Detterman, Mark, Env. Health

From: Vialpando, Marcelino
Sent: Monday, April 16, 2018 10:33 AM
To: Detterman, Mark, Env. Health; 'stuart@phase-1environmental.com'
Cc: Yoo, James
Subject: FW: Geotechnical Logs
Attachments: 398850-00079583-SIGNED.PDF; 04217028 Boring Logs.pdf; 04217028 Boring Map-Landscape.pdf

Hello Gentlemen,
Attached are the boring logs as requested.

Marcelino Vialpando
PWA Tech I
Alameda County Public Works Agency
Water Resources Section
399 Elmhurst Street
Hayward, CA 94544
O: (510) 670-5760
marcelino@acpwa.org
www.acgov.org/pwa/wells

From: Heather Trop <HeatherTrop@krazan.com>
Sent: Monday, April 16, 2018 8:40 AM
To: Vialpando, Marcelino <Marcelino@acpwa.org>
Subject: RE: W2018-0006 105th Ave. & International Blvd.

Good morning,

Attached is the email sent back in February with the logs for the project on 105th and International in Oakland. Please let us know if you need any further information.

Thank you,

Heather

From: Dave Jarosz
Sent: Monday, April 16, 2018 8:36 AM
To: Heather Trop
Subject: FW: W2018-0006 105th Ave. & International Blvd.

From: Vialpando, Marcelino [mailto:Marcelino@acpwa.org]
Sent: Monday, April 16, 2018 8:30 AM
To: Dave Jarosz

Cc: Wayne Andrade; Wells
Subject: RE: W2018-0006 105th Ave. & International Blvd.

Hello Dave,
What is the status of the logs? I still have not received anything. Thank you.

Marcelino Vialpando
PWA Tech I
Alameda County Public Works Agency
Water Resources Section
399 Elmhurst Street
Hayward, CA 94544
O: (510) 670-5760
marcelino@acpwa.org
www.acgov.org/pwa/wells

From: Dave Jarosz <DaveJarosz@krazan.com>
Sent: Monday, March 26, 2018 11:17 AM
To: Vialpando, Marcelino <Marcelino@acpwa.org>
Cc: Wayne Andrade <WayneAndrade@krazan.com>; Wells <wells@acpwa.org>
Subject: RE: W2018-0006 105th Ave. & International Blvd.

Marcelino,

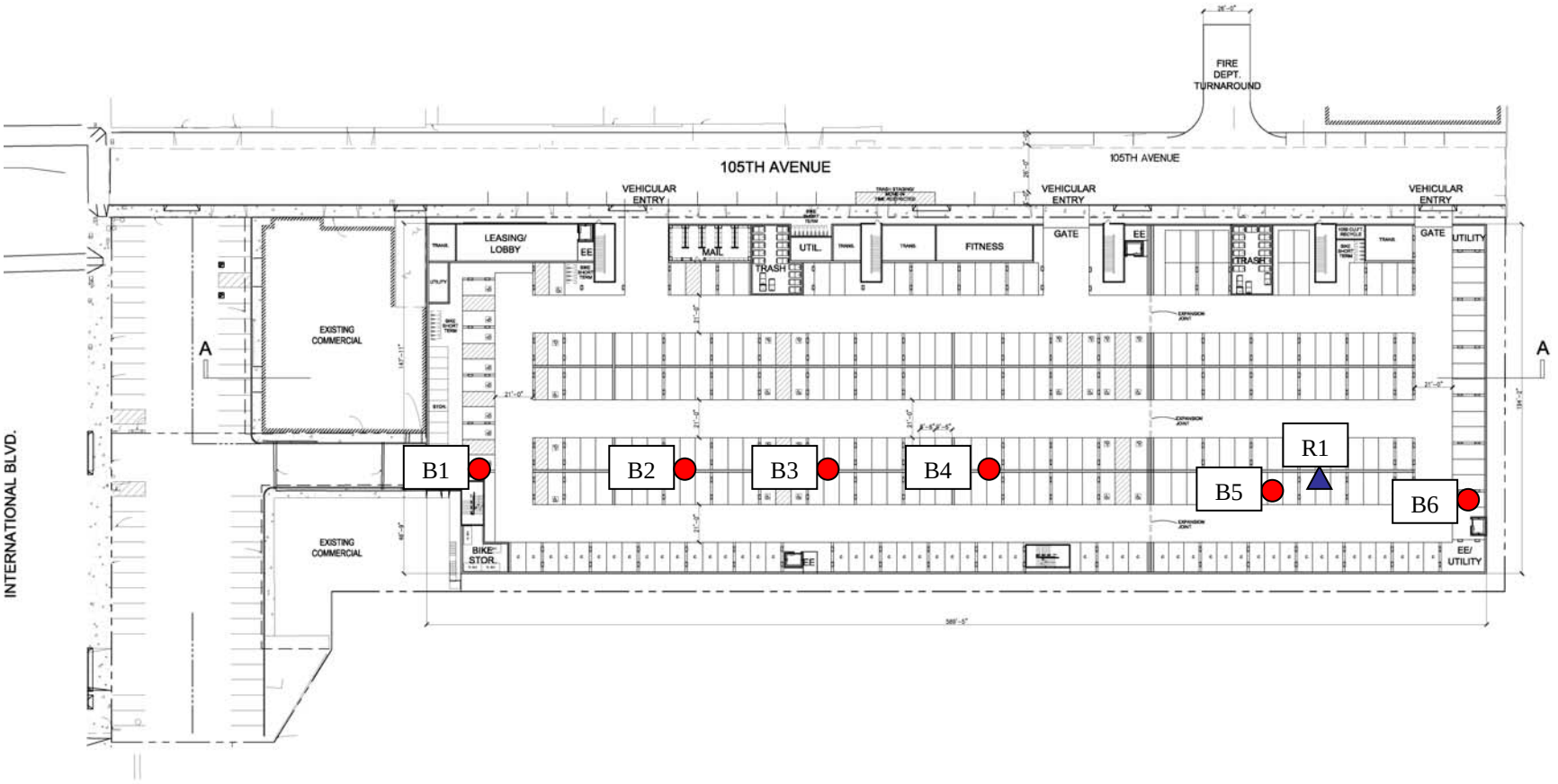
The report will be done this week. We will forward a copy of the logs once it is completed.

Thanks,
Dave

From: Vialpando, Marcelino [mailto:Marcelino@acpwa.org]
Sent: Monday, March 26, 2018 11:05 AM
To: Dave Jarosz
Cc: Wayne Andrade; Wells
Subject: W2018-0006 105th Ave. & International Blvd.

Hello Dave,
What is the status of the boring logs for the 6 borings performed on Thursday, January 11, 2018? Thank you.

Marcelino Vialpando
PWA Tech I
Alameda County Public Works Agency
Water Resources Section
399 Elmhurst Street
Hayward, CA 94544
O: (510) 670-5760
marcelino@acpwa.org
www.acgov.org/pwa/wells



APPROXIMATE BORING LOCATION

APPROXIMATE R-VALUE LOCATION

N
W
E
S

SITE MAP	**Scale:** NTS	**Date:** February 2018	Krazan GEOTECHNICAL ENGINEERING
Oakland International Seniors Project **SEC 105th Avenue and International Boulevard** **Oakland, California**	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 042-17028	**Figure No.** 1	

