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- General Information**
- Contact
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Procurement Folder: 1302451	SO Doc Code: CRFQ
Procurement Type: Central Master Agreement	SO Dept: 0803
Vendor ID: <input type="text" value="000000171013"/>	SO Doc ID: DOT2400000026
Legal Name: MID ATLANTIC SALT LLC	Published Date: 10/13/23
Alias/DBA:	Close Date: 11/1/23
Total Bid: \$0.00	Close Time: 13:30
Response Date: <input type="text" value="10/31/2023"/>	Status: Closed
Response Time: <input type="text" value="16:16"/>	Solicitation Description: <input type="text" value="Roadway Salt - Sodium Chloride 6624C021"/>
Responded By User ID: <input type="text" value="425114234"/>	Total of Header Attachments: 1
First Name: <input type="text" value="Sue"/>	Total of All Attachments: 1
Last Name: <input type="text" value="Stein"/>	
Email: <input type="text" value="sales@mid-atlanticsalt.com"/>	
Phone: <input type="text" value="6103487962"/>	



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder: 1302451
Solicitation Description: Roadway Salt - Sodium Chloride 6624C021
Proc Type: Central Master Agreement

Solicitation Closes	Solicitation Response	Version
2023-11-01 13:30	SR 0803 ESR10302300000002108	1

VENDOR
 000000171013
 MID ATLANTIC SALT LLC

Solicitation Number: CRFQ 0803 DOT2400000026
Total Bid: 0
Response Date: 2023-10-31
Response Time: 16:16:18
Comments:

FOR INFORMATION CONTACT THE BUYER
 John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Roadway Salt - Sodium Chloride - DELIVERY	0.00000	TON	68.000000	0.00

Comm Code	Manufacturer	Specification	Model #
46161506			

Commodity Line Comments: DELIVERY PRICES VARY

Extended Description:

DELIVERY of Roadway Salt - Sodium Chloride for use in snow removal and ice control throughout the state of West Virginia.
 VENDOR NOTE: Bid evaluation will be based on the bid prices submitted on the Pricing Pages Attachment A (ATT A) and Attachment B(ATT B). Vendor's entries of bid prices or other notations made in the wvOASIS commodity lines/descriptions will not be considered for bid evaluation or award.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Roadway Salt - Sodium Chloride - PICK-UP	0.00000	TON	68.000000	0.00

Comm Code	Manufacturer	Specification	Model #
46161506			

Commodity Line Comments: PICKUP

Extended Description:

PICK-UP of Roadway Salt - Sodium Chloride for use in snow removal and ice control throughout the state of West Virginia.
 VENDOR NOTE: Bid evaluation will be based on the bid prices submitted on the Pricing Pages Attachment A (ATT A) and Attachment B(ATT B). Vendor's entries of bid prices or other notations made in the wvOASIS commodity lines/descriptions will not be considered for bid evaluation or award.

NOTICE

Please note that this bid from Mid-Atlantic Salt, LLC for CRFQ 0803 DOT24*26 was received in the Purchasing Division prior to the bid opening date and time, on 11/01/2023. Due to WV Oasis technical difficulties, it could not be opened during the public bid opening. It was in the system and received on time.



Beverly Toler

Support Services Supervisor



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Request for Quote
 Highways

Proc Folder: 1302451			Reason for Modification:
Doc Description: Roadway Salt - Sodium Chloride 6624C021			
Proc Type: Central Master Agreement			
Date Issued	Solicitation Closes	Solicitation No	Version
2023-10-13	2023-11-01 13:30	CRFQ 0803 DOT2400000026	1


BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code: MAS
 Vendor Name: Mid-Atlantic Salt, LLC
 Address: P.O. Box 135
 Street:
 City: Gladwyne
 State: PA Country: USA Zip: 19035
 Principal Contact: Suzanne Stem
 Vendor Contact Phone: 610-348-7962 Extension:

FOR INFORMATION CONTACT THE BUYER
 John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X  FEIN# 30-0322840 DATE 10/30/23

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

REQUEST FOR QUOTATION:
The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways and the West Virginia Parkways Authority to establish an open end, multiple award contract for the delivery of sodium chloride, F.O.B. for use in snow removal and ice control throughout the state of West Virginia. Vendor may also provide options for WVDOH pick-up from its storage sites. Per the bid Requirements, Specifications, Terms and Conditions attached to this solicitation.

INVOICE TO	SHIP TO
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VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER	STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER
No City WV US	No City WV US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Roadway Salt - Sodium Chloride - DELIVERY	0.00000	TON		

Comm Code	Manufacturer	Specification	Model #
46161506			

Extended Description:
DELIVERY of Roadway Salt - Sodium Chloride for use in snow removal and ice control throughout the state of West Virginia.

