



050106 Form CSD-46

CHANGE ORDER NO. 1

Project Name Secondary Digester Cover and Gas Mixing Equipment Replacement

B&McD Project No. 46329

Owner City of Rapid City, South Dakota

Client Project No. WRF07-1549A

Contractor Heavy Constructors, Inc.

The below noted modifications to subject Contract are directed by Owner and accepted by Contractor:
 Change Order No. 1 shall include the Work described in Potential Change Order (PCO) No. 01 which is attached herein for reference.

The modification noted above result in **increase of \$999.70** in Contract Price, the current Contract Price being:

Original Contract Price.....	\$	<u>638,400.00</u>
Total net amount of all previous Change Orders..... (+ or -)	\$	<u>0</u>
Total net amount of all previous variable quantity adjustments.. (+ or -)	\$	<u>0</u>
Total net amount of this Change Order	+	<u>999.70</u>
Current Contract Price Including this Change Order.....	\$	<u>639,399.70</u>

The Contract Time shall be unchanged.

The price and/or time extension set forth in this Change Order is full compensation for all costs and delays, direct and indirect, incurred in connection with the conditions giving rise to this Change Order, the work specified herein, and any consequential costs, delays or effects on unchanged work resulting therefrom.

This Change Order, when executed, constitutes a modification to the Contract and all provisions of the Contract, except as modified above and by any previous Change Orders, shall apply hereto.

OWNER
City of Rapid City, South Dakota

CONTRACTOR
Heavy Constructors, Inc.

By _____
 Title _____
 Date _____

By [Signature]
 Title PROJECT MANAGER
 Date 9-10-08

BURNS & McDONNELL ENGINEERING, CO.

By _____
 Title _____
 Date _____

By [Signature]
 Title ASSISTANT
 Date 9/22/08

The conditions of the Change Order are noted for compliance and payment.



**City of Rapid City Water Reclamation Facility
Secondary Digester Cover and Gas Mixing Equipment Replacement Project**

BMcD Project No. 46329

Cost Proposal Request

No. 1

To: Dusty Born, Gustafson Builders

From: Barry Snyder, P.E.
Darin Brickman, P.E.

Date: September 2, 2008

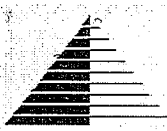
Title: Digester Concrete Repair

Please provide a cost proposal for the following work:

Repair two interior areas of insufficient rebar concrete cover at 40° and 45° (see attached report). Perform repairs using Sika FerroGard 903 coating. Each patch shall be 6 ft. square and centered on the visible surface rust on the wall. Apply product using manufactures recommend application procedures.

The Contract Documents contain the procedure, allowable costs, and supporting documentation required for this Cost Proposal Request.

cc: Sam Wilson, Burns & McDonnell
Klare Schroeder, City of Rapid City
Dave Van Cleave, City of Rapid City
Gale Schipke, City of Rapid City
Project File



Gustafson Builders

P.O. Box 1376

Rapid City, SD 57709

PROPOSED CHANGE ORDER

No. 00001

Phone: (605) 342-3144

Fax: (605) 342-8262

TITLE: Additional Tank Repair Work

DATE: 9/11/2008

PROJECT: Digester Cover

JOB: 4743

TO: Attn: Darin Brickman
Burns & McDonnell Engineering Co.
9785 Maroon Circle, Suite 400
Centennial, CO 80112
Phone: 303 721-9292 Fax: 303 721-0563

CONTRACT NO: 1

RE:

To:

From:

Number:

DESCRIPTION OF PROPOSAL

Title : General Contract

Number : 1

From : RAPID

To : GSTBLDRS

Item	Description	Stock#	Quantity	Units	Unit Price	Tax Rate	Tax Amount	Net Amount
00001	Sika Ferro-guard 903		1.000		\$536.00	6.00%	\$32.16	\$536.00
00002	Labor to apply		8.000	hrs	\$30.00	0.00%	\$0.00	\$240.00
00003	Misc Material & Tooling		1.000		\$46.00	0.00%	\$0.00	\$46.00

