

Appendix L-2 Quarry Information and Analytical Data Reports

- The licensed quarry/mine material placed in the Garfield Avenue Group Sites was certified by Tilcon, the licensed quarry (certification also included in this Appendix), as from a virgin source. Per the 2015 *Fill Material Guidance for SRP Sites* (NJDEP, 2015), “Whenever licensed quarry/mine material, certified as such by the quarry/mine operator, is delivered to a property undergoing remediation, the investigator may rely on the certification for the purpose of issuing a remedial action outcome (RAO) without sampling the delivered licensed quarry/mine material.”
- The concentration of manganese in one sample collected from the virgin material (Mt. Hope Quarry stone fines collected on May 7, 2019) exceeded the Default Impact to Groundwater Soil Screening Level (DIGWSSL) for manganese. This DIGWSSL exceedance does not pose a potential impact to groundwater. Prior to issuance of the *Fill Material Guidance for SRP Sites* (NJDEP, 2015), more than 30 samples from the Tilcon Pompton Lakes certified quarry material were collected and analyzed to confirm suitability for placement on other Garfield Avenue Group Sites. Manganese is naturally occurring, and the applicable Groundwater Quality Standards are based on secondary considerations (primarily aesthetic considerations such as taste, odor, and appearance) and not health considerations; as such, the exceedances do not need to be addressed for the impact to groundwater pathway.



TILCON NEW YORK INC.

PHONE: 973-366-7741 9 ENTIN ROAD, PARSIPPANY , New Jersey 07054

2019 Clean Fill Material Certification- NJ Locations Only

Tilcon NY Inc. New Jersey Division confirms to the best of our knowledge that the aggregates produced at the locations below are virgin stone products, contain no hazards or contamination prior to shipment of materials and conform to section 901 of the *2007 New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction*, The material is identified on the job with Tilcon NJ delivery tickets. The quarries are listed in the Quality List (QPL) of the NJDOT website

<http://www.state.nj.us/transportation/eng/materials/qualified/QPRDB.shtm>

Pompton Lakes Quarry- Granite Gneiss, 84 Borough of Pompton Lakes, Passaic County Blocks No(s) 105-Lot(s) 84. NJDOT approved crushed stone and certified fill products.

Mt. Hope Quarry- Granite Gneiss, 625 Mt Hope Road, Wharton Borough, Morris County NJ, Block No 20001 Lot(s) 5.01,5.02,7; Block 70001 Lot No 2;Block No 20101 Lot No 6. Mt Hope quarry contains NJDOT approved crushed stone, washed products and certified fill products.

Tilcon NY Inc. has had Pompton Lakes and Mt Hope quarries analyzed under the EPA Target Compound List as required by the LSRP program- *NJDEP Residential Direct Contact Soil Remediation Standards/Clean Fill Criteria*. A copy of the report is available upon request. To the best of our knowledge, the materials produced at the above quarries comply with Section 7 of the Fill Material Guidance for SRP Sites.

Riverdale Quarry- Granite Gneiss, 125 Hamburg Turnpike, Riverdale, Morris County NJ, Block No9s0 25, 26, 27, 29 Lot No 3. Riverdale Quarry NJDOT approved crushed stone, washed products and certified fill materials.

Oxford Quarry- Granite Gneiss and Limestone , Quarry and Mt Pisgah Avenue, White Township , Warren County Block 32- Lots 15,16 Block 33- Lots 22,23 Block 34 Lots 19,20 Block 25- Lots 3,5,9,90.1 NJDOT approved crushed stone ,washed products and certified materials .

Tilcon New York, INC Quality Control 973-659-3790

An Equal Opportunity Employer



State of New Jersey
Department of Labor and Workforce Development

Certificate No. 004630
Expiration Date 3/31/2020

MINE REGISTRATION CERTIFICATE

ISSUED TO: TILCON NY INC-MT. HOPE QUARRY
LOCATION: 625 MT. HOPE ROAD
WHARTON, NJ

BLK NO(S): SEE BELOW
LOT NO(S): SEE BELOW
COUNTY: MORRIS

Issued pursuant to the provisions of N.J.S.A. 34:6-98.1 et. seq. Failure to comply with the provisions of the Act, and the Rules promulgated thereunder, shall be good cause for the revocation of this Certificate.

Robert Asaro-Angelo

Commissioner

THIS CERTIFICATE MUST BE POSTED AT ALL TIMES

<u>BLK NO(S)</u>	<u>LOT NO(S)</u>
20001	5.01, 5.02, 7
70001	2
20101	6

S & S ENVIRONMENTAL SCIENCES, INC.

Environmental Engineering, Testing and Consultation

98 Sand Park Road, Cedar Grove, NJ 07009
Tel (973) 857-7188 Fax (973) 239-8380

Kamil Sor, Ph.D.
Orhun Sor, P.E.
Atilla Sencar, P.E.

This report is the confidential property of the Client, and information contained may not be published or reproduced without our written permission.

Client:	Tilcon New York, Inc.				
Project:	Mount Hope, NJ (NJDEP-SRS)				
Subject:	Laboratory Analysis of Aggregate Sample (Quarry Fines)-NJ				
Job No.:	07E34	Report Number:	19-E-78R	Date:	5/17/2019

We present herewith the laboratory test results of an aggregate sample delivered to our laboratory (identified as Quarry Fines) on May 7, 2019. The sample was collected by a representative of Tilcon NY, on the same day.

As requested, the aggregate sample was analyzed for the U.S. EPA Target Compound List (TCL)+30/Target Analyte List (TAL) parameters, Extractable Petroleum Hydrocarbons (EPH), pH, and Hexavalent Chromium. The analyses were performed by Integrated Analytical Laboratories, LLC (IAL) (NJDEP Lab ID No. 14751). The copies of the IAL/S&S sample chain-of-custody forms, the preliminary IAL laboratory summary report and NJDEP-SRS comparison tables are attached.

Review of the laboratory data and comparison of the sample test results to the NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS) indicated that the aggregate sample **meet** the **NJDEP-RDCSRS**.

If there are any questions or if we can be of further assistance in this matter, please contact us.

Very truly yours,
S & S ENVIRONMENTAL SCIENCES, INC.



Kamil Sor, Ph.D.
President

KS/ag

Attachments:

- (1) Laboratory Summary Report, S&S and IAL Sample Chain-of-Custody Form, and NJDEP-SRS Comparison Tables

cc: (1) Client

Steve O'Reilly

email: soreilly@tilconny.com

S&S ENVIRONMENTAL SCIENCES, INC.

Environmental Engineering, Testing and Consultation

98 Sand Park Rad, Cedar Grove, NJ 07009
Tel (973) 857-7188 Fax (973) 239-8380

NJDEP Lab Certification No. 07073

SAMPLE CHAIN OF CUSTODY

CLIENT:	Tilcon	DATE:	5-7-19
ADDRESS:			
CONTACT:		TEL. #:	
PROJECT:	Alt Hope	PROJECT LAB ID #:	19-053

SAMPLE NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF BOTTLES	ANALYSES REQUESTED
1	5-7-19	12 Noon	Grab		NJDEP-SRS - Cleanfill & NYSDEC

Comments:

PRESERVATIVE	
Cooled at 4°C?	<input checked="" type="checkbox"/>
HCl	
HNO ₃	
H ₂ SO ₄	
NaOH	
Na ₂ S ₂ O ₃	
Other	

pH Meter No.:	Reading	T°C	Time	Analyst
pH				
pH Dup.				

Temperature	
Flow	

Sampled By: *for*

RELINQUISHED BY:
for

RECEIVED BY:
Alt Hope

DATE AND TIME:
5-7-19 12:00 13:13

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: E 19

03331

CLIENT:

S+S

COOLER TEMPERATURE: 2° - 6°C:

(See Chain of Custody)

MT- Hope

Comments

COC: COMPLETE / INCOMPLETE

KEY

= YES/NA

= NO

VOA received: Encore

IGW - Methanol

(check one) Terra Core

No Preservative

- Bottles Intact
- no-Missing Bottles
- no-Extra Bottles

- Sufficient Sample Volume
- no-headspace/bubbles in VO's
- Labels intact/correct
- pH Check (exclude VO's)¹
- Correct bottles/preservative
- Sufficient Holding/Prep Time¹

Multiphasic Sample

Sample to be Subcontracted

Chain of Custody is Clear

¹ All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY:

INITIAL

AP

DATE

5/7/19

CORRECTIVE ACTION REQUIRED:

YES

(SEE BELOW)

NO

If COC is NOT clear, STOP until you get client to authorize/clarify work.