Log of Boring B1

Project: Oakland International Seniors Project

Project No: 042-17028

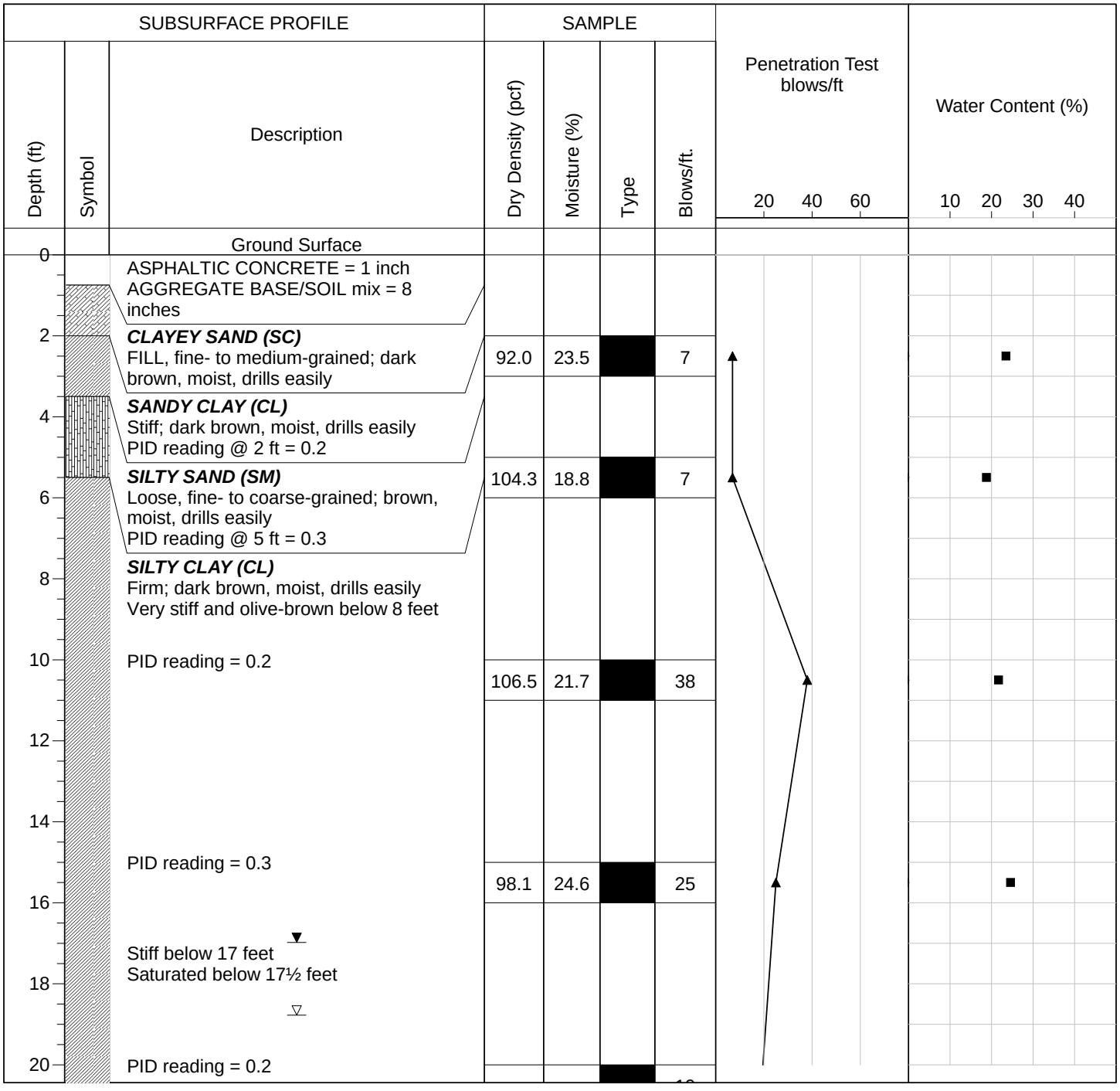
Client: Pacific West Communities, Inc.

Figure No.: A-1

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17'2"



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 40 Feet

Log of Boring B1

Project: Oakland International Seniors Project

Project No: 042-17028

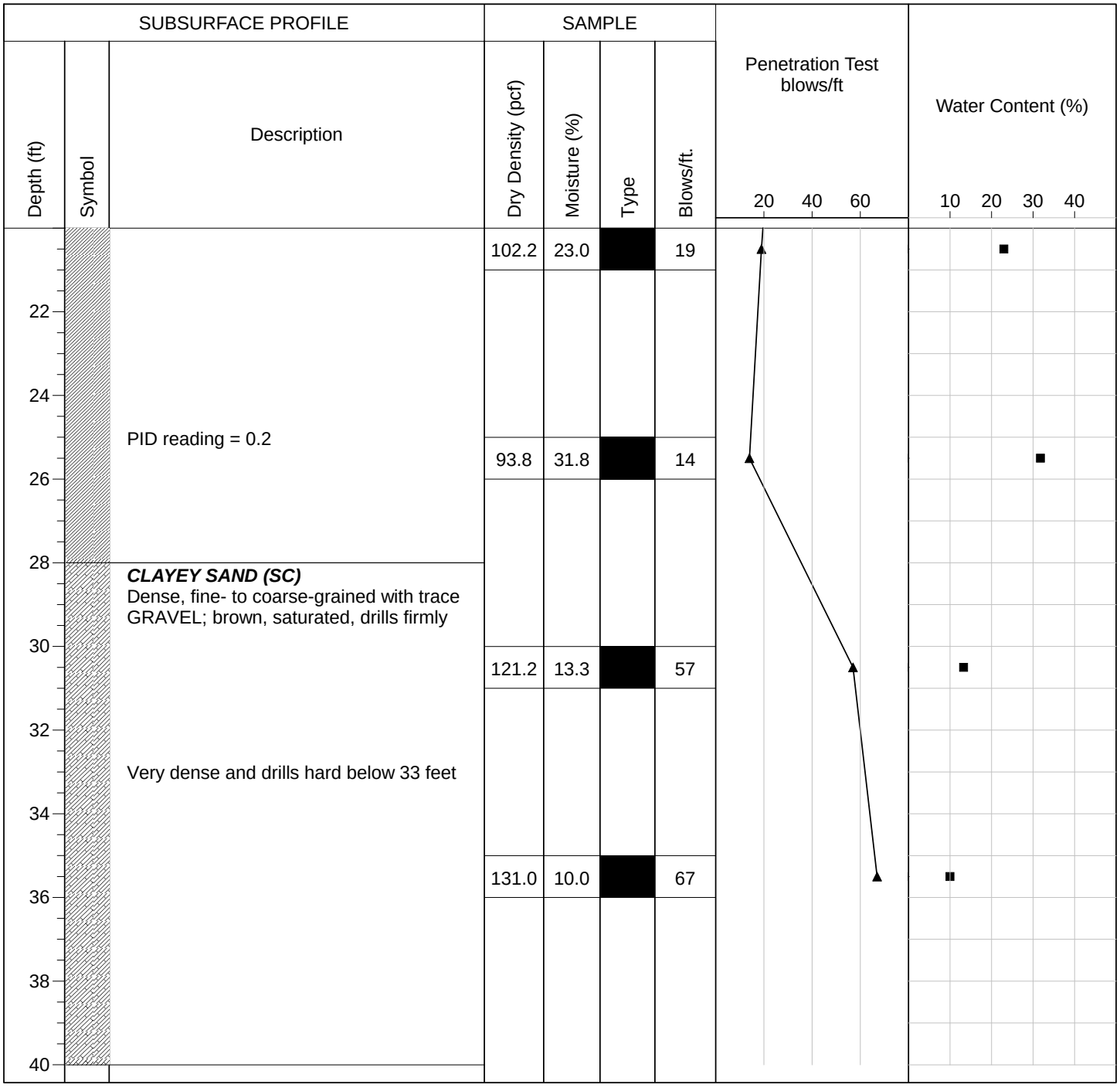
Client: Pacific West Communities, Inc.

Figure No.: A-1

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17'2"



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 40 Feet

Log of Boring B2

Project: Oakland International Seniors Project

Project No: 042-17028

Client: Pacific West Communities, Inc.