VENDOR NOTE: Bid evaluation will be based on the bid prices submitted on the Pricing Pages Attachment A (ATT A) and Attachment B(ATT B). Vendor's entries of bid prices or other notations made in the wvOASIS commodity lines/descriptions will not be considered for bid evaluation or award.

INVOICE TO		SHIP TO	
VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City US	WV	No City US	WV

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Roadway Salt - Sodium Chloride - PICK-UP	0.00000	TON		

Comm Code	Manufacturer	Specification	Model #
46161506			

Extended Description:

PICK-UP of Roadway Salt - Sodium Chloride for use in snow removal and ice control throughout the state of West Virginia.

VENDOR NOTE: Bid evaluation will be based on the bid prices submitted on the Pricing Pages Attachment A (ATT A) and Attachment B(ATT B). Vendor's entries of bid prices or other notations made in the wvOASIS commodity lines/descriptions will not be considered for bid evaluation or award.

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Tech Questions due by 10:00am	2023-10-23

	Document Phase	Document Description	Page
DOT240000026	Final	Roadway Salt - Sodium Chloride 6624C021	4

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

**ROADWAY SALT - SODIUM CHLORIDE
WVDOH DELIVERY SITE INFORMATION - EXH 3**

DISTRICT 5

County	Delivery Site Designation	Physical Address	BBI-to Address	Contact Name	Contact Phone	Contact Email	Org. No.	Long	Lat	Delivery Location
										Location Details / Notes
Berkeley	Martinsburg Headquarters - 0571 Storage Bldg	1867 Rock Cliff Drive Martinsburg, WV 25401	1867 Rock Cliff Drive Martinsburg, WV 25401	Paul Bohrer	304-267-0085	paull.bohrer@wv.gov	0571	-77.9667	39.49226	
	Tabler Station - 0502 Storage Bldg	1867 Rock Cliff Drive Martinsburg, WV 25401	1867 Rock Cliff Drive Martinsburg, WV 25401	Joe Castaldo	304-267-0060	joe.a.castaldo@wv.gov	0502	-78.02559	39.40807	
	Berkeley County Headquarters	Behind Park n Ride Exit 8 South Bound 25401	1867 Rock Cliff Drive Martinsburg, WV 25401	Joe Castaldo	304-267-0060	joe.a.castaldo@wv.gov	0502	-77.9667	39.49226	
Grant	Grant County Headquarters	H.C. 59, Box 245 (Route 28) Petersburg, WV 26847	H.C. 59, Box 245 Petersburg, WV 26847	Glenna Lott	304-257-4455	glenna.d.lott@wv.gov	0512	-79.17084	39.004214	
	Mt. Storm Substation	Corner of WV 42 & Route 50 Mt. Storm, WV 26739	H.C. 59, Box 245 Petersburg, WV 26847	Glenna Lott	304-257-4455	glenna.d.lott@wv.gov	0512	-79.24079	39.275529	
	Corridor H @ Knobly Road	US Route 48 (off of Corridor H) Maysville, WV 26833	2104 State Route 55 Moorefield, WV 26836	Tammy Crites	304-434-2228	tammy.lcrites@wv.gov	0583	-79.13427	39.1527	
Hampshire	Hampshire County Headquarters	H. C. 64, Box 232 (Jersey Mtn. Road) Romney, WV 26757	H. C. 64, Box 232 Romney, WV 26847	Autumn Kiser	304-822-4167	autumn.d.kiser@wv.gov	0514	-78.71298	39.34021	
	Capon Bridge Substation	Route 50 Capon Bridge, WV 26711	H. C. 64, Box 232 Romney, WV 26847	Autumn Kiser	304-822-4167	autumn.d.kiser@wv.gov	0514	-78.43888	39.300615	
	Stanesville	Route 29 Stanesville, WV 25444	H. C. 64, Box 232 Romney, WV 26847	Autumn Kiser	304-822-4167	autumn.d.kiser@wv.gov	0514	-78.50462	39.378318	
Hardy	Hardy County Headquarters	2104 State Route 55 Moorefield, WV 26836	2104 State Route 55 Moorefield, WV 26836	Donna Eye	304-434-2525	donna.k.eye@wv.gov	0516	-78.93765	39.067901	
	Baker Substation	County Route 29 Baker, WV 26801	2104 State Route 55 Moorefield, WV 26836	Donna Eye	304-434-2525	donna.k.eye@wv.gov	0516	-78.72676	39.063316	
Jefferson	Jefferson County Headquarters - 0519 Storage Bldg	1301 Lectown Pike Kearneysville, WV 25430	1301 Lectown Pike Kearneysville, WV 25430	Leslie Stout	304-725-5821	leslie.stout@wv.gov	0519	-77.91561	39.336894	
	9340 Expressway Headquarters - 0564 Storage Bldg	1301 Lectown Pike Kearneysville, WV 25430	1301 Lectown Pike Kearneysville, WV 25430	Kevin Dodson	304-725-5821	kevin.m.dodson@wv.gov	0564	-77.91561	39.336894	
Mineral	Mineral County Headquarters	HC 72, Box 72AA (US Route 50) New Creek, WV 26743	H.C. 72, Box 72AA New Creek, WV 26743	Mike Kitzmiller	304-788-1221	michael.a.kitzmiller@wv.gov	0529	-79.04336	39.360905	
	Skyline Substation	Route 42 Elk Garden, WV 26717	H.C. 72, Box 72AA New Creek, WV 26743	Mike Kitzmiller	304-788-1221	michael.g.kitzmiller@wv.gov	0529	-79.13001	39.324313	
	Short Gap Substation	Route 28 Ridgeley, WV 26753	H.C. 72, Box 72AA New Creek, WV 26743	Mike Kitzmiller	304-788-1221	michael.g.kitzmiller@wv.gov	0529	-78.80772	39.537577	
	District 5 Headquarters	US Route 50 Burlington, WV 26710	P.O. Box 99 Burlington, WV 26710	Jim Wolford	304-289-2261	jim.d.wolford@wv.gov	0567	-78.91364	39.338331	
Morgan	Morgan County Headquarters	166 DOH Lane (off of US 322) Berkeley Springs, WV 25411	166 DOH Lane Berkeley Springs, WV 25411	Jeno Munson	304-258-2578	jeno.e.munson@wv.gov	0533	-78.24245	39.603317	
	Largent Substation	Route 9 Great Cacapon, WV 25422	166 DOH Lane Berkeley Springs, WV 25411	Jeno Munson	304-258-2578	jeno.e.munson@wv.gov	0533	-78.38059	39.481842	