CLIENT NOTIFIED:

YES

Date/ Time:

NO

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY:

INITIAL

MS

DATE

5.4.19

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: S & S Environmental

Project: MT HOPE - AGG

Lab Case No.: E19-03331

PARAMETER(Units)	Lab ID:	03331-001
	Client ID:	19-053
	Matrix:	Solid
	Sampled Date	5/7/19
	Conc	Q
		MDL
Special Volatiles (Units)		(mg/Kg)
Dichlorodifluoromethane	ND	0.000417
Chloromethane	ND	0.000385
Vinyl chloride	ND	0.000428
Bromomethane	ND	0.000598
Chloroethane	ND	0.000416
Trichlorofluoromethane	ND	0.000496
Acrolein	ND	0.00264
1,1-Dichloroethene	ND	0.000385
Acetone	ND	0.00189
Carbon disulfide	ND	0.000234
Methylene chloride	ND	0.00184
Acrylonitrile	ND	0.00283
tert-Butyl alcohol (TBA)	ND	0.00126
trans-1,2-Dichloroethene	ND	0.000328
Methyl tert-butyl ether (MTBE)	ND	0.00019
1,1-Dichloroethane	ND	0.000354
cis-1,2-Dichloroethene	ND	0.000259
2-Butanone (MEK)	ND	0.000975
Bromochloromethane	ND	0.000241
Chloroform	ND	0.00024
1,1,1-Trichloroethane	ND	0.000201
Carbon tetrachloride	ND	0.000133
1,2-Dichloroethane (EDC)	ND	0.000333
Benzene	ND	0.000125
Trichloroethene	ND	0.000243
1,2-Dichloropropane	ND	0.000275
1,4-Dioxane	ND	0.049
Bromodichloromethane	ND	0.000187
cis-1,3-Dichloropropene	ND	0.000148
4-Methyl-2-pentanone (MIBK)	ND	0.000417
Toluene	ND	0.00025
trans-1,3-Dichloropropene	ND	0.000221
1,1,2-Trichloroethane	ND	0.000347
Tetrachloroethene	ND	0.000361
2-Hexanone	ND	0.000448
Dibromochloromethane	ND	0.000266
1,2-Dibromoethane (EDB)	ND	0.00021
Chlorobenzene	ND	0.000303
Ethylbenzene	ND	0.000187
Total Xylenes	ND	0.000787
Styrene	ND	0.000115
Bromoform	ND	0.000388
Isopropylbenzene	ND	0.000141
1,1,2,2-Tetrachloroethane	ND	0.000308
n-Propylbenzene	ND	0.000182

ND = Analyzed for but Not Detected at the MDL

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: S & S Environmental

Project: MT HOPE - AGG

Lab Case No.: E19-03331

Lab ID:	03331-001		
Client ID:	19-053		
Matrix:	Solid		
Sampled Date	5/7/19		
PARAMETER(Units)	Conc	Q	MDL
Special Volatiles (Units)	(mg/Kg)		
1,3,5-Trimethylbenzene	ND		0.000485
tert-Butylbenzene	ND		0.000146
1,2,4-Trimethylbenzene	ND		0.000627
sec-Butylbenzene	ND		0.000197
1,3-Dichlorobenzene	ND		0.000272
4-Isopropyltoluene	ND		0.000301
1,4-Dichlorobenzene	ND		0.000327
n-Butylbenzene	ND		0.000345
1,2-Dichlorobenzene	ND		0.000267
1,2-Dibromo-3-chloropropane	ND		0.000619
1,2,4-Trichlorobenzene	ND		0.000421
1,2,3-Trichlorobenzene	ND		0.000279
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.000667
Methyl acetate	ND		0.000156
Cyclohexane	ND		0.000552
Methylcyclohexane	ND		0.000248
1,3-Dichloropropene (cis- and trans-)	ND		0.000221
TOTAL VO's:	ND		
TOTAL TIC's:	ND		
TOTAL VO's & TIC's:	ND		
Semivolatiles - Special BNA (Units)	(mg/Kg)		
N-Nitrosodimethylamine	ND		0.020
Benzaldehyde	ND		0.020
Phenol	ND		0.025
Aniline	ND		0.023
Bis(2-chloroethyl) ether	ND		0.020
2-Chlorophenol	ND		0.022
2-Methylphenol	ND		0.030
2,2'-Oxybis(1-Chloropropane)	ND		0.032
4-Methylphenol **	ND		0.032
N-Nitrosodi-n-propylamine	ND		0.022
Acetophenone	ND		0.022
3-Methylphenol	ND		0.032
Hexachloroethane	ND		0.020
Nitrobenzene	ND		0.020
Isophorone	ND		0.030
2-Nitrophenol	ND		0.020
2,4-Dimethylphenol	ND		0.020
Bis(2-chloroethoxy) methane	ND		0.020
Benzoic acid	ND		0.021
2,4-Dichlorophenol	ND		0.021
Naphthalene	ND		0.023
4-Chloroaniline	ND		0.021

ND = Analyzed for but Not Detected at the MDL

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: S & S Environmental

Project: MT HOPE - AGG

Lab Case No.: E19-03331

Lab ID:	03331-001		
Client ID:	19-053		
Matrix:	Solid		
Sampled Date	5/7/19		
PARAMETER(Units)	Conc	Q	MDL
Semivolatiles - Special BNA (Units)	(mg/Kg)		
Hexachlorobutadiene	ND		0.020
Caprolactam	ND		0.032
4-Chloro-3-methylphenol	ND		0.025
2-Methylnaphthalene	ND		0.020
Hexachlorocyclopentadiene	ND		0.022
2,4,6-Trichlorophenol	ND		0.020
2,4,5-Trichlorophenol	ND		0.020
1,1'-Biphenyl	ND		0.020
2-Chloronaphthalene	ND		0.020
2-Nitroaniline	ND		0.028
Dimethyl phthalate	ND		0.020
2,6-Dinitrotoluene	ND		0.027
Acenaphthylene	ND		0.023
3-Nitroaniline	ND		0.024
Acenaphthene	ND		0.020
2,4-Dinitrophenol	ND		0.020
4-Nitrophenol	ND		0.020
2,4-Dinitrotoluene	ND		0.020
Dibenzofuran	ND		0.020
Diethyl phthalate	ND		0.021
Fluorene	ND		0.020
4-Chlorophenyl phenyl ether	ND		0.020
4-Nitroaniline	ND		0.026
1,2,4,5-Tetrachlorobenzene	ND		0.020
2,3,4,6-Tetrachlorophenol	ND		0.020
4,6-Dinitro-2-methylphenol	ND		0.021
N-Nitrosodiphenylamine	ND		0.024
1,2-Diphenylhydrazine	ND		0.025
4-Bromophenyl phenyl ether	ND		0.027
Hexachlorobenzene	ND		0.020
Atrazine	ND		0.020
Pentachlorophenol	ND		0.025
Phenanthrene	ND		0.020
Anthracene	ND		0.020
Carbazole	ND		0.022
Di-n-butyl phthalate	ND		0.020
Fluoranthene	ND		0.032
Benzidine	ND		0.020
Pyrene	ND		0.025
Butyl benzyl phthalate	ND		0.024
3,3'-Dichlorobenzidine	ND		0.020
Benzo[a]anthracene	ND		0.023
Chrysene	ND		0.020
Bis(2-ethylhexyl) phthalate	ND		0.029
Di-n-octyl phthalate	ND		0.031

ND = Analyzed for but Not Detected at the MDL

Continued on next page.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: S & S Environmental

Project: MT HOPE - AGG

Lab Case No.: E19-03331

PARAMETER(Units)	Conc	Q	MDL
Lab ID:	03331-001		
Client ID:	19-053		
Matrix:	Solid		
Sampled Date	5/7/19		
Semivolatiles - Special BNA (Units)	(mg/Kg)		
Benzo[b]fluoranthene	ND		0.029
Benzo[k]fluoranthene	ND		0.025
Benzo[a]pyrene	ND		0.020
Indeno[1,2,3-cd]pyrene	ND		0.020
Dibenz[a,h]anthracene	ND		0.022
Benzo[g,h,i]perylene	ND		0.031
Dinitrotoluene (2,4- and 2,6-)	ND		0.027
TOTAL BNA'S:	ND		
TOTAL TIC's:	ND		
TOTAL BNA'S & TIC's:	ND		
PCB's (Units)	(mg/Kg)		
Aroclor-1016	ND		0.00127
Aroclor-1221	ND		0.00127
Aroclor-1232	ND		0.00127
Aroclor-1242	ND		0.00127
Aroclor-1248	ND		0.00127
Aroclor-1254	ND		0.00127
Aroclor-1260	ND		0.00127
Aroclor-1262	ND		0.00127
Aroclor-1268	ND		0.00127
PCBs	ND		0.00127

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: S & S Environmental

Project: MT HOPE - AGG

Lab Case No.: E19-03331

PARAMETER(Units)	Conc	Q	MDL
Lab ID:	03331-001		
Client ID:	19-053		
Matrix:	Solid		
Sampled Date	5/7/19		
Pesticides (Units)	(mg/Kg)		
alpha-BHC	ND		0.000317
beta-BHC	ND		0.000317
gamma-BHC (Lindane)	ND		0.000317
delta-BHC	ND		0.000317
Heptachlor	ND		0.000317
Aldrin	ND		0.000317
Heptachlor epoxide	ND		0.000317
Endosulfan I	ND		0.000317
4,4'-DDE	ND		0.000317
Dieldrin	ND		0.000317
Endrin	ND		0.000317
Endosulfan II	ND		0.000317
4,4'-DDD	ND		0.000317
Endrin aldehyde	ND		0.000317
Endosulfan sulfate	ND		0.000317
4,4'-DDT	ND		0.000317
Endrin ketone	ND		0.000317
Methoxychlor	ND		0.000317
alpha-Chlordane	ND		0.000317
gamma-Chlordane	ND		0.000317
Toxaphene	ND		0.0038
Endosulfan (I and II)	ND		0.000317
Chlordane (alpha and gamma)	ND		0.000317
Herbicides (Units)	(mg/Kg)		
Dalapon	ND		0.00666
Dicamba	ND		0.00666
2,4-D	ND		0.00666
2,4,5-TP (Silvex)	ND		0.00666
2,4,5-T	ND		0.00666
2,4-DB	ND		0.00666
Dinoseb	ND		0.00666
NJ-EPH-C40 (Units)	(mg/Kg)		
C9-C40	46.8	J	19.4
Alcohols (Units)	(mg/Kg)		
Methanol	ND		1.98