Figure No.: A-2

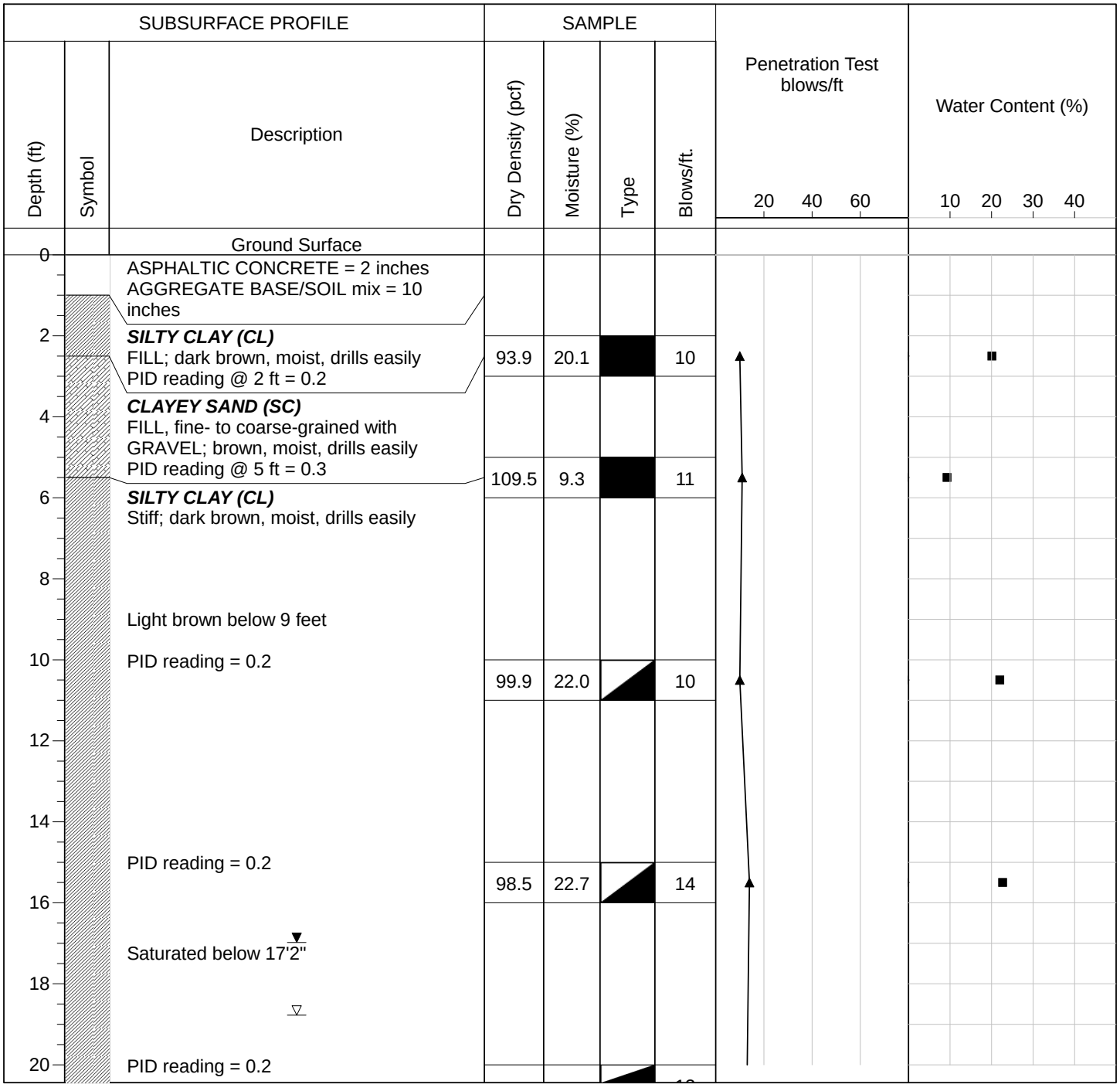
Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water>

Initial: 19 Feet

At Completion: 17'2"



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 30 Feet

Log of Boring B2

Project: Oakland International Seniors Project

Project No: 042-17028

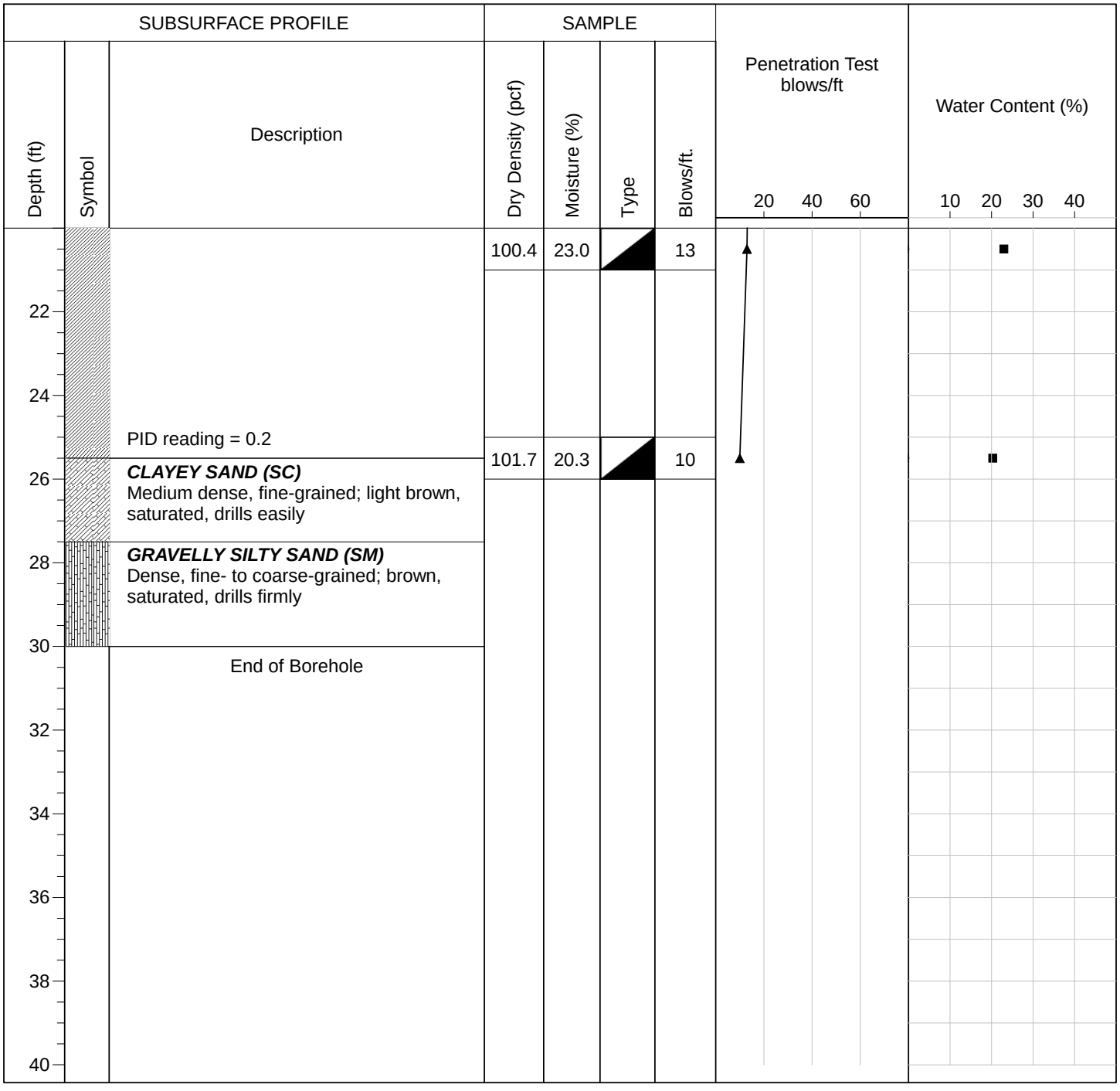
Client: Pacific West Communities, Inc.

Figure No.: A-2

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17'2"