Designation: E534 – 18

Roadway Salt - Sodium Chloride 6624C021
EXH 2

Standard Test Methods for Chemical Analysis of Sodium Chloride¹

This standard is issued under the fixed designation E534; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 These test methods cover the chemical analyses usually required for sodium chloride.

1.2 The analytical procedures appear in the following sections:

	Section
Sample Preparation	5 to 9
Moisture	10 to 17
Water Insolubles	18 to 26
Calcium and Magnesium	27 to 34
Sulfate	35 to 42
Reporting of Analyses	43 to 45

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 Review the current safety data sheets (SDS) for detailed information concerning toxicity, first-aid procedures, handling, and safety precautions.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

D1193 Specification for Reagent Water

D6809 Guide for Quality Control and Quality Assurance

¹ These test methods are under the jurisdiction of ASTM Committee D16 on Aromatic, Industrial, Specialty and Related Chemicals and are under the direct responsibility of Subcommittee D16.13 on Chlorine.

Current edition approved Feb. 1, 2018. Published April 2018. Originally approved in 1975. Last previous edition approved in 2013 as E534 – 13. DOI: 10.1520/E0534-18.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

Procedures for Aromatic Hydrocarbons and Related Materials

E180 Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial and Specialty Chemicals (Withdrawn 2009)³

E200 Practice for Preparation, Standardization, and Storage of Standard and Reagent Solutions for Chemical Analysis

3. Significance and Use

3.1 Sodium chloride occurs in nature. It is a necessary article of diet as well as the source for production of many sodium compounds and chlorine. The methods listed in 1.2 provide procedures for analyzing sodium chloride to determine if it is suitable for its intended use.

4. Reagents

4.1 *Purity of Reagents*—Unless otherwise indicated, it is intended that all reagents should conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available.⁴

4.2 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean Type II or III reagent water conforming to Specification D1193.

SAMPLE PREPARATION

5. Scope

5.1 This test method covers preparation of a sample that will be as representative as possible of the entire bulk quantity. The results of any analysis pertain only to the sample used.

6. Apparatus

6.1 *Coarse Grinder.*

6.2 *High-Speed Blender.*

6.3 *Oven.*

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ *Reagent Chemicals, American Chemical Society Specifications*, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analar Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmacopeial Convention, Inc. (USPC), Rockville, MD.

*A Summary of Changes section appears at the end of this standard

16.1.3 *Reproducibility (Multilaboratory)*—The standard deviation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be percent absolute values shown in Table 1. The 95 % limit for the difference between two such averages is the percent absolute values in Table 1.

16.2 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

17. Quality Guidelines

17.1 Laboratories shall have a quality control system in place.

17.1.1 Confirm the performance of the test instrument or test method by analyzing a quality control sample following the guidelines of standard statistical quality control practices.

17.1.2 A quality control sample is a stable material isolated from the production process and representative of the sample being analyzed.

17.1.3 When QA/QC protocols are already established in the testing facility, these protocols are acceptable when they confirm the validity of test results.