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: S & S Environmental

Project: MT HOPE - AGG

Lab Case No.: E19-03331

PARAMETER(Units)	Conc	Q	MDL
Lab ID:	03331-001		
Client ID:	19-053		
Matrix:	Solid		
Sampled Date	5/7/19		
Metals (Units)	(mg/Kg)		
Aluminum	2330		5.05
Antimony	ND		0.505
Arsenic	0.929	J	0.379
Barium	19.1		0.631
Beryllium	0.382	J	0.379
Cadmium	ND		0.758
Calcium	4380		37.9
Chromium	5.61		0.631
Cobalt	3.83		0.379
Copper	11.7		0.884
Iron	10600		37.9
Lead	ND		0.631
Magnesium	1990		37.9
Manganese	110		0.884
Mercury	ND		0.00926
Nickel	4.47		0.884
Potassium	1190		50.5
Selenium	3.91	J	3.79
Silver	ND		0.758
Sodium	162		50.5
Thallium	ND		0.631
Vanadium	8.71		0.631
Zinc	12.5	J	2.53
General Analytical (Units)			
Hexavalent Chromium(mg/Kg)	ND		0.378
Cyanide, Total(mg/Kg)	ND		0.500
pH/Corrosivity(SU)	9.29		NA
Trivalent (III) Chromium(mg/Kg)	5.61		0.631

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

Sample #: Field ID: Lab ID: Date Sampled: Depth(ft):	NJDEP SOIL REMEDIATION STANDARDS					19-053		
	CAS	Residential	Non-Res	Default IGW Screening Level (mg/Kg)	Conc	Q	RL	MDL
		SRS (mg/Kg)	SRS (mg/Kg)					
Special Volatiles (mg/Kg)								
Dichlorodifluoromethane	75-71-8	490	230000	39	ND	0.00097	0.000417	
Chloromethane	74-87-3	4	12	NS	ND	0.00097	0.000385	
Vinyl chloride	75-01-4	0.7	2	0.005	ND	0.00097	0.000428	
Bromomethane	74-83-9	25	59	0.04	ND	0.00097	0.000598	
Chloroethane	75-00-3	220	1100	NS	ND	0.00097	0.000416	
Trichlorofluoromethane	75-69-4	23000	340000	34	ND	0.00097	0.000496	
Acrolein	107-02-8	0.5	1	0.5	ND	0.019	0.00264	
1,1-Dichloroethene	75-35-4	11	150	0.008	ND	0.00097	0.000385	
Acetone	67-64-1	70000	NS	19	ND	0.0097	0.00189	
Carbon disulfide	75-15-0	7800	110000	6	ND	0.00097	0.000234	
Methylene chloride	75-09-2	46	230	0.01	ND	0.00194	0.00184	
Acrylonitrile	107-13-1	0.9	3	0.5	ND	0.019	0.00283	
tert-Butyl alcohol (TBA)	75-65-0	1400	11000	0.3	ND	0.00388	0.00126	
trans-1,2-Dichloroethene	156-60-5	300	720	0.6	ND	0.00097	0.000328	
Methyl tert-butyl ether (MTBE)	1634-04-4	110	320	0.2	ND	0.00097	0.00019	
1,1-Dichloroethane	75-34-3	8	24	0.2	ND	0.00097	0.000354	
cis-1,2-Dichloroethene	156-59-2	230	560	0.3	ND	0.00097	0.000259	
2-Butanone (MEK)	78-93-3	3100	44000	0.9	ND	0.00194	0.000975	
Bromochloromethane	74-97-5	NS	NS	NS	ND	0.00097	0.000241	
Chloroform	67-66-3	0.6	2	0.4	ND	0.00097	0.00024	
1,1,1-Trichloroethane	71-55-6	160000	NS	0.3	ND	0.00097	0.000201	
Carbon tetrachloride	56-23-5	2	4	0.005	ND	0.00097	0.000133	
1,2-Dichloroethane (EDC)	107-06-2	0.9	3	0.005	ND	0.00097	0.000333	
Benzene	71-43-2	2	5	0.005	ND	0.00097	0.000125	
Trichloroethene	79-01-6	3	10	0.01	ND	0.00097	0.000243	
1,2-Dichloropropane	78-87-5	2	5	0.005	ND	0.00097	0.000275	
1,4-Dioxane	123-91-1	NS	NS	NS	ND	0.194	0.049	
Bromodichloromethane	75-27-4	1	3	0.005	ND	0.00097	0.000187	
cis-1,3-Dichloropropene	10061-01-5	NS	NS	NS	ND	0.00097	0.000148	
4-Methyl-2-pentanone (MIBK)	108-10-1	NS	NS	NS	ND	0.00194	0.000417	
Toluene	108-88-3	6300	91000	7	ND	0.00097	0.00025	
trans-1,3-Dichloropropene	10061-02-6	NS	NS	NS	ND	0.00097	0.000221	
1,1,2-Trichloroethane	79-00-5	2	6	0.02	ND	0.00097	0.000347	
Tetrachloroethene	127-18-4	43	1500	0.005	ND	0.00097	0.000361	
2-Hexanone	591-78-6	NS	NS	NS	ND	0.00194	0.000448	
Dibromochloromethane	124-48-1	3	8	0.005	ND	0.00097	0.000266	
1,2-Dibromoethane (EDB)	106-93-4	0.008	0.04	0.005	ND	0.00097	0.00021	
Chlorobenzene	108-90-7	510	7400	0.6	ND	0.00097	0.000303	

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

Ethylbenzene	100-41-4	7800	110000	13	ND	0.00097	0.000187
Total Xylenes	1330-20-7	12000	170000	19	ND	0.00194	0.000787
Styrene	100-42-5	90	260	3	ND	0.00097	0.000115
Bromoform	75-25-2	81	280	0.03	ND	0.00097	0.000388
Isopropylbenzene	98-82-8	NS	NS	NS	ND	0.00097	0.000141
1,1,2,2-Tetrachloroethane	79-34-5	1	3	0.007	ND	0.00097	0.000308
n-Propylbenzene	103-65-1	NS	NS	NS	ND	0.00097	0.000182
1,3,5-Trimethylbenzene	108-67-8	NS	NS	NS	ND	0.00097	0.000485
tert-Butylbenzene	98-06-6	NS	NS	NS	ND	0.00097	0.000146
1,2,4-Trimethylbenzene	95-63-6	NS	NS	NS	ND	0.00097	0.000627
sec-Butylbenzene	135-98-8	NS	NS	NS	ND	0.00097	0.000197
1,3-Dichlorobenzene	541-73-1	5300	59000	19	ND	0.00097	0.000272
4-Isopropyltoluene	99-87-6	NS	NS	NS	ND	0.00097	0.000301
1,4-Dichlorobenzene	106-46-7	5	13	2	ND	0.00097	0.000327
n-Butylbenzene	104-51-8	NS	NS	NS	ND	0.00097	0.000345
1,2-Dichlorobenzene	95-50-1	5300	59000	17	ND	0.00097	0.000267
1,2-Dibromo-3-chloropropane	96-12-8	0.08	0.2	0.005	ND	0.00097	0.000619
1,2,4-Trichlorobenzene	120-82-1	73	820	0.7	ND	0.00097	0.000421
1,2,3-Trichlorobenzene	87-61-6	NS	NS	NS	ND	0.00097	0.000279
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NS	NS	NS	ND	0.00097	0.000667
Methyl acetate	79-20-9	78000	NS	22	ND	0.00194	0.000156
Cyclohexane	110-82-7	NS	NS	NS	ND	0.00097	0.000552
Methylcyclohexane	108-87-2	NS	NS	NS	ND	0.00097	0.000248
1,3-Dichloropropene (cis- and trans-)	542-75-6	2	7	0.005	ND	0.00097	0.000221
TOTAL VO's:		NS	NS	NS	ND		NA
TOTAL TIC's:		NS	NS	NS	ND		NA
TOTAL VO's & TIC's:		NS	NS	NS	ND		NA