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 30 Feet

Log of Boring B3

Project: Oakland International Seniors Project

Project No: 042-17028

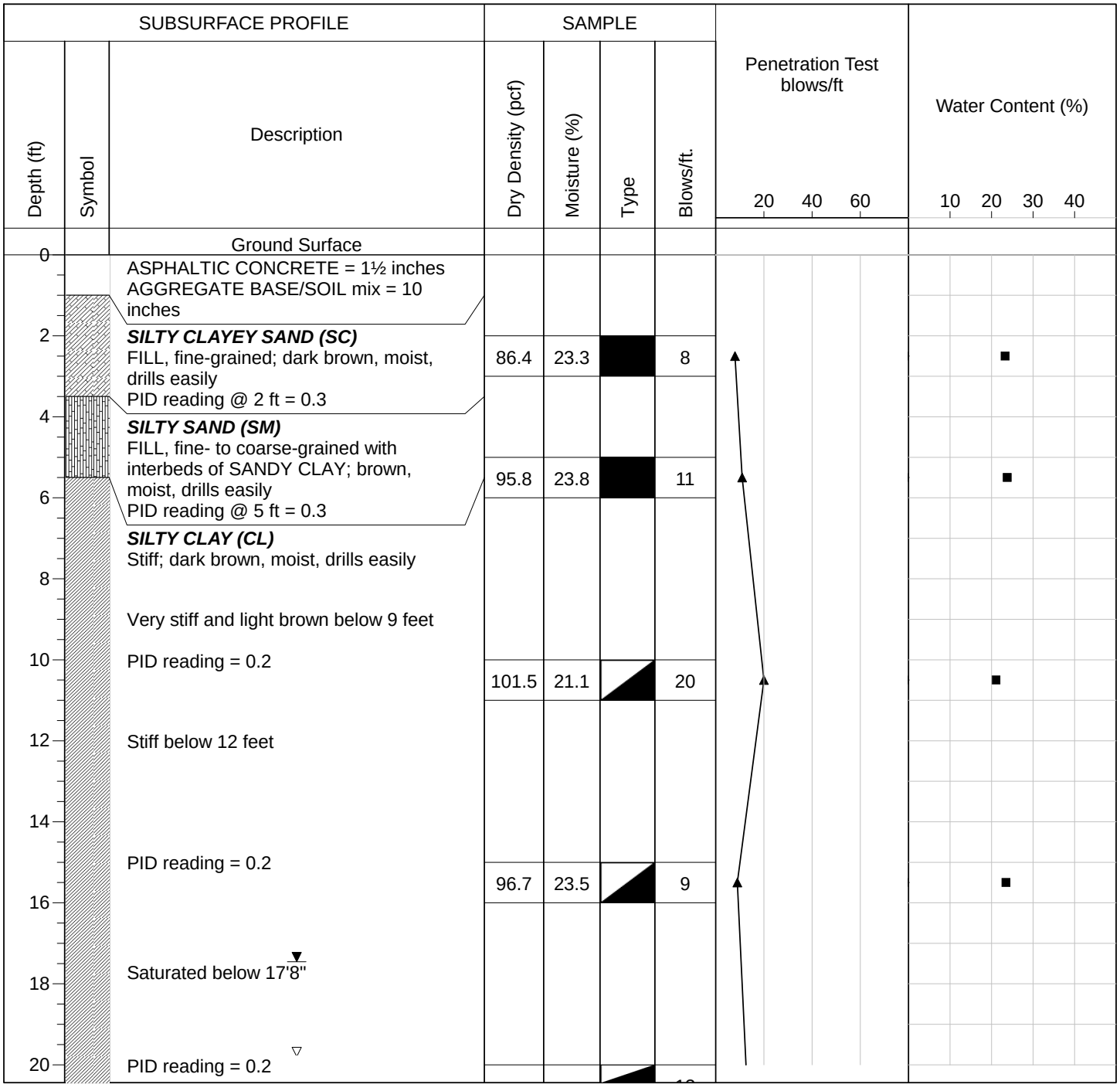
Client: Pacific West Communities, Inc.

Figure No.: A-3

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 20 Feet **At Completion:** 17'8"



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 30 Feet

Log of Boring B3

Project: Oakland International Seniors Project

Project No: 042-17028

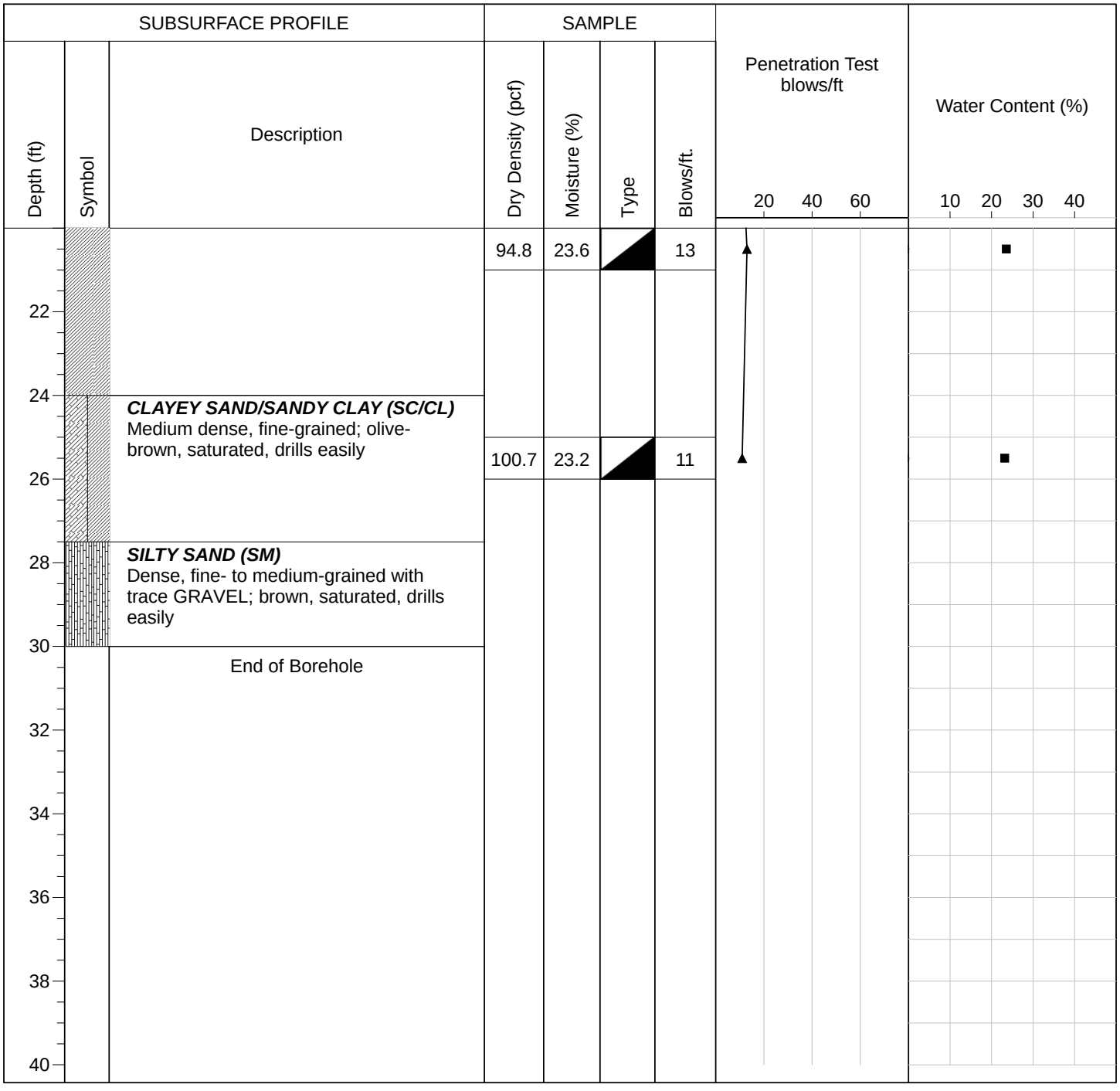
Client: Pacific West Communities, Inc.

Figure No.: A-3

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 20 Feet **At Completion:** 17'8"



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 30 Feet

Log of Boring B4

Project: Oakland International Seniors Project

Project No: 042-17028

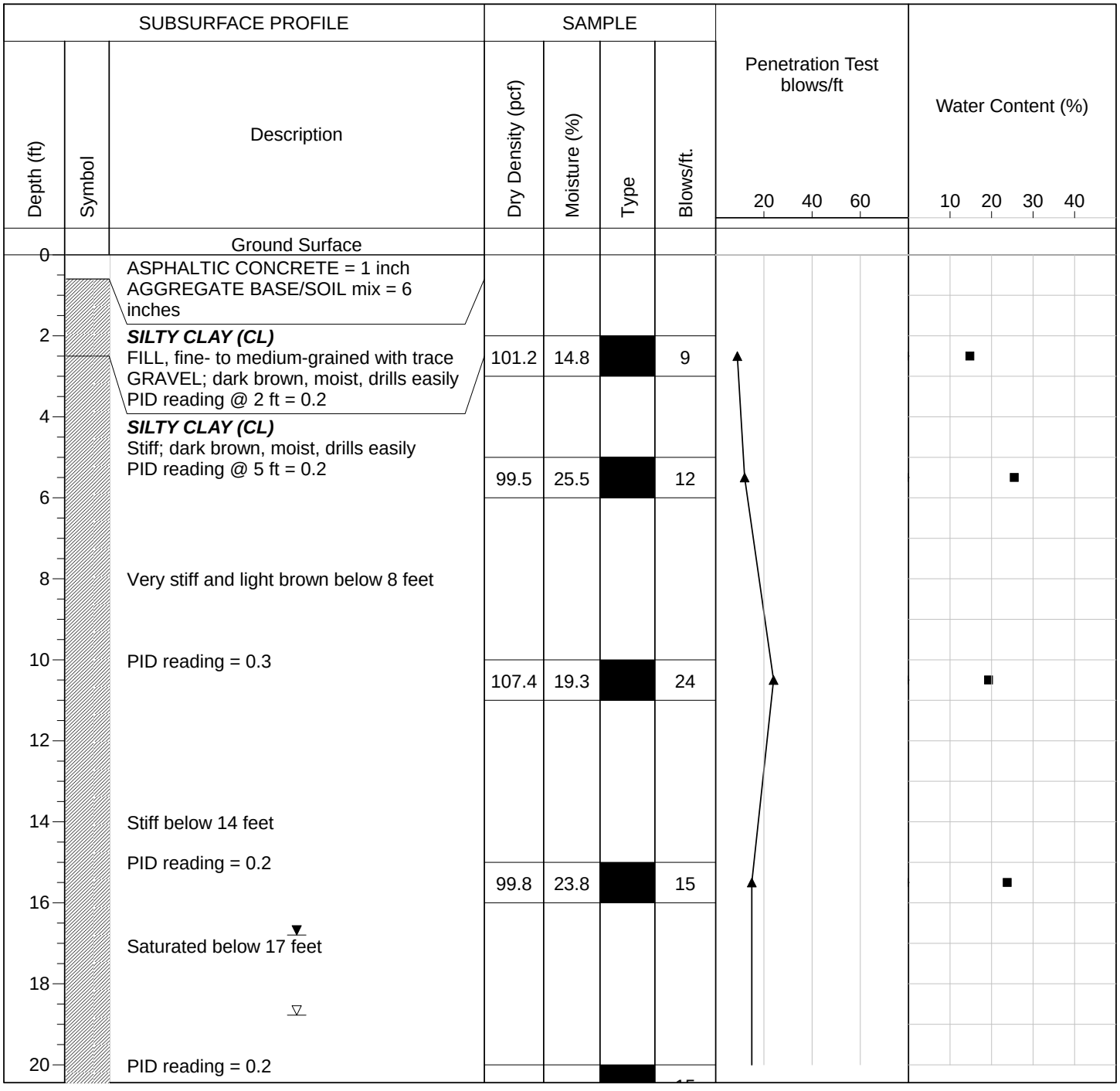
Client: Pacific West Communities, Inc.