17.1.4 When there are no QA/QC protocols established in the testing facility, use the guidelines described in Guide D6809 or similar statistical quality control practices.

WATER INSOLUBLES

18. Scope

18.1 This gravimetric method determines only the amount of insolubles present in sodium chloride which will not dissolve in water.

19. Apparatus

19.1 *Analytical Balance.*

19.2 *Desiccator.*

19.3 *Magnetic Stirrer with Stirring Bar.*

19.4 *Parabella Filter Funnel Assembly, 1000-mL, or its equivalent with 0.3- μ m glass fiber filter disk.*

20. Reagents

20.1 *Silver Nitrate, Standard Solution, 0.1 meq/mL AgNO₃*—Prepare and standardize in accordance with Practice E200.

21. Procedure, Rock and Solar Salts

21.1 Transfer a sample prepared in accordance with 8.1 to 8.6 to a 1-L Erlenmeyer flask, washing out the blender with 100 mL of water. Add 300 mL of water to give a total of 600 mL of water added.

21.2 Stir on a magnetic stirrer for 1 h. Adjust the stirrer speed to give maximum agitation without danger of losing any sample due to splashing. Place a beaker or watch glass over top of the flask while stirring.

21.3 Filter the solution by vacuum through a previously dried (110°C for 1 h) and accurately weighed filter disk using

the Parabella funnel. Transfer all insolubles to the paper and wash free of chlorides with water until the filtrate shows no turbidity when tested with 0.1 meq/mL AgNO₃ solution.

21.4 Dilute filtrate and washings to 1 L with water in volumetric flask.

21.5 Dry the filter disk at 110°C for 1 h.

21.6 Cool in a desiccator and weigh the disk on an analytical balance.

21.7 Save the filtrate for subsequent analyses.

22. Procedure, Evaporated and Purified Evaporated Salts

22.1 Place a well mixed sample in a 2-L beaker. Use 100-g sample for evaporated or 200 g for purified evaporated salt.

22.2 Add 750 mL of water.

22.3 Mix with a mechanical stirrer until solution is complete.

22.4 Filter the solution by vacuum through a previously dried (110°C for 1 h) and accurately weighed filter disk using the Parabella funnel. Transfer all insolubles to the paper and wash free of chlorides with water until the filtrate shows no turbidity when tested with 0.1 meq/mL AgNO₃ solution.

22.5 Dry the filter disk at 110°C for 1 h.

22.6 Cool in a desiccator and weigh on an analytical balance.

22.7 Dilute the filtration and washings to 1 L with water in a volumetric flask and reserve for subsequent analyses.

23. Calculation

23.1 Calculate the percentage of water insolubles as follows:

$$\text{insolubles, \% mass (m/m)} = \frac{A}{B} \times 100 \quad (2)$$

where:

A = increase in mass of filter disk, g, and

B = sample mass, g.

24. Report

24.1 Report the percentage of water insolubles to the nearest percentage shown as follows:

Range, %	Report to, %
0.002 to 0.005	0.001
0.01 to 0.04	0.01
0.15 to 0.35	0.01

25. Precision and Bias⁵

25.1 Ten laboratories analyzed six samples in duplicate on two different days. Practice E180 was followed for the design and analysis of the data; the details are given in ASTM Research Report RR:E15-1052.

25.1.1 *Intermediate Precision, formerly called Repeatability (Single Analyst)*—The coefficient of variation for a single determination has been estimated to be the percent relative values shown in Table 2 at the indicated degrees of freedom. The 95 % limit for the difference between two such runs is percent relative values shown in Table 2.

TABLE 3 Stock Solutions (Calcium and Magnesium)

Stock Solution	Aliquot, mL
Kansas rock salt	10
Northern rock salt	25
Southern rock salt	50
Evaporated salt	50
Purified salt	200
Solar salt	100

mL of standard EDTA solution. One aliquot is used to determine total calcium and magnesium and the other for calcium.

30.2 Dilute to 200 mL with water, if necessary, and place on magnetic stirrer.

30.3 Total Calcium and Magnesium:

30.3.1 Add 5 mL of buffer solution, 1 mL of KCN solution, and a sufficient amount of Eriochrome Black T Indicator Solution or its equivalent.

30.3.2 Titrate with standard EDTA solution to a true blue color.

30.3.3 Record the millilitres used as Titration 1 (T_1).

30.4 Calcium Only:

30.4.1 Add 2 mL of KOH solution, 1 mL of KCN solution to the other aliquot in 30.1 and 30.2, and stir for about 2 min to precipitate magnesium.