Semivolatiles - Special BNA (mg/Kg)		Conc	Q	RL	MDL
N-Nitrosodimethylamine	62-75-9	0.7	0.7	0.032	0.020
Benzaldehyde	100-52-7	6100	68000	0.032	0.020
Phenol	108-95-2	18000	210000	0.032	0.025
Aniline	62-53-3	NS	NS	0.032	0.023
Bis(2-chloroethyl) ether	111-44-4	0.4	2	0.032	0.020
2-Chlorophenol	95-57-8	310	2200	0.032	0.022
2-Methylphenol	95-48-7	310	3400	0.032	0.030
2,2'-Oxybis(1-Chloropropane)	108-60-1	23	67	0.032	0.032
4-Methylphenol **	106-44-5	31	340	0.032	0.032
N-Nitrosodi-n-propylamine	621-64-7	0.2	0.3	0.032	0.022
Acetophenone	98-86-2	2	5	0.032	0.022
3-Methylphenol	108-39-4	NS	NS	0.032	0.032
Hexachloroethane	67-72-1	12	48	0.032	0.020
Nitrobenzene	98-95-3	5	14	0.032	0.020
Isophorone	78-59-1	510	2000	0.032	0.030
2-Nitrophenol	88-75-5	NS	NS	0.032	0.020
2,4-Dimethylphenol	105-67-9	1200	14000	0.032	0.020
Bis(2-chloroethoxy) methane	111-91-1	NS	NS	0.032	0.020
Benzoic acid	65-85-0	NS	NS	0.325	0.021
2,4-Dichlorophenol	120-83-2	180	2100	0.032	0.021
Naphthalene	91-20-3	6	17	0.032	0.023
4-Chloroaniline	106-47-8	NS	NS	0.032	0.021
Hexachlorobutadiene	87-68-3	6	25	0.032	0.020
Caprolactam	105-60-2	31000	340000	0.032	0.032
4-Chloro-3-methylphenol	59-50-7	NS	NS	0.032	0.025
2-Methylnaphthalene	91-57-6	230	2400	0.032	0.020
Hexachlorocyclopentadiene	77-47-4	45	110	0.032	0.022
2,4,6-Trichlorophenol	88-06-2	19	74	0.032	0.020
2,4,5-Trichlorophenol	95-95-4	6100	68000	0.032	0.020
1,1'-Biphenyl	92-52-4	61	240	0.032	0.020
2-Chloronaphthalene	91-58-7	NS	NS	0.032	0.020
2-Nitroaniline	88-74-4	39	23000	0.032	0.028
Dimethyl phthalate	131-11-3	NS	NS	0.032	0.020
2,6-Dinitrotoluene	606-20-2	0.7	3	0.032	0.027
Acenaphthylene	208-96-8	NS	300000	0.032	0.023
3-Nitroaniline	99-09-2	NS	NS	0.032	0.024
Acenaphthene	83-32-9	3400	37000	0.032	0.020
2,4-Dinitrophenol	51-28-5	120	1400	0.032	0.020
4-Nitrophenol	100-02-7	NS	NS	0.032	0.020
2,4-Dinitrotoluene	121-14-2	0.7	3	0.032	0.020
Dibenzofuran	132-64-9	NS	NS	0.032	0.020
Diethyl phthalate	84-66-2	49000	550000	0.032	0.021
Fluorene	86-73-7	2300	24000	0.032	0.020
4-Chlorophenyl phenyl ether	7005-72-3	NS	NS	0.032	0.020
4-Nitroaniline	100-01-6	NS	NS	0.032	0.026

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

Pesticides (mg/Kg)	319-84-6	0.1	0.5	0.002	Conc	Q	RL	MDL
alpha-BHC	319-84-6	0.1	0.5	0.002	ND		0.000634	0.000317
beta-BHC	319-85-7	0.4	2	0.002	ND		0.000634	0.000317
gamma-BHC (Lindane)	58-89-9	0.4	2	0.002	ND		0.000634	0.000317
delta-BHC	319-86-8	NS	NS	NS	ND		0.000634	0.000317
Heptachlor	76-44-8	0.1	0.7	0.5	ND		0.000634	0.000317
Aldrin	309-00-2	0.04	0.2	0.2	ND		0.000634	0.000317
Heptachlor epoxide	1024-57-3	0.07	0.3	0.01	ND		0.000634	0.000317
Endosulfan I	959-98-8	NS	NS	NS	ND		0.000634	0.000317
4,4'-DDE	72-55-9	2	9	18	ND		0.000634	0.000317
Dieldrin	60-57-1	0.04	0.2	0.003	ND		0.000634	0.000317
Endrin	72-20-8	23	340	1	ND		0.000634	0.000317
Endosulfan II	33213-65-9	NS	NS	NS	ND		0.000634	0.000317
4,4'-DDD	72-54-8	3	13	4	ND		0.000634	0.000317
Endrin aldehyde	7421-93-4	NS	NS	NS	ND		0.000634	0.000317
Endosulfan sulfate	1031-07-8	470	6800	2	ND		0.000634	0.000317
4,4'-DDT	50-29-3	2	8	11	ND		0.000634	0.000317
Endrin ketone	53494-70-5	NS	NS	NS	ND		0.000634	0.000317
Methoxychlor	72-43-5	390	5700	160	ND		0.000634	0.000317
alpha-Chlordane	5103-71-9	NS	NS	NS	ND		0.000634	0.000317
gamma-Chlordane	5103-74-2	NS	NS	NS	ND		0.000634	0.000317
Toxaphene	8001-35-2	0.6	3	0.3	ND		0.00793	0.0038
Endosulfan (I and II)	115-29-7	470	6800	4	ND		0.000634	0.000317
Chlordane (alpha and gamma)	57-74-9	0.2	1	0.05	ND		0.000634	0.000317

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

S S Environmental
 Project Name: MT HOPE - AGG
 IAL SDG No: E19-03331

NJ-EPH-C40 (mg/Kg) C9-C40	IALC9C40	NS	NS	NS	Conc 46.8	Q J	RL 48.4	MDL 19.4

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

Alcohols (mg/Kg)	67-56-1	NS	NS	NS	Conc	Q	RL	MDL
Methanol					ND		1.98	1.98

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

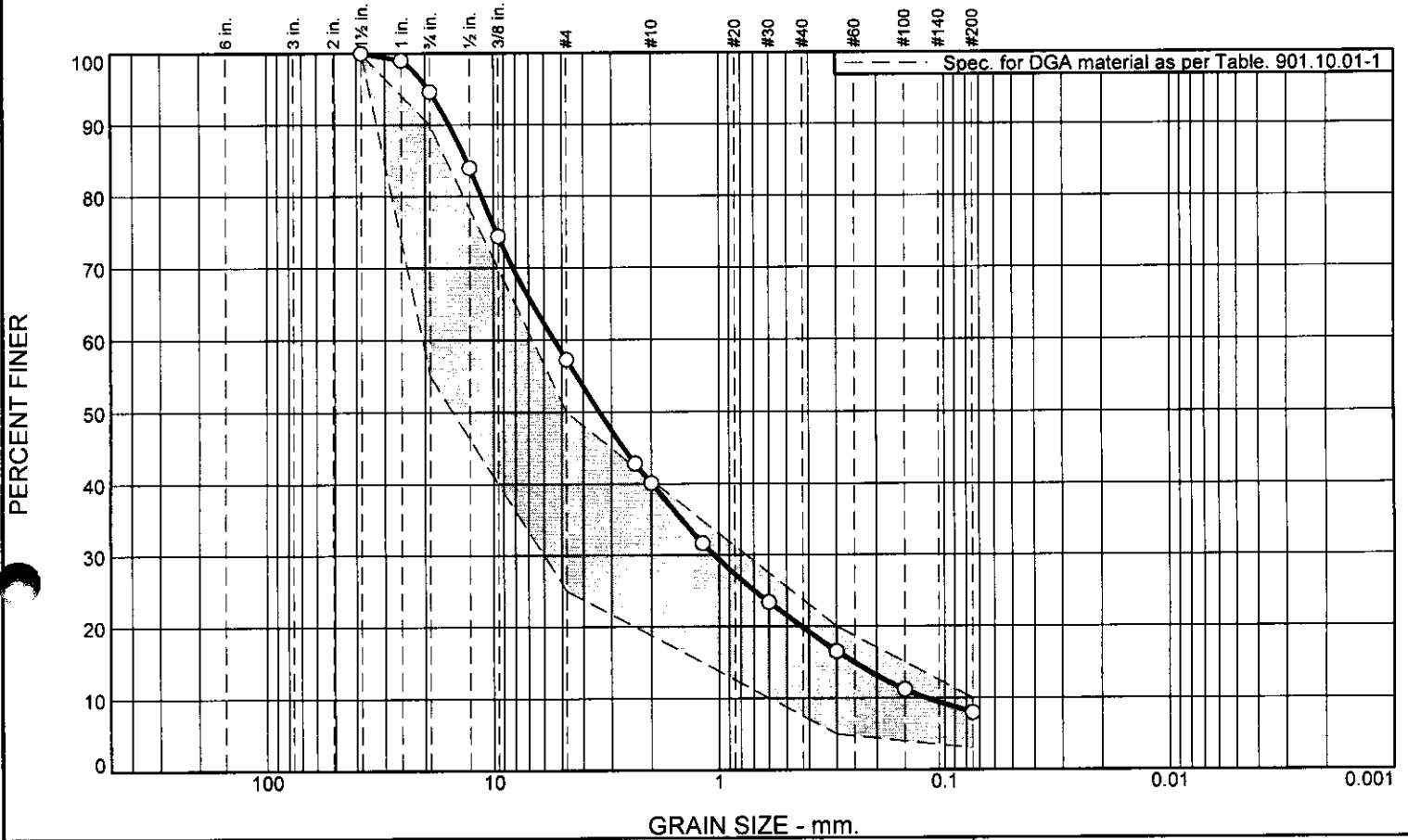
Metals (mg/Kg)	7429-90-5	78000		NS	6000	Conc	Q	RL	MDL
Aluminum	7440-36-0	31	450	NS	6	2330		12.6	5.05
Antimony	7440-38-2	19	19	59000	19	0.929	J	1.26	0.505
Arsenic	7440-39-3	16000	59000	2100	2100	19.1		1.26	0.379
Barium	7440-41-7	16	140	140	0.7	0.382	J	1.26	0.631
Beryllium	7440-43-9	78	78	78	2	ND		1.26	0.379
Cadmium	7440-70-2	NS	NS	NS	NS	4380		1.26	0.758
Calcium	7440-47-3	NS	NS	NS	NS	5.61		1.26	37.9
Chromium	7440-48-4	1600	590	90	90	3.83		1.26	0.631
Cobalt	7440-50-8	3100	45000	11000	11000	11.7		1.26	0.379
Copper	7439-89-6	NS	NS	NS	NS	10600		1.26	0.884
Iron	7439-92-1	400	800	800	90	ND		1.26	37.9
Lead	7439-95-4	NS	NS	NS	NS	1990		1.26	0.631
Magnesium	7439-96-5	11000	5900	5900	65	110		1.26	37.9
Manganese	7439-97-6	23	65	65	0.1	ND		0.023	0.884
Mercury	7440-02-0	1600	23000	23000	48	4.47		1.26	0.00926
Nickel	7440-09-7	NS	NS	NS	NS	1190		1.26	0.884
Potassium	7782-49-2	390	5700	5700	11	3.91	J	8.84	50.5
Selenium	7440-22-4	390	5700	5700	1	ND		1.26	3.79
Silver	7440-23-5	NS	NS	NS	NS	162		1.26	0.758
Sodium	7440-28-0	withdrawn	withdrawn	withdrawn	3	ND		1.26	50.5
Thallium	7440-62-2	78	1100	1100	NS	8.71		1.26	0.631
Vanadium	7440-66-6	23000	110000	110000	930	12.5	J	1.26	0.631
Zinc									2.53