Figure No.: A-4

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17 Feet



Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 40 Feet

Log of Boring B4

Project: Oakland International Seniors Project

Project No: 042-17028

Client: Pacific West Communities, Inc.

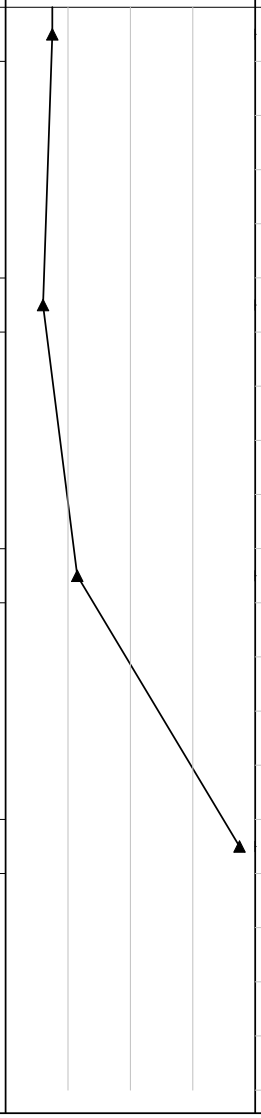
Figure No.: A-4

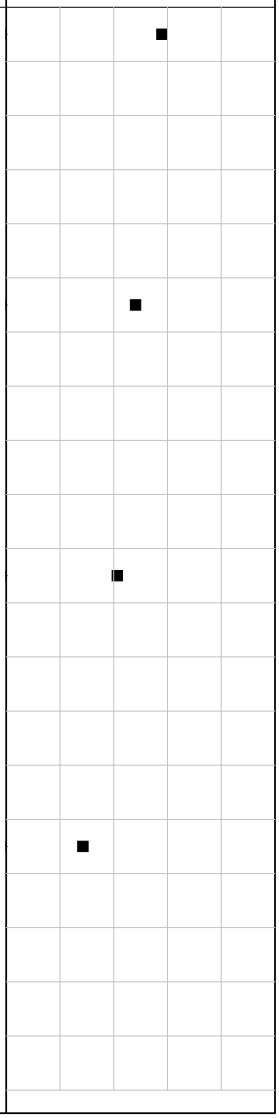
Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
			98.3	29.0		15
22		***SILTY SAND/SANDY SILT (SM/ML)*** Loose, fine- to coarse-grained; brown, moist, drills easily				
24						
26			99.5	24.1		12
28		***SILTY SAND (SM)*** Medium dense, fine-grained; light brown, saturated, drills easily				
30			106.0	20.7		23
32		***SILTY CLAY (CL)*** Hard, fine- to coarse-grained with trace GRAVEL; brown, saturated, drills hard				
34						
36			122.2	14.3		75
38						
40						





Drill Method: Hollow Stem

Drill Rig: CME 45C-1

Driller: Chris Wyneken

Krazan and Associates

Drill Date: 1-10-18

Hole Size: 6½ Inches

Elevation: 40 Feet

Log of Boring B5

Project: Oakland International Seniors Project

Project No: 042-17028

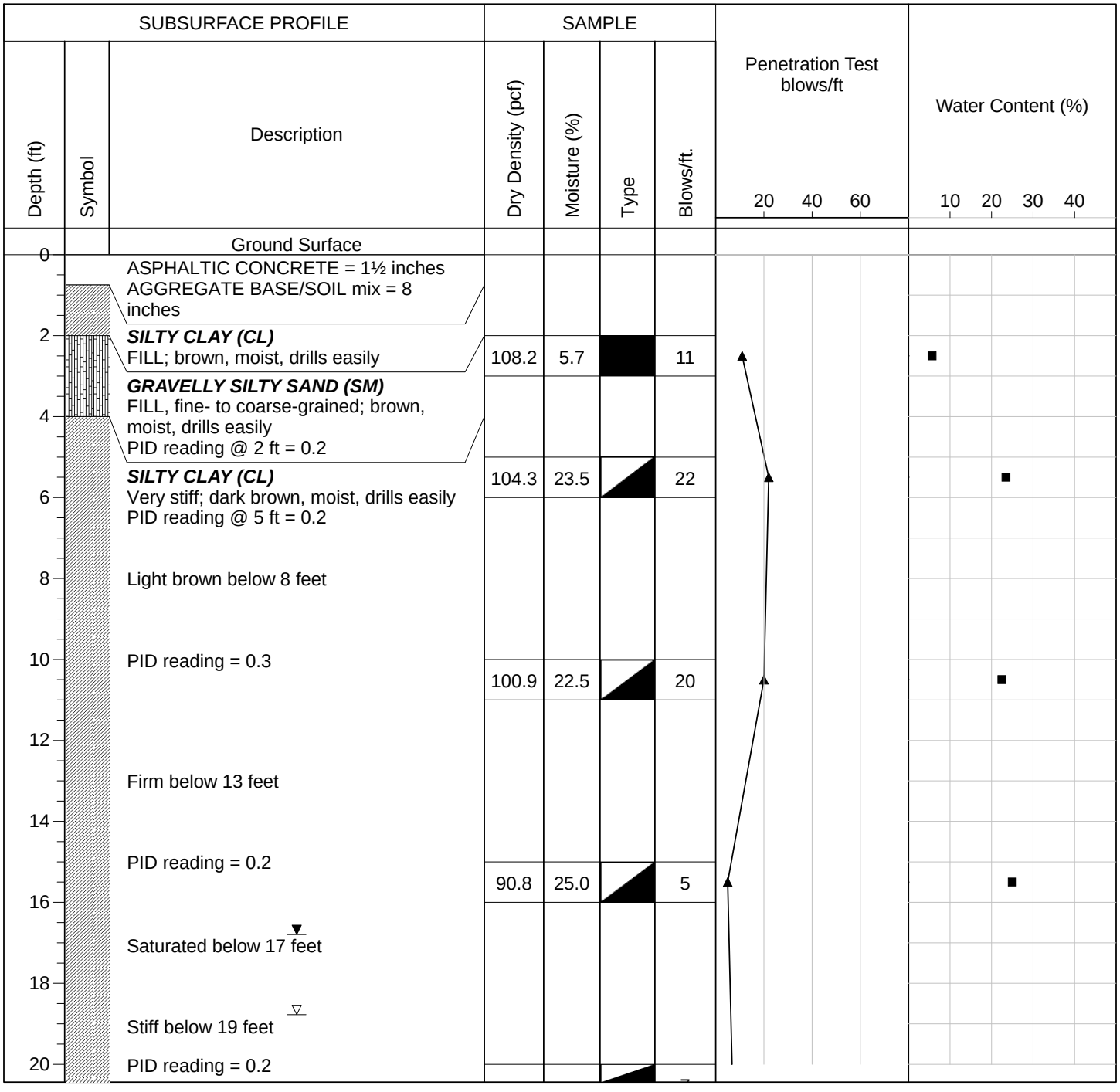
Client: Pacific West Communities, Inc.