30.4.2 Add a sufficient amount of murexide solution or an equivalent calcium indicator solution.

30.4.3 Titrate with standard EDTA solution to a true blue color.

30.4.4 Record the millilitres used as Titration 2 (T_2).

31. Calculation

31.1 Calculate the mass percent of calcium as follows:

$$\text{Ca, \% mass (m/m)} = \frac{(T_2) (\text{factor}) (0.1)}{S} \quad (4)$$

where:

T_2 = EDTA used to titrate calcium only, mL.

S = mass of salt in aliquot, g.

31.1.1 See 29.3 for factor.

31.2 Calculate the mass percent of magnesium as follows:

$$\text{Mg, \% mass (m/m)} = \frac{(T_1 - T_2) (\text{factor}) (0.6064) (0.1)}{S} \quad (5)$$

where:

T_1 = EDTA used to titrate total calcium and magnesium,

S = mass of salt in aliquot, g.

32. Report

32.1 Report the percentage of calcium to the nearest 0.001 %. Report the percentage of magnesium to the nearest 0.001 %.

33. Precision and Bias⁵

33.1 Eight laboratories analyzed five samples in duplicate on two different days. Practice E180 was followed for the design and analysis of the data; the details are given in ASTM Research Report RR:E15-1052.

33.1.1 *Intermediate Precision (formerly called Repeatability (Single Analyst))*—The coefficient of variation for a single determination has been estimated to be 3.56 % relative at 100 df. The 95 % limit for the difference between two such runs is 10 % relative.

33.1.2 *Laboratory Precision (Within-Laboratory, Between-Days Variability)*—The coefficient of variation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be 6.34 % relative at 40 df. The 95 % limit for the difference between two such averages is 18 % relative.

33.1.3 *Reproducibility (Multilaboratory)*—The coefficient of variation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be 9.82 % relative at 7 df. The 95 % limit for the difference between two such averages is 28 % relative.

33.1.4 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

33.2 The following criteria should be used in judging the acceptability of magnesium results:

33.2.1 *Repeatability (Single Analyst)*—The standard deviation for a single determination has been estimated to be percent absolute values shown in Table 4 at the indicated degrees of freedom. The 95 % limit for the difference between two such runs is the percent absolute values shown in Table 4.

33.2.2 *Laboratory Precision (Within-Laboratory, Between-Days Variability)*—The standard deviation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be the percent absolute values shown in Table 4 at the indicated degrees of freedom. The 95 % limit for the difference between two such averages is the percent absolute values shown in Table 4.

33.2.3 *Reproducibility (Multilaboratory)*—The standard deviation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be the percent absolute values shown in Table 4 at the indicated

TABLE 4 Precision for Magnesium Method

Range, %	Repeatability			Laboratory Precision			Reproducibility		
	Standard Deviation, %	Degrees of Freedom	95 % Limit, %	Standard Deviation, %	Degrees of Freedom	95 % Limit, %	Standard Deviation, %	Degrees of Freedom	95 % Limit, %
0.001 to 0.003	0.00071	56	0.002	0.00066	28	0.002	0.00147	8	0.004
0.02 to 0.025	0.0035	52	0.010	0.033	26	0.092	0.0042	8	0.012

42. Quality Guidelines

42.1 Laboratories shall have a quality control system in place.

42.1.1 Confirm the performance of the test instrument or test method by analyzing a quality control sample following the guidelines of standard statistical quality control practices.

42.1.2 A quality control sample is a stable material isolated from the production process and representative of the sample being analyzed.

42.1.3 When QA/QC protocols are already established in the testing facility, these protocols are acceptable when they confirm the validity of test results.

42.1.4 When there are no QA/QC protocols established in the testing facility, use the guidelines described in Guide D6809 or similar statistical quality control practices.

REPORTING OF ANALYSES

43. Scope

43.1 Analyses should be reported on a dry basis. If analyses are on an as received sample, correction should be made by converting to a dry basis. Sodium chloride purity is determined by subtracting the total percentage of impurities from 100. Moisture should be reported as a separate value.

44. Procedure

44.1 Convert sulfate to calcium sulfate and the unused calcium to calcium chloride unless the sulfate in sample exceeds the quantity necessary to combine with the calcium. In this case, convert the calcium to calcium sulfate and the unused

sulfate first to magnesium sulfate, and the remaining sulfate, if any, to sodium sulfate. Convert the unused magnesium to magnesium chloride.

44.2 Report rock and solar salt impurities to the second decimal place and salt purity, by difference, to the first decimal place.

44.3 Report evaporated salt impurities to the third decimal place and salt purity, by difference, to the second decimal place.

44.4 Report purified salt impurities to the fourth decimal place and salt purity, by difference, to the third decimal place.