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

General Analytical	18540-29-9	240	20	NS	Conc	Q	RL	MDL
Hexavalent Chromium-mg/Kg	57-12-5	47	680	20	ND		1.00	0.378
Cyanide, Total-mg/Kg	SRP 6	NS	NS	NS	9.29		1.00	0.500
pH/Corrosivity-SU	16065-83-1	120000	NS	NS	5.61		NA	NA
Trivalent (III) Chromium-mg/Kg							1.26	0.631
NJDEP Soil Remediation Standards: Remediation Standards N.J.A.C. 7:26D, May 2012; Amended Sept 2017								
BOLD Conc	Indicates a concentration that exceeds applicable criteria.							
BOLD RL	Indicates RL that exceeds applicable criteria.							
BOLD MDL	Indicates MDL that exceeds applicable criteria.							
NS = No Standard Available								
ND = Analyzed for but Not Detected at the MDL								
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.								

Standards are based upon published regulatory information.
 Users are encouraged to consult appropriate regulatory sources for current values and updates.
 IAL assumes no responsibility for the accuracy of these values.

Particle Size Distribution Report As per ASTM D 422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	5.4	37.4	17.1	20.3	11.8	8.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0	100.0	
1	99.0		
3/4	94.6	55.0 - 90.0	X
1/2	84.0		
3/8	74.4		
#4	57.2	25.0 - 50.0	X
#8	42.9		
#10	40.1		
#16	31.6		
#30	23.4		
#50	16.5	5.0 - 20.0	
#100	11.2		
#200	8.0	3.0 - 10.0	

Material Description
DGA material. well-graded sand with silt and gravel

Atterberg Limits
PL= NP LL= NV PI= NP

Coefficients
D₉₀= 15.6267 D₈₅= 13.1193 D₆₀= 5.4023
D₅₀= 3.3968 D₃₀= 1.0500 D₁₅= 0.2530
D₁₀= 0.1210 C_u= 44.63 C_c= 1.69

Classification
USCS= SW-SM AASHTO= A-1-a

Remarks
Sample was collected by Mr. Vincent Jr. on 03/14/19 and tested on 03/18/19. In-Situ %MC=5.2
F.M.=4.48

* Spec. for DGA material as per Table. 901.10.01-1

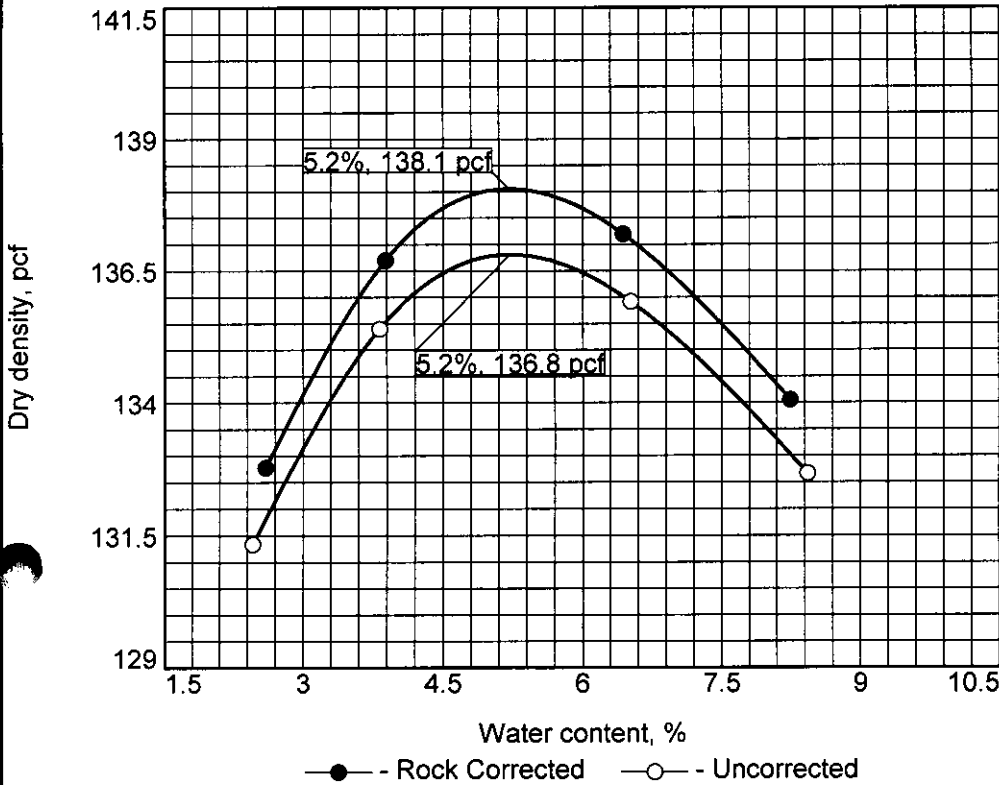
Source of Sample: Off-Site Material
Sample Number: S-1

Date: 03/18/2019

ANS CONSULTANTS, INC. South Plainfield, New Jersey	Client: Entact Project: 70 Carteret Avenue, Jersey City, NJ
	Project No: ANV-3667 Figure 1 F 1

COMPACTION TEST REPORT

Curve No.
S-1



Test Specification:

ASTM D 1557-12 Method C Modified
ASTM D4718-15 Oversize Corr. Applied to

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 56
Mold Size: 0.075 cu. ft.