Figure No.: A-5

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17 Feet



Drill Method: Hollow Stem

Drill Date: 1-11-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 60 Feet

Log of Boring B5

Project: Oakland International Seniors Project

Project No: 042-17028

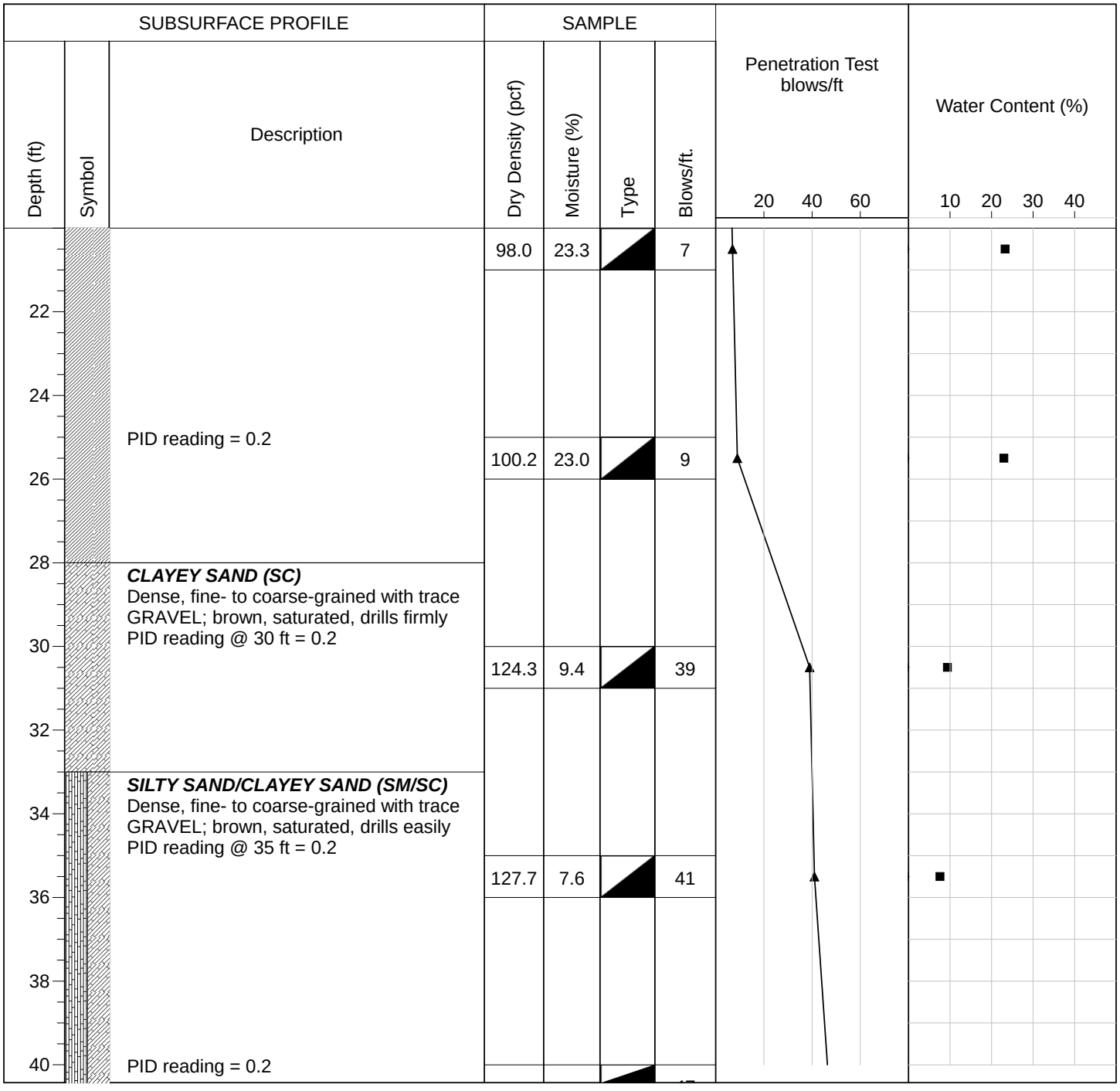
Client: Pacific West Communities, Inc.

Figure No.: A-5

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17 Feet



Drill Method: Hollow Stem

Drill Date: 1-11-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 60 Feet

Log of Boring B5

Project: Oakland International Seniors Project

Project No: 042-17028

Client: Pacific West Communities, Inc.

Figure No.: A-5

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 19 Feet **At Completion:** 17 Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
42		With increased GRAVEL below 42 feet	126.2	9.9		47
44		Very dense below 44 feet				
		PID reading = 0.2				
46			127.0	9.3		60
48		Dense below 48 feet				
50		PID reading = 0.2	124.7	9.6		47
		SILTY CLAYEY SAND (SC) Dense, fine- to coarse-grained; brown, saturated, drills easily				
52						
54		PID reading = 0.2				
56			102.9	18.3		32
58						
60						

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Date: 1-11-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 60 Feet

Log of Boring B6

Project: Oakland International Seniors Project

Project No: 042-17028

Client: Pacific West Communities, Inc.

Figure No.: A-6

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 18 Feet **At Completion:** 16½ Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		ASPHALTIC CONCRETE = 1½ inches AGGREGATE BASE/SOIL mix = 6 inches				
2		***CLAYEY SAND (SC)*** FILL, fine-grained; dark brown, moist, drills easily	93.3	18.9		10
4		***SILTY CLAY (CL)*** Stiff; dark brown, moist, drills easily PID reading @ 2 ft = 0.2 Very stiff below 5 feet PID reading @ 5 ft = 0.3	108.6	18.6		20
6						
8		Very stiff and light brown below 8 feet				
10		PID reading = 0.2	107.4	19.8		35
12						
14		***SANDY CLAYEY SILT (ML)*** Loose, fine-grained; dark brown, moist, drills easily PID reading @ 15 ft = 0.2	97.7	26.5		11
16		Saturated below 16½ feet ▽				
18						
20		PID reading = 0.2				

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Date: 1-10-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 6½ Inches

Driller: Chris Wyneken

Elevation: 30 Feet

Log of Boring B6

Project: Oakland International Seniors Project

Project No: 042-17028

Client: Pacific West Communities, Inc.

Figure No.: A-6

Location: SEC 105th Avenue and International Boulevard, Oakland, CA

Logged By: Wayne Andrade

Depth to Water> **Initial:** 18 Feet **At Completion:** 16½ Feet

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
			98.5	26.7		17
24		***CLAYEY SAND (SC)*** Dense, fine- to coarse-grained with trace GRAVEL; brown, saturated, drills firmly PID reading @ 25 ft = 0.2	121.7	13.6		53
30		End of Borehole				

Penetration Test blows/ft: 20, 40, 60

Water Content (%): 10, 20, 30, 40

Drill Method: Hollow Stem

Drill Rig: CME 45C-1

Driller: Chris Wyneken

Krazan and Associates

Drill Date: 1-10-18

Hole Size: 6½ Inches

Elevation: 30 Feet

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client: Krazan & Associates, Inc.
Address: 215 W. Dakota Avenue
Clovis, CA 93612

Attn: Martin Groth

Comments: 04217028 - Oakland International Seniors Project

Lab Request: 398850
Report Date: 01/31/2018
Date Received: 01/24/2018
Client ID: 14212

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
398850-001	B1@5'
398850-002	B1@15'
398850-003	DCS-1
398850-004	DCS-2

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Diane M. Galvan

Report Review performed by: Diane Galvan, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

ACCREDITED IN ACCORDANCE WITH nelac

Matrix:	Solid	**Client:**	Krazan & Associates, Inc.	**Collector:**	Client
Sampled:	01/11/2018 09:30	**Site:**			
Sample #:	**398850-001**	**Client Sample #:**	B1@5'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1187043		
Lead	**8.90**	1	1	mg/Kg	01/26/18	01/28/18	KLN	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1187020		
TPH (C13 to C28)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	
TPH (C29 to C40)	ND	1	20	mg/Kg	01/24/18	01/25/18	LT	
TPH (C6 to C12)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*62*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1186947		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		01/24/18	ZZ	
2-Chloroethyl Vinyl Ether	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		01/24/18	ZZ	
Acetone	ND	1	100	ug/Kg		01/24/18	ZZ	
Allyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Benzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromoform	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroform	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	