45. Conversion Factors

BaSO ₄	x	0.4116	=	SO ₄
BaSO ₄	x	0.5832	=	CaSO ₄
BaSO ₄	x	0.6086	=	Na ₂ SO ₄
Ca	x	3.3967	=	CaSO ₄
Ca	x	0.6064	=	Mg
CaSO ₄	x	0.2944	=	Ca
CaSO ₄	x	0.8153	=	CaCl ₂
CaSO ₄	x	0.8842	=	MgSO ₄
CaSO ₄	x	1.0434	=	Na ₂ SO ₄
Mg	x	3.9173	=	MgCl ₂
MgCl ₂	x	1.4296	=	CaSO ₄
MgCl ₂	x	1.2641	=	MgSO ₄
MgSO ₄	x	1.4299	=	CaSO ₄
MgSO ₄	x	1.1311	=	MgCl ₂
MgSO ₄	x	1.1800	=	Na ₂ SO ₄
SO ₄	x	1.4173	=	CaSO ₄

46. Keywords

46.1 calcium; evaporated salt; magnesium; moisture; purified salt; rock salt; sodium chloride; sulfate; water insolubles

SUMMARY OF CHANGES

Committee D16 has identified the location of selected changes to this standard since the last issue (E534-13) that may impact the use of this standard. (Approved February 1, 2018.)

(1) Quality Guidelines were added to Section 17, Section 26, Section 34, and Section 42.

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This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

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Designation: D632 – 12 (Reapproved 2020)^{ε1}

Roadway Salt - Sodium Chloride 6624C021
EXH I

Standard Specification for Sodium Chloride¹

This standard is issued under the fixed designation D632; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

^{ε1} NOTE—10.1 was revised editorially in December 2020.

1. Scope

1.1 This specification covers sodium chloride intended for use as a deicer and for road construction or maintenance purposes.

1.2 The values stated as SI units are to be regarded as the standard.

1.3 For purposes of determining conformance to this specification, values for chemical analysis shall be rounded to the nearest 0.1 %, and values for grading shall be rounded to the nearest 1 %, in accordance with the rounding method in Practice E29.

1.4 The text of this specification references notes and footnotes that provide explanatory material. These notes and footnotes shall not be considered as requirements of the specification.

1.5 The following precautionary caveat pertains only to the test method in Annex A1 of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This specification is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.31 on Calcium and Sodium Chlorides and Other Deicing Materials.

Current edition approved Nov. 1, 2020. Published November 2020. Originally approved in 1941. Last previous edition approved in 2012 as D632 – 12. DOI: 10.1520/D0632-12R20E01.

2. Referenced Documents

2.1 ASTM Standards:²

- C136/C136M Test Method for Sieve Analysis of Fine and Coarse Aggregates
- C670 Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials
- E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves
- E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E287 Specification for Laboratory Glass Graduated Burets
- E288 Specification for Laboratory Glass Volumetric Flasks
- E534 Test Methods for Chemical Analysis of Sodium Chloride

3. Classification

3.1 This specification covers sodium chloride obtained from natural deposits (rock salt) or produced by man (evaporated, solar, other) and recognizes two types and two grades as follows:

3.1.1 *Type I*—Used primarily as a pavement deicer or in aggregate stabilization.

3.1.1.1 *Grade 1*—Standard grading (Note 1).

3.1.1.2 *Grade 2*—Special grading (Note 1).

3.1.2 *Type II*—Used in aggregate stabilization or for purposes other than deicing.

NOTE 1—Grade 1 provides a particle grading for general application, and has been found by latest research to be most effective for ice control and skid resistance under most conditions. Grade 2 is the grading typical of salt produced in the western United States and is available in states of the Rocky Mountains region and west, which may be preferred by purchasers in that area.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

ANNEX
(Mandatory Information)
A1. RAPID METHOD OF ANALYSIS FOR SODIUM CHLORIDE
A1.1 Scope

A1.1.1 This annex covers a rapid method for chemical analysis of sodium chloride.

A1.1.2 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

A1.2 Significance and Use

A1.2.1 The procedure for chemical analysis in this annex determines the total amount of chlorides present in the sample and expresses that value as sodium chloride.

A1.2.2 This rapid method of analysis does not distinguish between sodium chloride and other evaporite chloride compounds with ice-melting capabilities. Typical rock salt and solar salt sometimes contains small amounts of CaCl_2 , MgCl_2 , and KCl , depending on the source of the material. When this rapid method is used on continuing shipments from a known source, it will provide a fast, essentially accurate determination of the sodium chloride content of the material furnished. Thus, the need for testing by the referee method, Test Method E534, is reduced.

A1.3 Apparatus

A1.3.1 *Glassware*—Standard weighing bottles, volumetric flasks (conforming to Specification E288, Class C or better), and burets (conforming to Specification E287, Class B or better).

A1.3.2 *Balance*, having a capacity of at least 20 g, accurate and readable to 0.01 g.