Test Performed on Material

Passing 3/4 in. Sieve

Soil Data

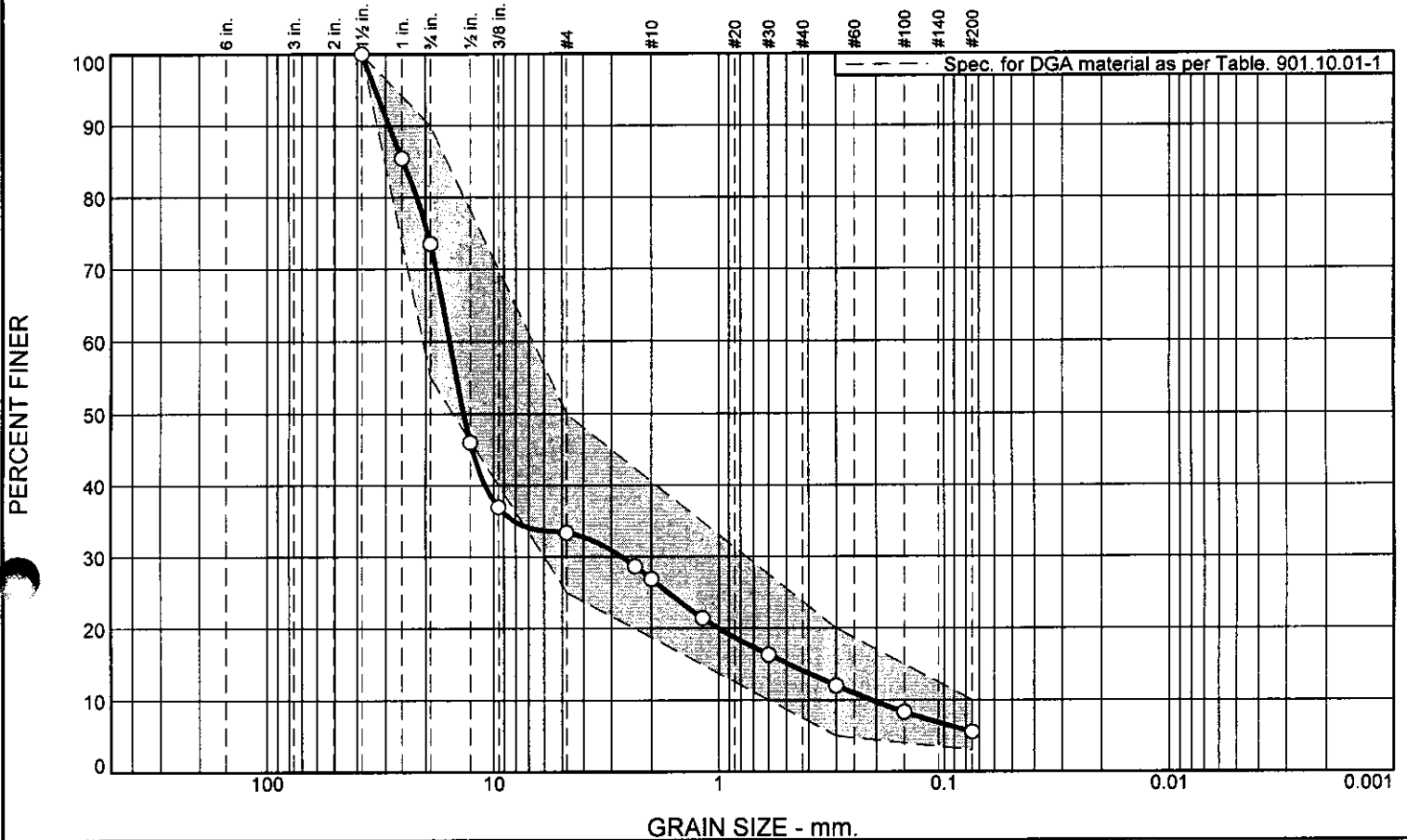
NM _____ Sp.G. _____
LL NV PI _____ NP _____
%>3/4 in. 5.4 %<#200 8.0
USCS SW-SM AASHTO A-1-a

TESTING DATA

	1	2	3	4	5	6
WM + WS	24.03	24.48	24.79	24.72		
WM	13.94	13.94	13.94	13.94		
WW + T #1	800.0	820.0	777.7	914.5		
WD + T #1	780.8	789.8	730.1	843.4		
TARE #1	0.0	0.0	0.0	0.0		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	2.6	3.9	6.4	8.2		
DRY DENSITY	132.8	136.7	137.2	134.1		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 138.1 pcf Optimum moisture = 5.2 %	136.8 pcf 5.2 %	DGA material, well-graded sand with silt and gravel
Project No. ANV-3667 Client: Entact Project: 70 Carteret Avenue, Jersey City, NJ ○ Source of Sample: Off-Site Material Sample Number: S-1 ANS CONSULTANTS, INC. South Plainfield, New Jersey		Remarks: Sample was collected by Mr. Vincent Jr. on 03/14/19 and tested on 03/15/19.

Particle Size Distribution Report As per ASTM D 422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	26.4	40.2	6.5	12.8	8.5	5.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0	100.0	
1	85.4		
3/4	73.6	55.0 - 90.0	
1/2	46.0		
3/8	37.0		
#4	33.4	25.0 - 50.0	
#8	28.7		
#10	26.9		
#16	21.4		
#30	16.3		
#50	12.0	5.0 - 20.0	
#100	8.3		
#200	5.6	3.0 - 10.0	

* Spec. for DGA material as per Table. 901.10.01-1

Material Description
DGA material. well-graded gravel with silt and sand

Atterberg Limits
PL= NP LL= NV PI= NP

Coefficients
 D₉₀= 28.9542 D₈₅= 25.0826 D₆₀= 15.6485
 D₅₀= 13.5899 D₃₀= 2.7078 D₁₅= 0.4891
 D₁₀= 0.2104 C_u= 74.37 C_c= 2.23

Classification
USCS= GW-GM AASHTO= A-1-a

Remarks
Sample was collected by Mr. Clifford on 07/16/19 and tested on 07/18/19. In-Situ %MC=1.2
F.M.=5.69

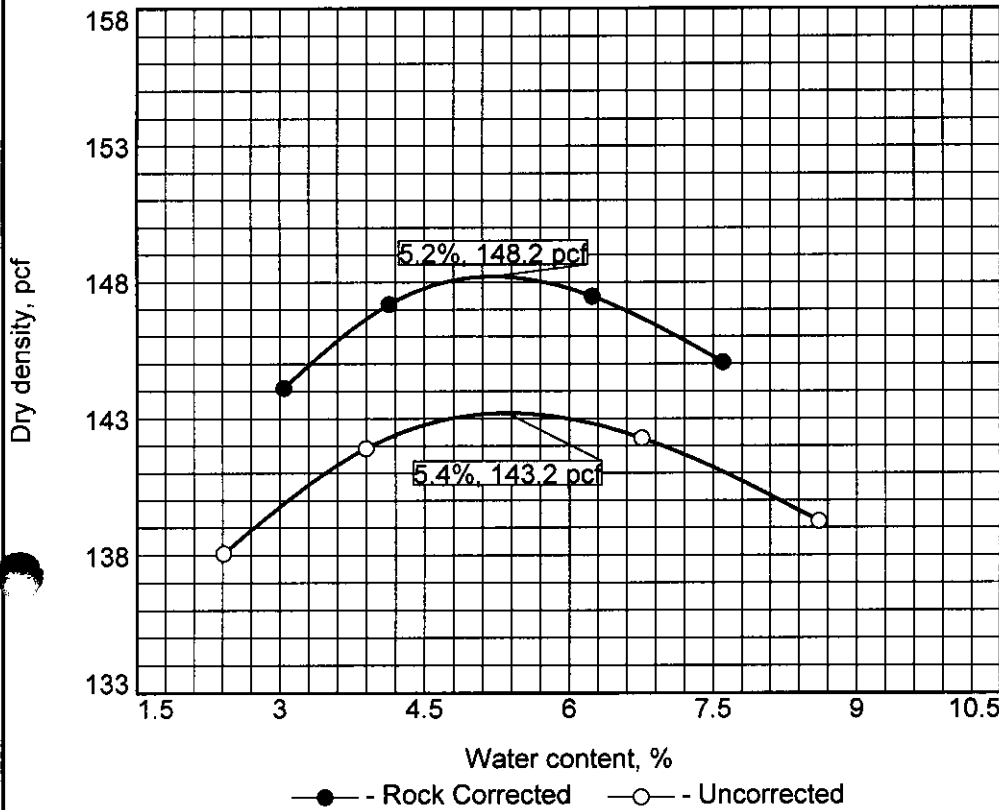
Location: Stock Pile- Tilcon 07/15/16, S-1
Sample Number: S-2

Date: 07/18/2019

ANS CONSULTANTS, INC. South Plainfield, New Jersey	Client: Entact
	Project: 70 Carteret Avenue, Jersey City, NJ
Project No: ANV-3667	Figure 2 F 1

COMPACTION TEST REPORT

Curve No.
S-2



Test Specification:
ASTM D 1557-12 Method C Modified
ASTM D4718-15 Oversize Corr. Applied to

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 56
Mold Size: 0.075 cu. ft.