Subtotal: \$854.16

Description	Markup Percent	Markup Amount
OH & P	15.000%	\$128.12
Excise tax	2.040%	\$17.42

Total Cost: \$999.70

APPROVAL:

By: _____
Darin Brickman

By: 
Dustin P Born

Date: _____

Date: _____

Sika FerroGard® 903

Penetrating, corrosion inhibiting, impregnation coating for hardened concrete

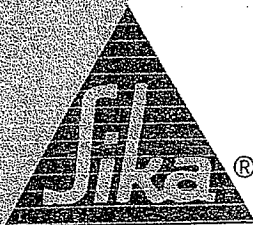
Description	Sika FerroGard 903 is a corrosion inhibiting impregnation coating for hardened concrete surfaces. It is designed to penetrate the surface and then to diffuse in vapor or liquid form to the steel reinforcing bars embedded in the concrete. Sika FerroGard 903 forms a protective layer on the steel surface which inhibits corrosion caused by the presence of chlorides as well as by carbonation of concrete.
How it Works	Sika FerroGard 903 is a combination of amino alcohols, and organic and inorganic inhibitors that protects both the anodic and cathodic parts of the corrosion cell. This dual action effect dramatically delays the initiation of corrosion and greatly reduces the overall corrosion activity. Sika FerroGard 903 protects the embedded steel by depositing a physical barrier in the form of a protective layer on the surface of the steel reinforcement. This barrier inhibits corrosion of the steel.
Where to Use	Sika FerroGard 903 is recommended for all steel-reinforced, prestressed, precast, post tensioned or marine concrete. Use of Sika FerroGard 903: <ul style="list-style-type: none">■ Steel-reinforced concrete, bridges and highways exposed to corrosive environments (deicing salts, weathering)■ Building facades and balconies■ Steel-reinforced concrete in or near a marine environment■ Parking garages■ Piers, piles, and concrete dock structures■ As part of Sika's system approach for buildings and civil engineering structures
Advantages	Sika FerroGard 903 offers owners, specifiers, port authorities, DOTs, and engineers, a new technology in corrosion inhibition that can easily be applied to the surface of existing concrete to extend the service life of any reinforced concrete structure. <ul style="list-style-type: none">■ Protects against the harmful effects of corrosion by penetrating the surface of even the most dense concrete and diffusing to the steel to inhibit corrosion.■ Enhances the durability of reinforced concrete.■ Does not require concrete removal.■ Environmentally sound.■ Does not contain calcium nitrite.■ Easily applied by either spray or roller to all existing reinforced concrete.■ Can be applied to reinforced concrete that already exhibits corrosion.■ Adds additional benefits when used prior to protective coatings in concrete restoration systems.■ Water based for easy handling and application.■ Not a vapor barrier; allows vapor diffusion.■ FerroGard has been proven effective in both laboratory (ASTM G109/Cracked Beams) and field analysis.■ ANSI/NSF Standard 61 potable water approved
Coverage	For normal concrete, application is 200 ft. ² /gal. each coat. A minimum of two coats is recommended. For dense concrete, application may exceed 300 ft. ² /gal. Therefore, more than two coats may be required to achieve the total application rate: 100 ft. ² /gal.
Packaging	5 gallon pails with spout, 55 gallon drums.

Typical Data [at 73°F(23°C)]

Shelf life	18 month minimum in original, unopened container
Storage Conditions	Store at 40°-95°F (4°-35°C). Protect from freezing. If frozen, discard.
Color	Pale Yellow
Viscosity	15 cps
Flash Point	None (water based)
Density	1.13 (9.4 lbs./gal.)
pH	11 (±1)
Application Rate	100 ft. ² /gal. total application rate

How to Use

Surface preparation Before applying Sika FerroGard 903 be sure the surface is clean and sound. Remove all dirt, dust, oil, grease, efflorescence or existing coatings from concrete surface by steam cleaning, waterblasting or slightly sandblasting. Allow concrete surface to dry prior to application of Sika FerroGard 903. The dryer the surface the better the penetration and effectiveness.