Matrix:	Solid	**Client:**	Krazan & Associates, Inc.	**Collector:**	Client
Sampled:	01/11/2018 09:30	**Site:**			
Sample #:	**398850-001**	**Client Sample #:**	B1@5'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Dibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		01/24/18	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Methylene chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Naphthalene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
o-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Styrene	ND	1	5	ug/Kg		01/24/18	ZZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		01/24/18	ZZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		01/24/18	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Toluene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		01/24/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*103*	*70-145*	
4-Bromofluorobenzene (SUR)	*111*	*70-145*	
Dibromofluoromethane (SUR)	*91*	*70-145*	
Toluene-d8 (SUR)	*100*	*70-145*	

Matrix: Solid **Client:** Krazan & Associates, Inc. **Collector:** Client
Sampled: 01/11/2018 09:30 **Site:**
Sample #: 398850-002 **Client Sample #:** B1@15' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B NELAC Prep Method: EPA 3050B						QCBatchID: QC1187043		
Lead	**10.9**	1	1	mg/Kg	01/26/18	01/28/18	KLN	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1187020		
TPH (C13 to C28)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	
TPH (C29 to C40)	ND	1	20	mg/Kg	01/24/18	01/25/18	LT	
TPH (C6 to C12)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*61*		*50-150*					
Method: EPA 8260B NELAC Prep Method: EPA 5030						QCBatchID: QC1186947		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		01/24/18	ZZ	
2-Chloroethyl Vinyl Ether	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		01/24/18	ZZ	
Acetone	ND	1	100	ug/Kg		01/24/18	ZZ	
Allyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Benzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromoform	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroform	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	

Matrix:	Solid	**Client:**	Krazan & Associates, Inc.	**Collector:**	Client
Sampled:	01/11/2018 09:30	**Site:**			
Sample #:	**398850-002**	**Client Sample #:**	B1@15'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Dibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		01/24/18	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Methylene chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Naphthalene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
o-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Styrene	ND	1	5	ug/Kg		01/24/18	ZZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		01/24/18	ZZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		01/24/18	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Toluene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		01/24/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*112*	*70-145*	
4-Bromofluorobenzene (SUR)	*109*	*70-145*	
Dibromofluoromethane (SUR)	*97*	*70-145*	
Toluene-d8 (SUR)	*97*	*70-145*	

Matrix: Solid	**Client:** Krazan & Associates, Inc.		**Collector:** Client		
Sampled: 01/11/2018 15:15	**Site:**				
Sample #: **398850-003**	**Client Sample #:** DCS-1		**Sample Type:**		

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1187043		
Lead	**7.77**	1	1	mg/Kg	01/26/18	01/28/18	KLN	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1187020		
TPH (C13 to C28)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	
TPH (C29 to C40)	ND	1	20	mg/Kg	01/24/18	01/25/18	LT	
TPH (C6 to C12)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*65*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1186947		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		01/24/18	ZZ	
2-Chloroethyl Vinyl Ether	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		01/24/18	ZZ	
Acetone	ND	1	100	ug/Kg		01/24/18	ZZ	
Allyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Benzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromoform	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroform	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	

Matrix:	Solid	**Client:**	Krazan & Associates, Inc.	**Collector:**	Client
Sampled:	01/11/2018 15:15	**Site:**			
Sample #:	**398850-003**	**Client Sample #:**	DCS-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Dibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		01/24/18	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Methylene chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Naphthalene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
o-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Styrene	ND	1	5	ug/Kg		01/24/18	ZZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		01/24/18	ZZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		01/24/18	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Toluene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		01/24/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*118*	*70-145*	
4-Bromofluorobenzene (SUR)	*105*	*70-145*	
Dibromofluoromethane (SUR)	*100*	*70-145*	
Toluene-d8 (SUR)	*94*	*70-145*	

Matrix: Solid	**Client:** Krazan & Associates, Inc.		**Collector:** Client		
Sampled: 01/11/2018 15:00	**Site:**				
Sample #: **398850-004**	**Client Sample #:** DCS-2		**Sample Type:**		

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1187043		
Lead	**8.98**	1	1	mg/Kg	01/26/18	01/28/18	KLN	
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1187020		
TPH (C13 to C28)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	
TPH (C29 to C40)	ND	1	20	mg/Kg	01/24/18	01/25/18	LT	
TPH (C6 to C12)	ND	1	10	mg/Kg	01/24/18	01/25/18	LT	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*80*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1186947		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,1-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,1-Dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,3-Trichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dibromoethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
1,3-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
1,4-Dichlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
2,2-Dichloropropane	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Butanone (MEK)	ND	1	100	ug/Kg		01/24/18	ZZ	
2-Chloroethyl Vinyl Ether	ND	1	5	ug/Kg		01/24/18	ZZ	
2-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Chlorotoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Isopropyltoluene	ND	1	5	ug/Kg		01/24/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		01/24/18	ZZ	
Acetone	ND	1	100	ug/Kg		01/24/18	ZZ	
Allyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Benzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromoform	ND	1	5	ug/Kg		01/24/18	ZZ	
Bromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloroform	ND	1	5	ug/Kg		01/24/18	ZZ	
Chloromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	

Matrix:	Solid	**Client:**	Krazan & Associates, Inc.	**Collector:**	Client
Sampled:	01/11/2018 15:00	**Site:**			
Sample #:	**398850-004**	**Client Sample #:**	DCS-2	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Dibromomethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		01/24/18	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Methylene chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		01/24/18	ZZ	
Naphthalene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
o-Xylene	ND	1	5	ug/Kg		01/24/18	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Styrene	ND	1	5	ug/Kg		01/24/18	ZZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		01/24/18	ZZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		01/24/18	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		01/24/18	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Toluene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		01/24/18	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichloroethene	ND	1	5	ug/Kg		01/24/18	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		01/24/18	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		01/24/18	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		01/24/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*117*	*70-145*	
4-Bromofluorobenzene (SUR)	*108*	*70-145*	
Dibromofluoromethane (SUR)	*99*	*70-145*	
Toluene-d8 (SUR)	*95*	*70-145*	

QCBatchID: QC1186947	**Analyst:** nicollez		**Method:** EPA 8260B		
Matrix: Solid	**Analyzed:** 01/24/2018		**Instrument:** VOA-MS (group)		

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1186947MB1					
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5	
1,1,1-Trichloroethane	ND	ug/Kg		5	
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5	
1,1,2-Trichloroethane	ND	ug/Kg		5	
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5	
1,1-Dichloroethane	ND	ug/Kg		5	
1,1-Dichloroethene	ND	ug/Kg		5	
1,1-Dichloropropene	ND	ug/Kg		5	
1,2,3-Trichlorobenzene	ND	ug/Kg		5	
1,2,3-Trichloropropane	ND	ug/Kg		5	
1,2,4-Trichlorobenzene	ND	ug/Kg		5	
1,2,4-Trimethylbenzene	ND	ug/Kg		5	
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5	
1,2-Dibromoethane	ND	ug/Kg		5	
1,2-Dichlorobenzene	ND	ug/Kg		5	
1,2-Dichloroethane	ND	ug/Kg		5	
1,2-Dichloropropane	ND	ug/Kg		5	
1,3,5-Trimethylbenzene	ND	ug/Kg		5	
1,3-Dichlorobenzene	ND	ug/Kg		5	
1,3-Dichloropropane	ND	ug/Kg		5	
1,4-Dichlorobenzene	ND	ug/Kg		5	
2,2-Dichloropropane	ND	ug/Kg		5	
2-Butanone (MEK)	ND	ug/Kg		100	
2-Chloroethyl Vinyl Ether	ND	ug/Kg		5	
2-Chlorotoluene	ND	ug/Kg		5	
4-Chlorotoluene	ND	ug/Kg		5	
4-Isopropyltoluene	ND	ug/Kg		5	
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5	
Acetone	ND	ug/Kg		100	
Allyl Chloride	ND	ug/Kg		5	
Benzene	ND	ug/Kg		5	
Bromobenzene	ND	ug/Kg		5	
Bromochloromethane	ND	ug/Kg		5	
Bromodichloromethane	ND	ug/Kg		5	
Bromoform	ND	ug/Kg		5	
Bromomethane	ND	ug/Kg		5	
Carbon Tetrachloride	ND	ug/Kg		5	
Chlorobenzene	ND	ug/Kg		5	
Chlorodibromomethane	ND	ug/Kg		5	
Chloroethane	ND	ug/Kg		5	
Chloroform	ND	ug/Kg		5	
Chloromethane	ND	ug/Kg		5	
cis-1,2-Dichloroethene	ND	ug/Kg		5	
cis-1,3-dichloropropene	ND	ug/Kg		5	
cis-1,4-dichloro-2-butene	ND	ug/Kg		5	
Dibromomethane	ND	ug/Kg		5	
Dichlorodifluoromethane	ND	ug/Kg		5	
Di-isopropyl ether (DIPE)	ND	ug/Kg		5	
Ethylbenzene	ND	ug/Kg		5	
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5	
Hexachlorobutadiene	ND	ug/Kg		5	

