

TO: Mr. Ross Edison, Project Manager
ND Public Service Commission
600 E. Boulevard, State Capitol
Bismarck, ND 58505

DATE: 9/26/22 10-10-22

PROJECT NO: GEO-092205

PROJECT: 2022 Garrison Phase V AML Project
MeLean County, North Dakota

GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	13A	13B	13C
* Date Cast	9-12-22	9-12-22	9-12-22
* Age to be Tested, Days	14	28	56
* Slump (inches)	7	7	7
* Location of Placement	Hole #721		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	589#		
Cement	104#		
Fine Aggregate	2844#		
Water	254#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND27787-1	ND 27787-2	ND 27787-3
* Date Received	9-15-22	9-15-22	9-15-22
* Method of Curing:			
Days on Job & Enroute	3	3	3
Days Lab. Cured-ASTM:C192	11	25	53
* Age at Test, days	14	28	56
* Load at Failure, pounds	3,910	4,090	
* Strength, psi	311	325	

REMARKS: *Information taken from field data sheet prepared by GEOSERV, INC.



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Grout Tests of Cylinders
GEOSERV, INC.

TO: Mr. Ross Edison, Project Manager
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600 E. Boulevard, State Capitol
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DATE: 9/28/22 10-12-22

PROJECT NO: GEO-092205

PROJECT: 2022 Garrison Phase V AML Project
MeLean County, North Dakota

GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	26A	26B	26C
* Date Cast	9-14-22	9-14-22	9-14-22
* Age to be Tested, Days	14	28	56
* Slump (inches)	11	11	11
* Location of Placement	Hole #439		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	607#		
Cement	103#		
Fine Aggregate	2829#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22923-1	ND 22923-2	ND 22923-3
* Date Received	9-17-22	9-17-22	9-17-22
* Method of Curing:			
Days on Job & Enroute	3	3	3
Days Lab. Cured-ASTM:C192	11	25	53
* Age at Test, days	14	28	56
* Load at Failure, pounds	4,880	4,990	
* Strength, psi	389	397	

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600 E. Boulevard, State Capitol
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DATE: 9/30/22 10-14-22

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GROUT TESTS OF CYLINDERS

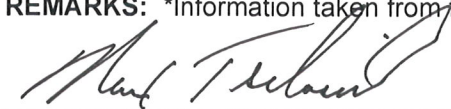
FIELD DATA:

* Job Identification	33A	33B	33C
* Date Cast	9-16-22	9-16-22	9-16-22
* Age to be Tested, Days	14	28	56
* Slump (inches)	10 1/4	10 1/4	10 1/4
* Location of Placement	Hole #417		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	603#		
Cement	100#		
Fine Aggregate	2833#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22930-1	ND 22930-2	ND 22930-3
* Date Received	9-19-22	9-19-22	9-19-22
* Method of Curing:			
Days on Job & Enroute	3	3	3
Days Lab. Cured-ASTM:C192	11	25	53
* Age at Test, days	14	28	56
* Load at Failure, pounds	3,410	3,480	
* Strength, psi	271	277	

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GROUT TESTS OF CYLINDERS


FIELD DATA:

* Job Identification	45A	45B	45C
* Date Cast	9-26-22	9-26-22	9-26-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	8 1/2	8 1/2	8 1/2
* Location of Placement	Hole #897		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	606#		
Cement	101#		
Fine Aggregate	2811#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22942-1	ND 22942-2	ND 22942-3
* Date Received	9-29-22	9-29-22	9-29-22
* Method of Curing:			
Days on Job & Enroute	3	3	3
Days Lab. Cured-ASTM:C192	11	25	25
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	5,440	Discarded	Discarded
* Strength, psi	432		

REMARKS: *Information taken from field data sheet prepared by GEOSERV, INC.



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GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	46A	46B	46C
* Date Cast	9-26-22	9-26-22	9-26-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	10 3/4	10 3/4	10 3/4
* Location of Placement	Hole #897		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	606#		
Cement	101#		
Fine Aggregate	2831#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22943-1	ND 22943-2	ND 22943-3
* Date Received	9-29-22	9-29-22	9-29-22
* Method of Curing:			
Days on Job & Enroute	3	3	3
Days Lab. Cured-ASTM:C192	11	25	25
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	5,200	Discarded	Discarded
* Strength, psi	413		

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GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	47A	47B	47C
* Date Cast	9-27-22	9-27-22	9-27-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	10	10	10
* Location of Placement	Hole #897		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	607#		
Cement	101#		
Fine Aggregate	2806#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22944-1	ND 22944-2	ND 22944-3
* Date Received	9-29-22	9-29-22	9-29-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	26
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	3,260	Discarded	Discarded
* Strength, psi	259		

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GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	48A	48B	48C
* Date Cast	9-27-22	9-27-22	9-27-22
* Age to be Tested, Days	14	28	56
* Slump (inches)	10 3/4	10 3/4	10 3/4
* Location of Placement	Hole #886		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	601#		
Cement	101#		
Fine Aggregate	2800#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22945-1	ND 22945-2	ND 22945-3
* Date Received	9-29-22	9-29-22	9-29-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	54
* Age at Test, days	14	28	56
* Load at Failure, pounds	3,330		
* Strength, psi	265		

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FIELD DATA:

* Job Identification	49A	49B	49C
* Date Cast	9-27-22	9-27-22	9-27-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	10 1/4	10 1/4	10 1/4
* Location of Placement	Hole #886		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	604#		
Cement	103#		
Fine Aggregate	2814#		
Water	305#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22946-1	ND 22946-2	ND 22946-3
* Date Received	9-29-22	9-29-22	9-29-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	26
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	3,660	Discarded	Discarded
* Strength, psi	291		

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FIELD DATA:

* Job Identification	50A	50B	50C
* Date Cast	9-27-22	9-27-22	9-27-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	9 1/2	9 1/2	9 1/2
* Location of Placement	Hole #886		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	607#		
Cement	102#		
Fine Aggregate	2822#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22947-1	ND 22947-2	ND 22947-3
* Date Received	9-29-22	9-29-22	9-29-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	26
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	4,920	Discarded	Discarded
* Strength, psi	391		

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