September 1997	
EQUIPI	MENT USED	FORD 5	558 RUBBE	ER T	IRE BACKHOE	н& А	A REP K. RECKER	
DEPTH	SAMPLE	SAMPLE	ELEV./					
(FT)	NUMBER	DEPTH RANGE	DEPTH (FT)		VISUAL DESCRIPTION		REMARKS	
			85.0 0.2		-FOREST MAT-			
				44				
			83.7	117				
			1.5		Brown silty fine SAND, trace gravel			
1			82.7		-MARINE DEPOSIT-			
			2.5		Refusal <i>on</i> bedrock at 25 ft. Bottom of exploration at 25 ft.			
							-	
WATER	LEVEL FR	OM GROUN	D SURFAC		APPROXIMATE PIT DIMENSIONS AT SURFACE		SUMMARY	
1	DATE	TIME* (hours)	DEPTH (feet)		LENGTH: 8.0 FEET UIDTH: 3.0 FEET		DEPTH (ft) 2.5	
					BOULDERS		JAR SAMPLES	
				8			BAG SAMPLES	
				0	VER 18" DIAMETER: = VOLUME:		UATER LEVEL (ft) NE	
	AFTER	COMPLET	ED		(number) (cu.ft.	.)		