A1.4 Reagents

A1.4.1 *Nitric Acid (HNO_3)*, dilute ($\text{HNO}_3:\text{H}_2\text{O}$, 1:4 by volume).

A1.4.2 *Calcium Carbonate (CaCO_3)*—Reagent grade, low chloride, powder.

A1.4.3 *Silver Nitrate Solution*—0.05 N AgNO_3 .

A1.4.4 *Sodium Chloride (NaCl)*—Reagent grade.

A1.4.5 *Potassium Chromate (K_2CrO_4) Solution*—(50 g $\text{K}_2\text{CrO}_4/\text{L}$).

A1.5 Procedure

A1.5.1 Thoroughly mix the composite sample obtained under 8.1, and reduce by quartering or by means of a sample

splitter to approximately 500 g. Pulverize the reduced sample to pass a 300- μm (No. 50) sieve.

A1.5.2 *Standardization*—Standardize the silver nitrate (AgNO_3) solution daily, using 10 g of reagent grade sodium chloride (NaCl) following the applicable procedure in A1.5.3.

A1.5.3 From the pulverized sodium chloride, obtain a test sample with a mass of 10.00 ± 0.01 g and place in a beaker with 250 mL distilled water. Add 10 mL of the diluted nitric acid solution (HNO_3 , 1 + 4 by volume) and stir for 20 min at room temperature to put the salt in solution. Transfer the solution, including any insoluble material, to a 2-L volumetric flask, dilute to the mark with distilled water, and mix. With a pipet, draw off 25 mL of the solution and place in a white porcelain casserole. Add 0.5 g of calcium carbonate (CaCO_3) to neutralize the excess HNO_3 , and adjust the pH to approximately 7. Add 3 mL of the potassium chromate (K_2CrO_4) solution as an indicator and titrate dropwise with the silver nitrate (AgNO_3) solution until a faint but distinct change in color occurs—a persistent yellowish brown endpoint (see Note A1.1), comparable to standardization. Estimate the titer from the buret to the second decimal place.

NOTE A1.1—The color of the initial solution is lemon-yellow. With addition of the calcium carbonate (CaCO_3) and stirring, the initial solution becomes opaque, with a creamy lemon-yellow color. Addition of the silver nitrate (AgNO_3) solution produces silver chloride, which begins to agglomerate as the titration progresses, and the lemon-yellow color will begin to have whitish, opaque swirls of silver chloride. As the titration proceeds, the red color formed by addition of each drop begins to disappear more slowly. Continue the addition dropwise until a faint but distinct change in color occurs and the yellow-brown to faint reddish-brown color persists. The first stable presence of red silver chromate is the endpoint. If the endpoint is overstepped, a deep reddish-brown color occurs.

A1.6 *Calculate*—Calculate the total chlorides expressed as percent NaCl as follows:

$$P = [(A/B) \times (C/D)] \times 100 \quad (\text{A1.1})$$

where:

A = reagent grade NaCl used, g,

B = 0.05 N AgNO_3 solution required to titrate the reagent grade NaCl , mL,

C = 0.05 N AgNO_3 solution required to titrate the sample being tested, mL,

D = test sampling mass, g, and

P = total chlorides, expressed as sodium chloride, in the sample being tested, %.

A1.6.1 If moisture is apparent in the sample, dry a duplicate 10-g sample of the pulverized salt at 105 °C and correct the mass of the sample accordingly.

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SPECIFICATIONS

- 1. PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways and the West Virginia Parkways Authority to establish an open end, multiple award contract for the delivery of sodium chloride, F.O.B. for use in snow removal and ice control throughout the state of West Virginia. Vendor may also provide options for WVDOH pick-up from its storage sites.

- 2. DEFINITIONS:** The terms listed below shall have the following meanings assigned to them throughout and for the purpose of this Solicitation. Additional definitions can be found in Section 2 of the General Terms and Conditions.
 - 2.1 “ADO” or “Delivery Order”** - a written order entered by WVDOH personnel in the wvOASIS financial system against a master agreement, authorizing quantities of commodities and/or services to be delivered in accordance with all terms, conditions, and prices stipulated in the original contract.

 - 2.2 “ASTM International” and “ASTM”** – the international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services, formerly known as the American Society for Testing and Materials. Reference: www.astm.org

 - 2.3 “Attachment A,” “Pricing Pages,” or “ATT A”** – interchangeable terms referring to the schedule of Pricing Pages attached hereto as Attachment A (“ATT A”) upon which Vendor should list its pricing for the delivery of sodium chloride to designated WVDOH locations or for pick-up from Vendor storage locations.

 - 2.4 “Contract Item” or “Item”** – the list of items available for Vendor to provide pricing as identified in Section 3 of this Solicitation and referenced throughout.

 - 2.5 “Contractor” or “Vendor”** – interchangeable terms referring to any person or entity that submits a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded Contract Items through this contract.