QCBatchID: QC1186947 **Analyst:** nicollez **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 01/24/2018 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1186947MB1					
Isopropylbenzene	ND	ug/Kg		5	
m and p-Xylene	ND	ug/Kg		5	
Methylene chloride	ND	ug/Kg		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5	
Naphthalene	ND	ug/Kg		5	
N-butylbenzene	ND	ug/Kg		5	
N-propylbenzene	ND	ug/Kg		5	
o-Xylene	ND	ug/Kg		5	
Sec-butylbenzene	ND	ug/Kg		5	
Styrene	ND	ug/Kg		5	
t-Butyl alcohol (TBA)	ND	ug/Kg		10	
Tert-amylmethylether (TAME)	ND	ug/Kg		5	
Tert-butylbenzene	ND	ug/Kg		5	
Tetrachloroethene	ND	ug/Kg		5	
Toluene	ND	ug/Kg		5	
trans-1,2-dichloroethene	ND	ug/Kg		5	
trans-1,3-dichloropropene	ND	ug/Kg		5	
trans-1,4-dichloro-2-butene	ND	ug/Kg		5	
Trichloroethene	ND	ug/Kg		5	
Trichlorofluoromethane	ND	ug/Kg		5	
Vinyl Chloride	ND	ug/Kg		5	
Xylenes (Total)	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1186947LCS1, QC1186947LCSD1											
1,1-Dichloroethene	50	50	48	47	ug/Kg	96	94	2	59-172	22	
Benzene	50	50	46	46	ug/Kg	92	92	0	62-137	24	
Chlorobenzene	50	50	46	45	ug/Kg	92	90	2	60-133	24	
Methyl-t-butyl Ether (MTBE)	50	50	45	45	ug/Kg	90	90	0	62-137	21	
Toluene	50	50	45	45	ug/Kg	90	90	0	59-139	21	
Trichloroethene	50	50	47	46	ug/Kg	94	92	2	66-142	21	

QCBatchID:	**QC1187020**	**Analyst:**	lytagas	**Method:**	EPA 8015M
Matrix:	Solid	**Analyzed:**	01/25/2018	**Instrument:**	SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1187020MB1						
TPH (C10 to C28)	ND	mg/Kg		10		
TPH (C13 to C28)	ND	mg/Kg		10		
TPH (C28 to C40)	ND	mg/Kg		20		
TPH (C29 to C40)	ND	mg/Kg		20		
TPH (C6 to C12)	ND	mg/Kg		10		
TPH (C8 to C10)	ND	mg/Kg		10		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1187020LCS1											
TPH (C10 to C28)	250		280		mg/Kg	112			70-130		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1187020MS1, QC1187020MSD1												**Source: 398850-001**
TPH (C10 to C28)	ND	250	250	240	250	mg/Kg	96	100	4.1	70-130	20	

QCBatchID: QC1187043 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 01/26/2018 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1187043MB1						
Arsenic	ND	mg/Kg		1		
Lead	ND	mg/Kg		1		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1187043LCS1											
Arsenic	100		98.4		mg/Kg	98			80-120		
Lead	100		102		mg/Kg	102			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1187043MS1, QC1187043MSD1												**Source: 398873-001**
Arsenic	7.88	100	100	102	98.2	mg/Kg	94	90	3.8	75-125	20	
Lead	37.0	100	100	121	125	mg/Kg	84	88	3.3	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

Krazan & Associates, Inc. 215 W. Dakota Avenue, Clovis, CA 93612, (559) 348-2200, FAX (559) 348-2190

CHAIN-OF-CUSTODY RECORD 398850

DATE: 1.23.18 **Lab ID:**

Client:	Krazan & Associates, Inc.
Address:	215 West Dakota Avenue Clovis, CA 93612
Sampled By:	Martin Groth
Phone:	(559) 348-2200
FAX:	(559) 348-2190
Project Manager:	Martin Groth
Project Job:	04217028 - Oakland International Seniors Project

	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container #	Container Type	REQUESTED ANALYSIS: TPH-cc by 8015B	VOCs inc. oxygenates by 8260B	Lead by 6010B
1	B1@5'	1.11.18	9:30	Soil	1	SL	X	X	X
2	B1@15'	1.11.18	9:30	Soil	1	SL	X	X	X
3	DCS-1	1.11.18	3:15	Soil	1	SL	X	X	X
4	DCS-2	1.11.18	3:00	Soil	1	SL	X	X	X
5									
6									
7									
8									
9									
10									

Correct Containers:	Yes	No	
Sample Temperature:	Ambient	Cold	Warm
Sample Preservative:	Yes	No	
Turnaround Time:	Normal	Specify:	

Comments:

PLEASE RETURN ICE CHEST & ICE PACKS

RELINQUISHED BY		RECEIVED BY	
Signature:	Wayne Andrade	Signature:	Martin Groth
Print:	Wayne Andrade	Print:	Martin Groth
Company:	Krazan	Company:	Krazan
Date:	1/23/18 Time: 1615	Date:	1/23/18 Time: 4:15
Signature:	Martin Groth	Signature:	
Print:	Martin Groth	Print:	C. Hernandez
Company:	Krazan	Company:	E.A.
Date:	1/23/18 Time: 3:12	Date:	1/24/18 Time: 13:50
Signature:		Signature:	
Print:		Print:	
Company:		Company:	
Date:	Time:	Date:	Time:

4.9 7.5

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Krazan Project: _____

Date Received: 01/24/18 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 4.9 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☐ Ice ☑ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 2.5 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 1/24/18

FedEx Express US Airbill

8470 1066 9890

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 1/23/18 Sender's FedEx Account Number 1287-5263-2

Sender's Name Marty Groth Phone 559-348-2200

Company Krazan & Associates

Address 215 W. Dakota Ave

Dept./Floor/Suite/Room

City Clovis State CA ZIP 93612

2 Your Internal Billing Reference

3 To

Recipient's Name Phone 714-771-6900

Company CA Enthalpy Analytical Inc.

Recipient's Address 931 W. Barkley Ave

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Orange State CA ZIP 92868

8470 1066 9890

4a Express Package Service — Packages up to 150 lbs. * To most locations

1 [X] FedEx Priority Overnight — Next business morning*

5 [ ] FedEx Standard Overnight — Next business afternoon*

6 [ ] FedEx First Overnight — Earliest next business morning delivery to select locations*

3 [ ] FedEx 2Day — Second business day*

20 [ ] FedEx Express Saver — Third business day*

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service — Packages over 150 lbs. ** To most locations

7 [ ] FedEx 1Day Freight* — Next business day**

8 [ ] FedEx 2Day Freight — Second business day**

83 [ ] FedEx 3Day Freight — Third business day**

* Call for Confirmation:

5 Packaging — * Declared value limit $500

6 [ ] FedEx Envelope*

2 [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak

3 [ ] FedEx Box

4 [ ] FedEx Tube

1 [X] Other

6 Special Handling — Include FedEx address in Section 3.

3 [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight to select ZIP codes

1 [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight

31 [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

[X] No

4 [ ] Yes — As per attached Shipper's Declaration

[ ] Yes — Shipper's Declaration not required

6 [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including Dry Ice) cannot be shipped in FedEx packaging.

[ ] Cargo Aircraft Only

7 Payment — Bill to: Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip. Acct. No. [ ]

1 [X] Sender — Acct. No. in Section 1 will be billed.

2 [ ] Recipient

3 [ ] Third Party

4 [ ] Credit Card

5 [ ] Cash/Check

FedEx Acct. No. / Credit Card No.

Exp. Date

Total Packages: 1

Total Weight: 5 lbs

Total Charges

Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the *FedEx Service Guide* for details.

8 Sign to Authorize Delivery Without a Signature

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

467

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