

6980 Sierra Center Parkway, Suite 90
Reno, NV 89511

January 24, 2018
File: 1009

Mr. Chris Benna
RILITE AGGREGATES
3025 Mill Street
Reno, NV 89502

RE: Rilite Pit – NV Energy Gas Pipe Sand Bedding

Dear Mr. Benna:

Per your request, we have performed aggregate quality testing on the NV Energy gas pipe sand bedding received by our laboratory from the Rilite Pit on January 22, 2018. Test results are provided on the attached page(s) in comparison with standards outlined in the *NV Energy Engineering & Construction Standard* specifications.

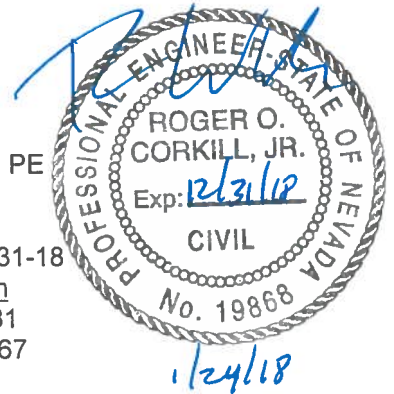
We appreciate this opportunity to provide our laboratory testing services. If you have any questions or require further information, please do not hesitate to contact us.

Sincerely,

CONSTRUCTION MATERIALS ENGINEERS, INC.

Steven L. Vineis
Laboratory Manager
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Roger O. Corkill Jr., PE
Project Manager
RE Number 19868
Expiration Date 12-31-18
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SLV:ROC:jb
Attachments
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NV ENERGY GAS PIPE SAND BEDDING TEST RESULTS SUMMARY - RILITE PIT

Sieve Analysis

U.S. Standard Sieve Size	Percent Passing by Weight	
	ASTM C136/ASTM C117	NV Energy Specification ¹
³ / ₈ Inch	100	100
No. 4	100	90 - 100
No. 8	82	-
No. 16	53	-
No. 30	33	-
No. 50	22	10 - 40
No. 100	14	3 - 20
No. 200	8.7	0 - 15

Test Type	Test Method	Sample Result	NV Energy Specification ¹
Sand Equivalent	ASTM D2419	69	25 Minimum
Plasticity Index	ASTM D4318	Nonplastic	Nonplastic

Moisture Density

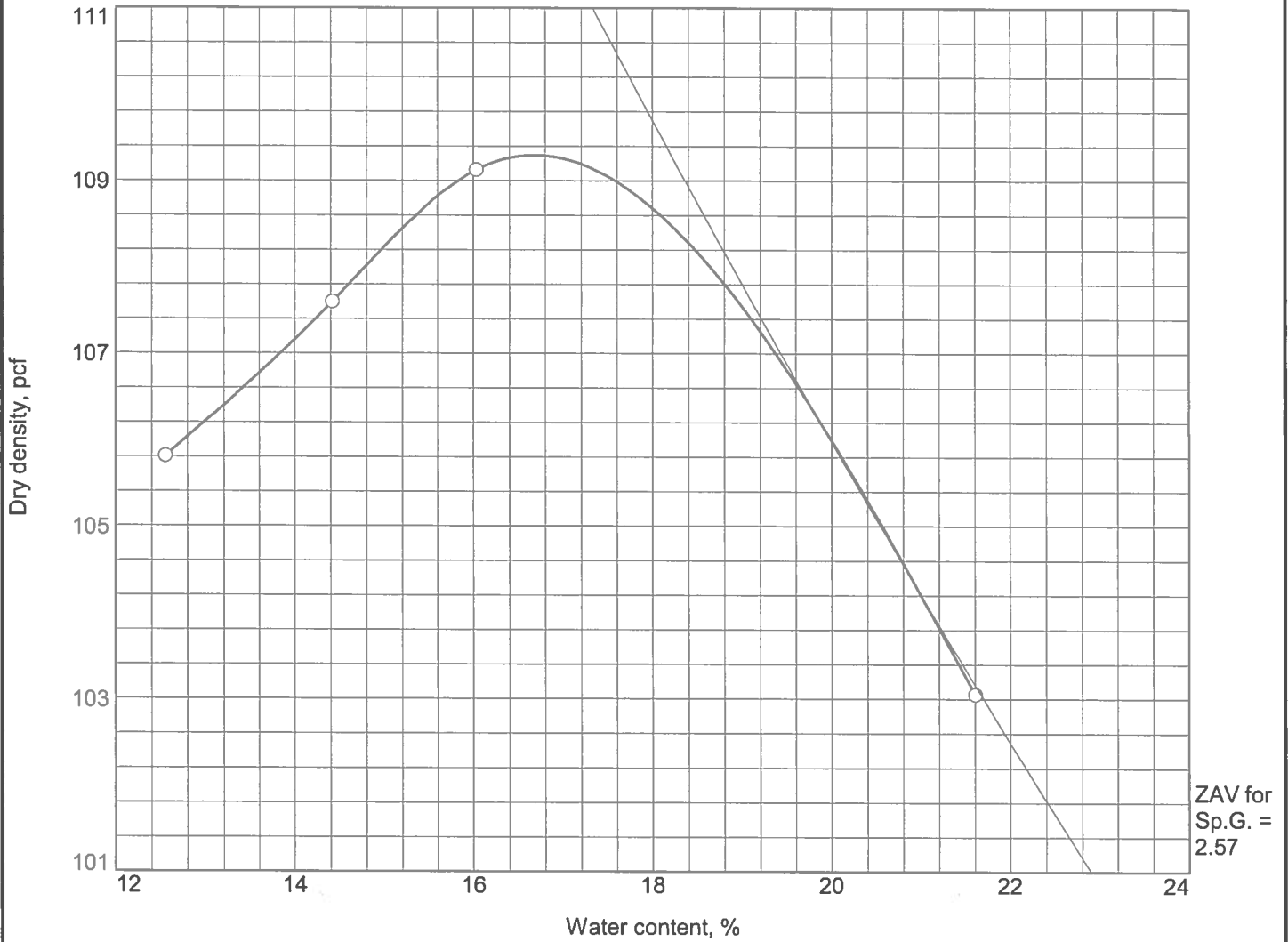
Test Type	Test Method	Sample Result	NV Energy Specification ¹
Maximum Dry Density	ASTM D1557A	109.5	-
Optimum Moisture	ASTM D1557A	16.5%	-

Angularity

Description	Test Method	Sample Result	NV Energy Specification ¹
Angular	ASTM D2488	0.0%	0.0% Maximum
Subangular	ASTM D2488	0.0%	Acceptable
Subrounded	ASTM D2488	0.0%	Acceptable
Rounded	ASTM D2488	0.0%	Acceptable

¹ Specifications per NV Energy Engineering and Construction Standard dated 5/2016.

MOISTURE DENSITY CURVE



Test specification: ASTM D 1557-12 Method A Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
							0.0	8.7

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 109.5 pcf Optimum moisture = 16.5 %	NV ENERGY SAND (GAS)

Project No. 1009 Client: RILITE AGGREGATES Project: RILITE AGGREGATES-QUALITY TESTING Location: PLANT STOCKPILE Sample Number: 31960	Remarks: RECEIVED 1/22/2018
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CONSTRUCTION MATERIALS ENGINEERS, INC.

Figure

Tested By: M. MAGEE

Checked By: S. VINEIS