

Environmental Affairs

RECEIVED
REGION 1

2001 JUN -5 PM 3: 16

May 31, 2001

Mr. Mark Roberts
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

VIACOM

**RE: Additional Backfill Sand Information
Final Radiological Status Survey Report, Building 7 and
Sewer System Report - License No. SMB-1527
Viacom Inc. - Bloomfield Township, New Jersey**

Dear Mr. Roberts:

Based upon discussions with you and previous comments from New Jersey Department of Environmental Protection, Viacom is providing additional information on the backfill sand. Information on the sand was provided in the "Final Radiological Status Survey Report, Building 7 and Sewer System" dated August 2000. The sand was used as bedding material for the new storm water pipe, per standard industry practices, and meets Section 901 of New Jersey Department of Transportation Standards Specifications for Road and Bridge Construction. The following information is presented as additional data related to this issue.

A radiological technician using a portable survey meter equipped with a 2-inch x 2-inch sodium iodine (NaI) detector observed elevated readings from a sand stockpile on the concrete slab of Building 3. Based upon these measurements a sample (BF-1) was collected and analyzed. The material was described as a white sand. The Contractor stopped work in this area to await post-excavation sample results.

The results of the sand stockpile were 14 pCi/g thorium. Upon receipt of these results, Viacom had the Contractor observe the quarry operations and obtain a sample of the material at the source (Quarry Sand-1). The sand was made by crushing No. 57 granite stone followed by washing with river water and is identified by the supplier as "utility sand". The washing process separates sand into different grades. The result of the sand sample from the quarry was 11.9 pCi/g thorium which is consistent with the stockpile sand. A sample of a second stockpile of the white sand was collected (BF-2); the result was 11.5 pCi/g thorium.

The Contractor procured a different sand, commonly referred to as bank sand, from the supplier (bank sand is not granite based). Samples of this yellow sand contained 0.8 pCi/g (BF-3) and 0.9 pCi/g (BF-4) thorium. This sand was used for the remainder of the project.

Results of the samples were submitted in the report referenced above and are also summarized as follows:

Sample Date	Sample	Thorium (pCi/g)	Comments
2/8/00	BF-1	14	White, Stockpile
2/17/00	Quarry Sand 1	11.9	Collected at Quarry
2/21/00	BF-2	11.5	White, Stockpile
2/21/00	BF-3	0.8	Yellow, Bank Sand
2/28/00	BF-4	0.9	Yellow, Bank Sand

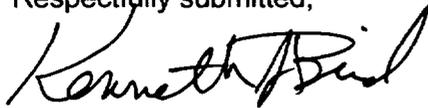
The white sand was used in Alignment 1, Survey Unit A from Station 3+83 to Station 4+96. Six inches of white sand were placed this section of pipe. White sand was also placed around the pipe from Station 4+08 to Station 4+96.

Enclosed are material certifications from Tilcon-NJ, a supplier of the stone and sand for the project. Tilcon-NJ's Riverdale Quarry was the supplier of the white utility sand. The location where the virgin granite was mined is listed on the certification sheet (enclosed). The certification sheet is also provided for the bank sand.

Based upon the sample results, field personnel observations, typical naturally occurring thorium levels in granite, and discussions with quarry personnel, the thorium concentrations in the white utility sand were determined to be naturally occurring. Under our license Viacom is responsible for removing licensed material. The granite sand with its naturally occurring thorium concentrations is not considered to be a licensed material.

If you have any additional questions on this matter please contact me.

Respectfully submitted,



Kenneth J. Bird, CIH
Radiation Safety Officer
Project Engineer/Consultant

Enclosures

pc: Mr. Steven Myers, NJDEP
Township of Bloomfield, Health & Human Services
Mr. Richard Smith- Viacom (w/o enclosures)
Mr. James Moran, Viacom (w/o enclosures)
Mr. Andrew Lombardo, Earth Science Consultants, Inc. (w/o enclosures)
Cummings/Riter Consultants, Inc.