Test Performed on Material
Passing 3/4 in. **Sieve**

Soil Data

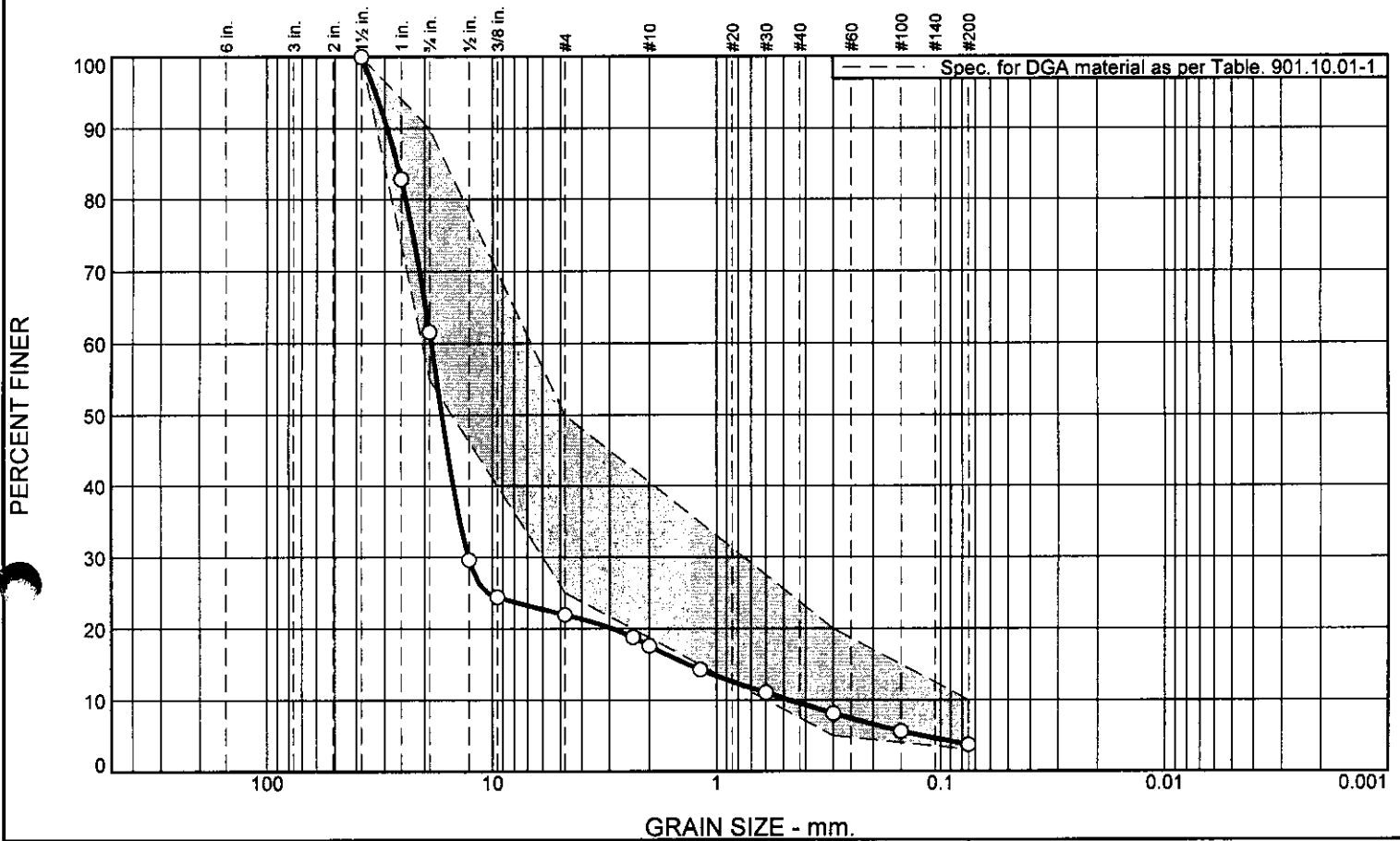
NM _____ **Sp.G.** _____
LL NV **PI** NP
%>3/4 in. 26.4 **%<#200** 5.6
USCS GW-GM **AASHTO** A-1-a

TESTING DATA

	1	2	3	4	5	6
WM + WS	24.54	24.99	25.33	25.28		
WM	13.94	13.94	13.94	13.94		
WW + T #1	912.8	762.5	730.1	1010.8		
WD + T #1	891.3	733.9	683.9	930.7		
TARE #1	0.0	0.0	0.0	0.0		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	3.0	4.1	6.2	7.6		
DRY DENSITY	144.1	147.2	147.5	145.1		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 148.2 pcf	143.2 pcf	DGA material, well-graded gravel with silt and sand
Optimum moisture = 5.2 %	5.4 %	
Project No. ANV-3667 Client: Entact Project: 70 Carteret Avenue, Jersey City, NJ Location: Stock Pile- Tilcon 07/15/16, S-1 Sample Number: S-2		Remarks: Sample was collected by Mr. Clifford on 07/16/19 and tested on 07/17/19
ANS CONSULTANTS, INC.		
South Plainfield, New Jersey		

Particle Size Distribution Report As per ASTM D 422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	38.4	39.7	4.3	8.1	5.8	3.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0	100.0	
1	82.9		
3/4	61.6	55.0 - 90.0	
1/2	29.6		
3/8	24.4		
#4	21.9	25.0 - 50.0	X
#8	18.8		
#10	17.6		
#16	14.2		
#30	11.0		
#50	8.1	5.0 - 20.0	
#100	5.6		
#200	3.7	3.0 - 10.0	

* Spec. for DGA material as per Table. 901.10.01-1

Material Description

DGA material, poorly graded gravel with sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D₉₀= 29.2098 D₈₅= 26.3865 D₆₀= 18.7143
 D₅₀= 16.7513 D₃₀= 12.7980 D₁₅= 1.3481
 D₁₀= 0.4740 C_u= 39.48 C_c= 18.47

Classification

USCS= GP AASHTO= A-1-a

Remarks

Sample was collected by Mr. Clifford on 07/16/9 and tested on 07/18/19. In-Situ %MC=0.5
 F.M.=6.34

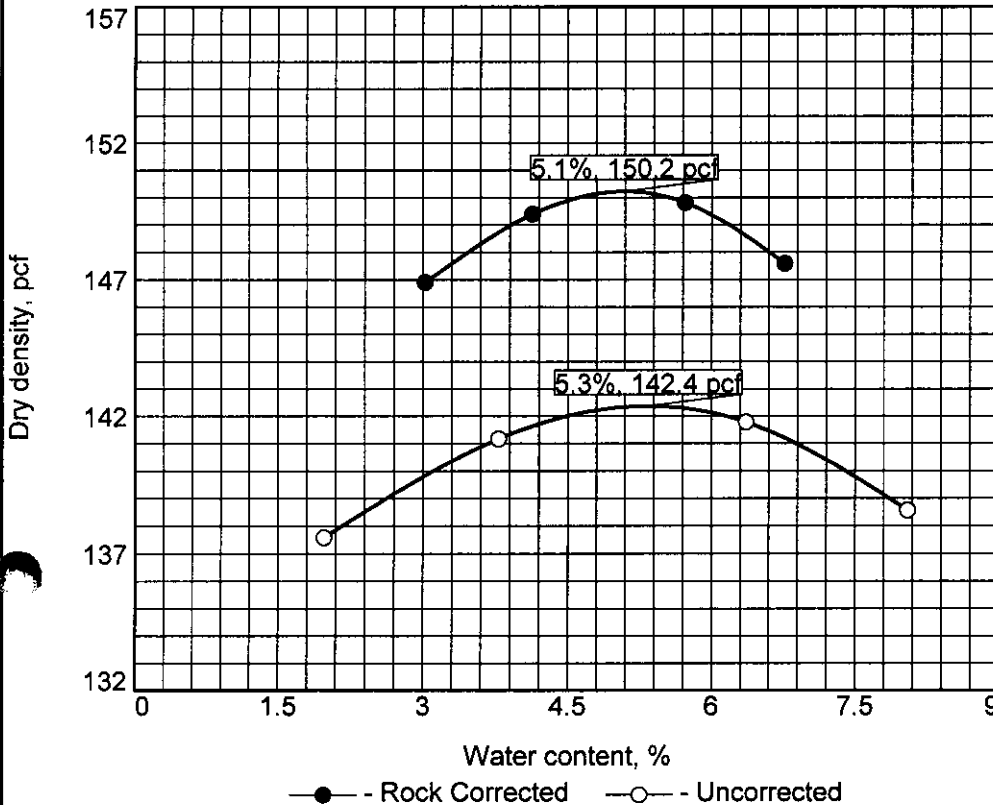
Location: Stock Pile- Tilcon 07/15/16, S-2
 Sample Number: S-3

Date: 07/18/2019

ANS CONSULTANTS, INC. South Plainfield, New Jersey	Client: Entact
	Project: 70 Carteret Avenue, Jersey City, NJ
Project No: ANV-3667	Figure 3 F 1

COMPACTION TEST REPORT

Curve No.
S-3



Test Specification:
ASTM D 1557-12 Method C Modified
ASTM D4718-15 Oversize Corr. Applied to

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 56
Mold Size: 0.075 cu. ft.