Corrosion

Key Criteria	Performance Level	Test Method/Institute
Corrosion inhibition	FerroGard corrosion inhibitors delay the onset of corrosion and reduce the rate of corrosion by 65% versus control specimen after 1 year.	1
Penetration Rate in hardened concrete	FerroGard 903 penetrates independently of orientation (horizontal, vertical, overhead) at a rate of 1/10 to 4/5 inches (2.5 to 20 mm) per day, depending on the density of the concrete.	2
Depth of Penetration	FerroGard 903 penetrates up to 3 inches (76 mm) in 28 days.	2
Protective layer on steel	FerroGard 903 forms a protective layer on the reinforcing steel of high integrity measured at as much as 100 Å in thickness.	3
Displacement of chlorides from steel surface	FerroGard 903 forms a continuous film on the reinforcing steel and displaces chloride ions from the steel surface.	3
Corrosion Rate Field Monitoring	Reduction of corrosion rates in excess of 65%.	4

Test Method/Institute:

1. Cracked Concrete Beam Test (adapted from ASTM G109).
2. Secondary Neutron Mass Spectroscopy (SNMS) / Institute for Radiochemistry, Karlsruhe (Germany), Prof. Dr. J. Goschnick
3. X-ray Photon Spectroscopy (XPS) and Secondary Ion Mass Spectroscopy (SIMS) / Brundle and Associates, San Jose, CA and University Heidelberg (Germany), Prof. M. Grunze.
4. Performance of Corrosion Inhibitors in Practice, Graeme Jones, C-Probe Technologies Ltd., 2000.

Application

Sika FerroGard 903 is applied by roller, brush or spray on concrete surfaces. When spraying, use a conventional airless spray system or hand-pressure equipment. A minimum of two coats is always recommended. Dense substrates may require more coats. Waiting time between coats of Sika FerroGard 903 is at least 1 hour. Allow a minimum of one day to allow Sika FerroGard 903 to dry and penetrate.

When Sika FerroGard 903 is used prior to the application of a repair mortar, concrete overlay, protective coating, Sikafloor system or any other application, care must be taken to remove any residue remaining on the surface from the application of Sika FerroGard 903. Clean the substrate in such a manner (i.e. push the water in one direction away and off from the surface to be overcoated) to completely remove any residue. Horizontal surfaces require pressure washing (2,000 psi minimum) to remove the residue. Vertical surfaces may be rinsed with water or pressure washed. The use of Sika Armatex 110 EpoCem as a bonding agent prior to the application of repair mortars or concrete overlays is suggested. Drying times depend on environmental conditions, absorbency of the substrate and maximum recommended moisture content for the subsequently applied system.

Limitations

- Minimum ambient and substrate temperatures 35°F.
- Do not apply when temperature is expected to fall below 35°F within 12 hours.
- If the applied surfaces will be submerged after the application of Sika FerroGard 903, a waterproofing coating must be applied prior to submersion.
- Substrate should be as dry as possible prior to the application.
- Protect glass, wood, brick, galvanized steel, copper and exposed aluminum during the application.
- Maximum chloride content of concrete structures intended to be treated with Sika FerroGard 903 is 6 lbs./y³ (measured at the level of the reinforcing steel). For levels up to 10 lbs./y³, consult technical service.

Caution

Irritant - Skin and eye irritant. Vapors may cause respiratory tract irritation. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. Remove contaminated clothing.

First Aid

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician immediately. For respiratory problems, remove person to fresh air. Wash clothing before re-use.

Clean Up

In case of spills or leaks, wear suitable protective equipment, contain spill, collect with absorbent material, and transfer to a suitable container. Ventilate area. Avoid contact. Dispose of in accordance with current, applicable local, state, and federal regulations.

KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

Visit our website at www.sikausa.com

1-800-933-SIKA NATIONWIDE

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Corregidora, Queretaro
C.P. 76920 A.P. 136
Phone: 52 42 25 0122
Fax: 52 42 25 0537



Quality Certification Numbers: Lyndhurst: FM 69711 (ISO 9001), FM 170421 (QS 9000), Marlon: FM 69715, Kansas City: FM 69707, Santa Fe Springs: FM 69408

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