TILCON-NJ Certified Aggregates

Fax 908.647.8222

STONEHOUSE ROAD • P.O. BOX 407 • MILLINGTON, N.J. 07946 • 908-580-3910

Typical GRADATION, NJDOT BANK RUN SAND

Project

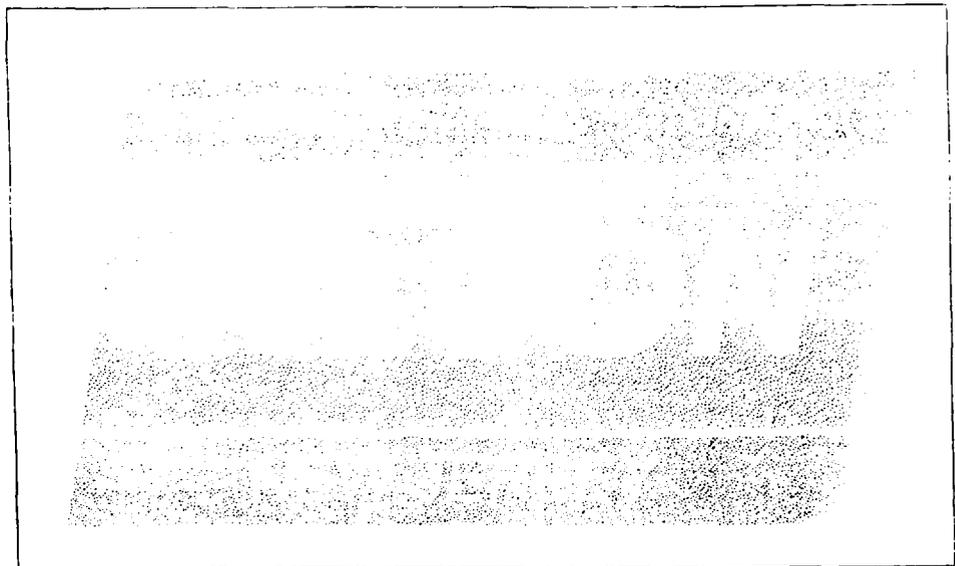
Westinghouse
Bloomfield, NJ

Contractor

Secore

Sp. Gr	2.66
Loose	95.5
Rodded	107

Typical	Prod. Target	
% Pass	Low	High



Tilcon Inc confirms that NJDOT Bank Run Sand available at Certified Aggregates meets the specification for environmental use and conforms to section 901 of the **New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction**. The material is defined as virgin stone mined at Certified Aggregates, Waterloo & Kinney road, Blk. 600 Lot 1, Stanhope, Sussex County NJ. The material is identified on the job with Tilcon delivery tickets.

The unit weights and voids are for process control and should be verified by the contractor before use.

TILCON-NJ

RIVERDALE QUARRY

Fax 973.835.0582

125 HAMBURG TURNPIKE • RIVERDALE, N.J. • 973-835-0028

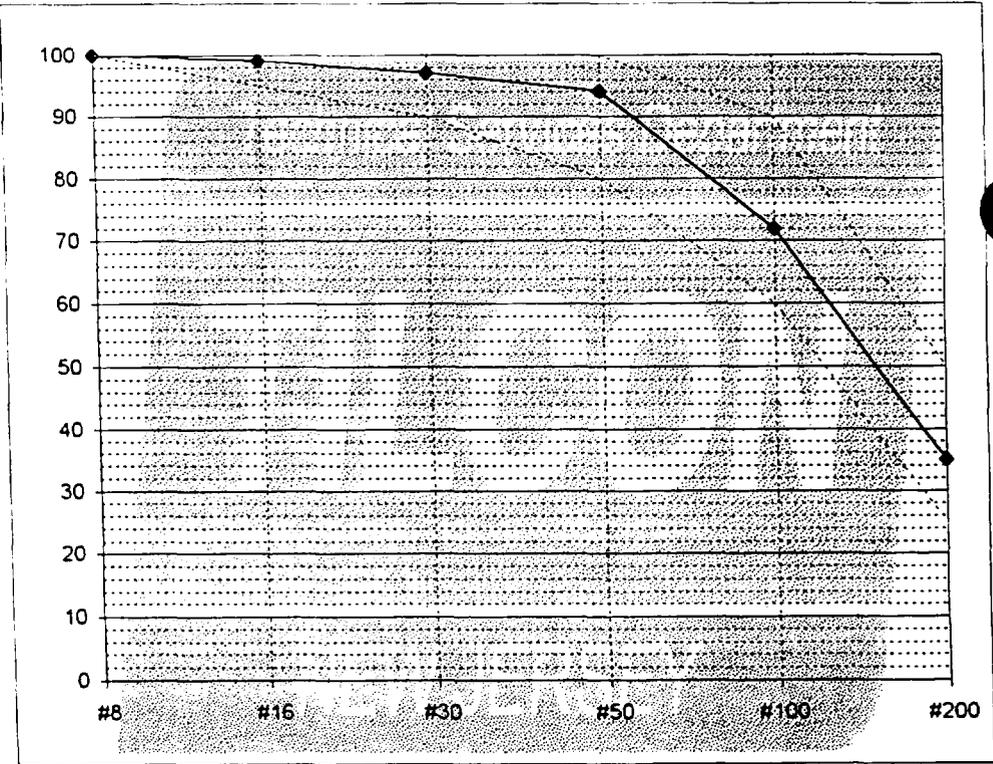
TYPICAL GRADATION UTILITY SAND

Project	
Boomfield, NJ	

Contractor	
Secore	

Sp. Gr	
Loose	53
Rodded	61

	Typical % Pass	Prod. Target	
		Low	High
#8	100	100	100
#16	99	95	100
#30	97	90	100
#50	94	80	100
#100	72	60	90
#200	35	25	50



Tilcon-NJ confirms that the Utility Sand available at Riverdale Quarry meets the specification for environmental use and conforms to the quality requirements of section 901 of *The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction*. It is defined as virgin granite mined at Riverdale Quarry, 125 Hamburg Turnpike, Block 13-Lots 25-29 Borough of Riverdale, Morris County. The Material is identified on the job with Tilcon-NJ delivery tickets.

The unit weights and voids are for process control and should be verified by the contractor before use.