Test Performed on Material
Passing 3/4 in. **Sieve**

Soil Data

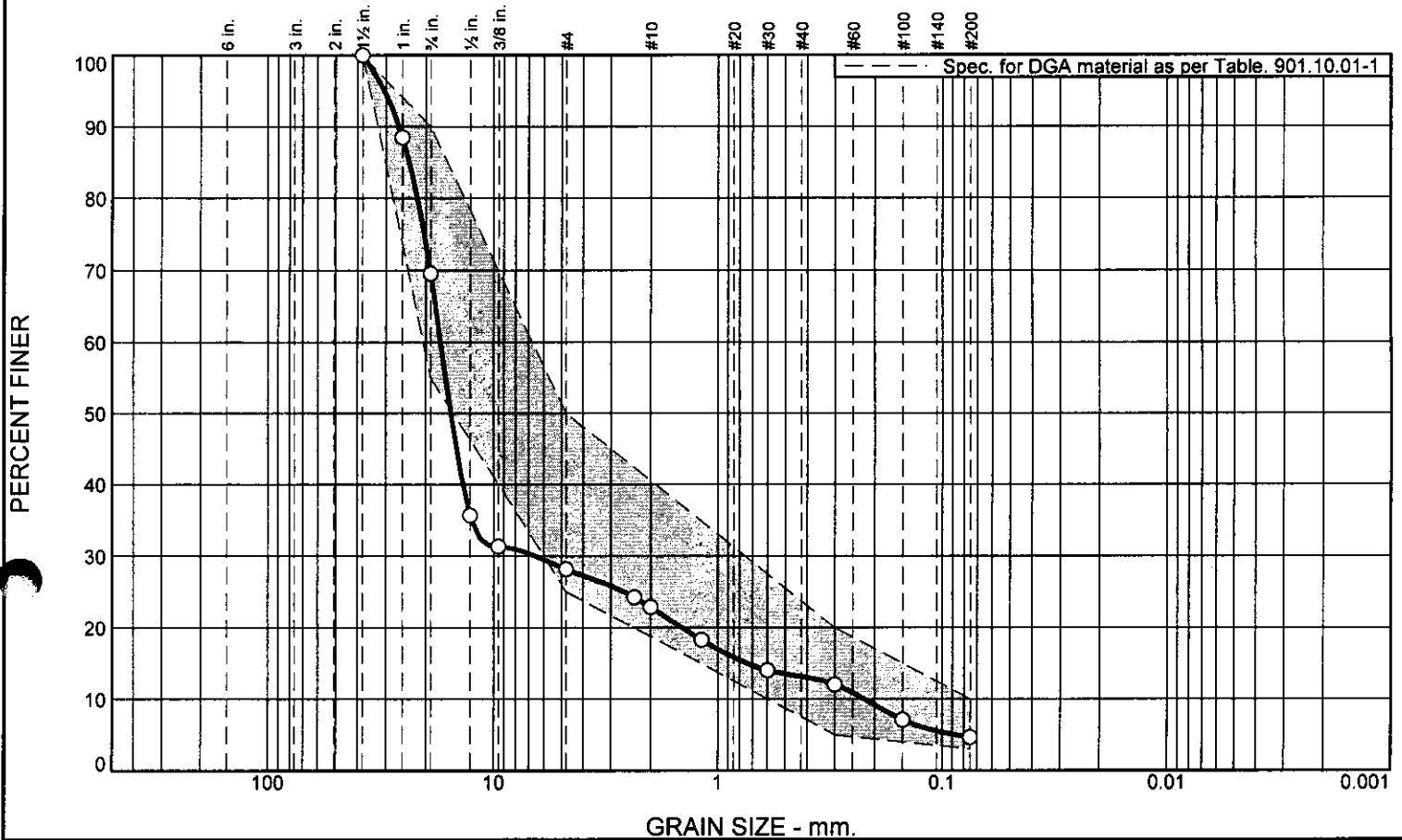
NM _____ **Sp.G.** _____
LL NV **PI** NP
%>3/4 in. 38.4 **%<#200** 3.7
USCS GP **AASHTO** A-1-a

TESTING DATA

	1	2	3	4	5	6
WM + WS	24.46	24.92	25.24	25.16		
WM	13.94	13.94	13.94	13.94		
WW + T #1	907.9	979.4	897.6	856.1		
WD + T #1	890.3	943.7	843.9	792.3		
TARE #1	0.0	0.0	0.0	0.0		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	3.0	4.1	5.7	6.8		
DRY DENSITY	146.9	149.4	149.8	147.6		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 150.2 pcf	142.4 pcf	DGA material, poorly graded gravel with sand
Optimum moisture = 5.1 %	5.3 %	
Project No. ANV-3667 Client: Entact Project: 70 Carteret Avenue, Jersey City, NJ Location: Stock Pile- Tilcon 07/15/16, S-2 Sample Number: S-3		Remarks: Sample was collected by Mr. Clifford on 07/16/19 tested on 07/17/19.
ANS CONSULTANTS, INC.		
South Plainfield, New Jersey		

Particle Size Distribution Report As per ASTM D 422



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	30.4	41.4	5.3	9.8	8.4	4.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0	100.0	
1	88.5		
3/4	69.6	55.0 - 90.0	
1/2	35.7		
3/8	31.3		
#4	28.2	25.0 - 50.0	
#8	24.3		
#10	22.9		
#16	18.3		
#30	14.0		
#50	12.0	5.0 - 20.0	
#100	7.1		
#200	4.7	3.0 - 10.0	

* Spec. for DGA material as per Table. 901.10.01-1

Material Description

DGA material. poorly graded gravel with sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D₉₀= 26.2918 D₈₅= 23.7092 D₆₀= 17.1730
D₅₀= 15.4493 D₃₀= 6.5195 D₁₅= 0.7438
D₁₀= 0.2221 C_u= 77.32 C_c= 11.14

Classification

USCS= GP AASHTO= A-1-a

Remarks

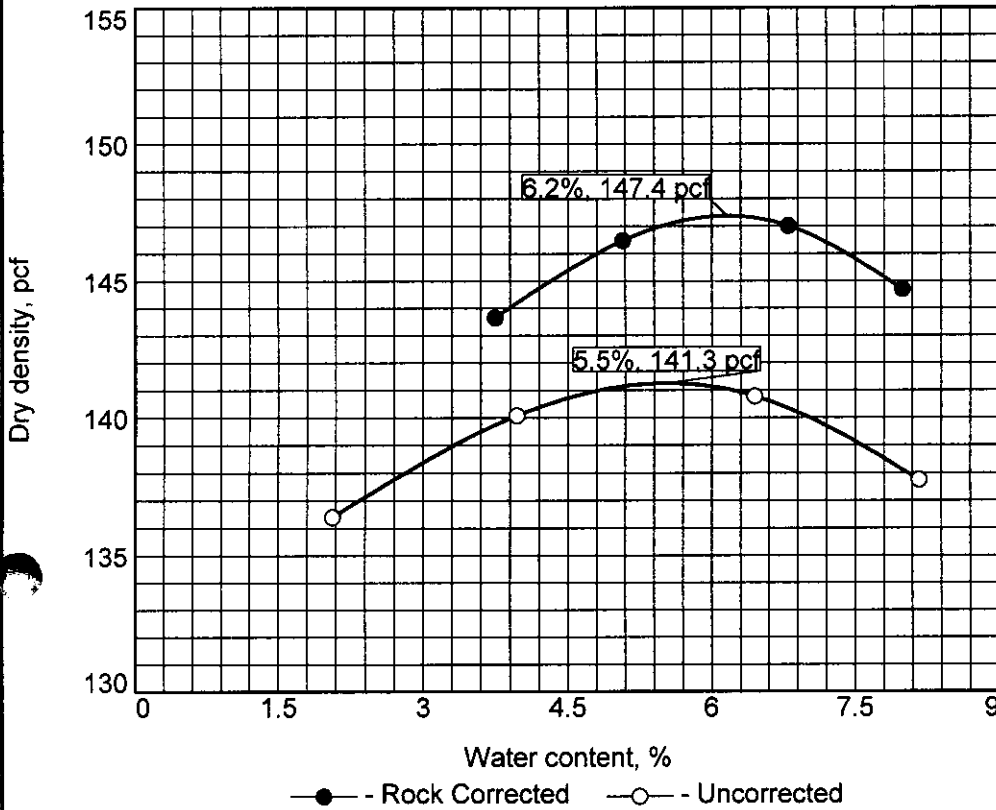
Sample was collected by Mr. Clifford on 07/16/19 and tested on 07/18/19. In-Situ %MC=0.6
F.M.=5.95

Location: Stock Pile- Tilcon 07/15/16, S-3
Sample Number: S-4

Date: 07/18/2019

<p>ANS CONSULTANTS, INC.</p> <p>South Plainfield, New Jersey</p>	<p>Client: Entact</p> <p>Project: 70 Carteret Avenue, Jersey City, NJ</p> <p>Project No: ANV-3667</p>
<p>Figure 4 F 1</p>	

COMPACTION TEST REPORT



Curve No.
S-4

Test Specification:
ASTM D 1557-12 Method C Modified
ASTM D4718-15 Oversize Corr. Applied to

Hammer Wt.: 10 lb.
Hammer Drop: 18 in.
Number of Layers: five
Blows per Layer: 56
Mold Size: 0.075 cu. ft.

Test Performed on Material
Passing 3/4 in. **Sieve**

Soil Data

NM _____ **Sp.G.** _____
LL NV **PI** NP
%>3/4 in. 30.4 **%<#200** 4.7
USCS GP **AASHTO** A-1-a

TESTING DATA

	1	2	3	4	5	6
WM + WS	24.38	24.86	25.18	25.11		
WM	13.94	13.94	13.94	13.94		
WW + T #1	796.9	882.4	819.9	962.7		
WD + T #1	780.8	848.7	770.2	890.0		
TARE #1	0.0	0.0	0.0	0.0		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	3.7	5.1	6.8	8.0		
DRY DENSITY	143.7	146.5	147.0	144.7		

ROCK CORRECTED TEST RESULTS	UNCORRECTED	Material Description
Maximum dry density = 147.4 pcf	141.3 pcf	DGA material, poorly graded gravel with sand
Optimum moisture = 6.2 %	5.5 %	
Project No. ANV-3667 Client: Entact Project: 70 Carteret Avenue, Jersey City, NJ ○ Location: Stock Pile- Tilcon 07/15/16, S-3 Sample Number: S-4		Remarks: Sample was collected by Mr. Clifford on 07/16/19 and tested on 07/17/19.
ANS CONSULTANTS, INC.		
South Plainfield, New Jersey		