 - 2.6 “Emergency Requests”**- requests for Contract Items to be fulfilled without delay, owing to circumstances for which the WVDOH could not have reasonably expected and has been designated as such by a WVDOH District Engineer or their designee.

 - 2.7 “F.O.B.” or “Free on Board”** – indicates that the price for goods includes delivery at the Vendor’s expense to a specified point, and that the Vendor retains liability for loss or damage until the goods are delivered.

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- 2.8 **“Liquidated Damages”** - monetary compensation due from the Vendor in the event the Vendor’s performance falls short of contractual stipulation or breaches the contract. Delays in the delivery of goods and/or services or quality failures or corrections by the Vendor may result in the Agency assessing charges for such deficiencies per these contract Specifications, the Standard Specs Section 108.7, as amended, and calculated from the table posted in Section 6.3.1 of these Specifications.
- 2.9 **“MSDS” and “Material Safety Data Sheets”** – detailed informational documents provided by manufacturers outlining the physical and chemical properties of a product, potential physical and health hazards, and procedures for safe handling.
- 2.10 **“MP”** - refers to a Materials Procedure per the Materials Control, Soils, and Testing Division of the West Virginia Division of Highways. Reference: <https://transportation.wv.gov/highways/mcst/Pages/WVDOH-Materials-Procedures.aspx>
- 2.11 **“Solicitation”** – the official notice of an opportunity to supply the State with goods or services.
- 2.12 **“Roadway Salt,” “Sodium Chloride,” or “Material”** – solid masses of salt crystals (NaCl) for use in the de-icing of roadways.
- 2.13 **“Standard Specs”** – refers to the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, most recent edition, as modified or amended by all subsequent Supplemental Specifications.
- 2.14 **“WVDOH” or “Agency”**– means the West Virginia Division of Highways.
- 2.15 **“WV Parkways” and “Agency”** – means the West Virginia Parkways Authority.

3. GENERAL REQUIREMENTS:

- 3.1 **Standard Specifications Roads and Bridges:** The following Standard Specs Sections shall apply, as applicable, to the administration of this contract: 101, 102, 103, 104, 105, 106, 107, 108, 109, and 110, as amended.

Material, equipment, and performance of this contract shall conform, but not be limited to, the requirements of Sections 636 and 715, as amended.

A free electronic copy of the Standard Specs may be obtained by sourcing: <https://transportation.wv.gov/highways/TechnicalSupport/specifications/Pages/default.aspx>

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3.2 Contract Items and Mandatory Requirements: Vendor shall provide Agency with the Contract Items specified herein on an open-end and continuing basis, F.O.B. destination or by Agency pick-up from Vendor storage site. Contract Items must meet or exceed the mandatory requirements as shown below.

3.2.1 Sodium Chloride: Vendor provided sodium chloride shall conform to the requirements of ASTM D632 (Reference Exhibit 1 “EXH 1”) and testing requirements of ASTM E534 (Reference Exhibit 2 “EXH 2”). Vendor shall provide its sodium chloride supply source, the supplier’s certification of quality and gradation, and MSDS information with its bid submission. (Reference

3.2.2 Anti-Clumping Material: If an anti-clumping agent may potentially be applied to Vendor provided sodium chloride, Vendor shall provide MSDS information for its anti-clumping agent with its bid submission.

3.2.3 Sampling and Testing: Acceptance shall be based on approval of the suppliers’ certification of quality and gradation. MCS&T may conduct sampling and testing at any time throughout the term of this contract to verify the quality and/or gradation of Vendor provided sodium chloride. Sampling and testing inquiries should be directed to:

WVDOH Materials Control, Soils and Testing Division
190 Dry Branch Road
Charleston, WV 25306
Phone: 304-558-3160

3.2.4 Moisture Content: Delivered material shall be covered in transit and moisture content shall not exceed 2.0% by weight for stockpile delivery. Laboratory testing for moisture shall be administered in accordance with ASTM E534, as amended, at any time during the delivery. Upon visual inspection by the Agency/WVDOH District Manager or designee, any supplied sodium chloride that does not appear to meet ASTM D632 standards will be sampled and tested by the WVDOH. In accordance with ASTM D632, no less than three (3) samples will be randomly taken from the delivered material by Agency personnel, witnessed, and signed off on by the delivery driver. The supplier will be notified of sampling within 48 hours and test results within seven (7) business days of test completion. Upon testing, the supplier shall be responsible for moisture content in excess of 2.0% per delivery and shall deduct the excess weight from the price.

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For example: If a delivery of 75 tons costs \$45.00/ton and the moisture content is found to be 3.5%, the adjusted weight will be calculated as follows:

- $3.5\% - 2.0\% = 1.5\%$ (*percentage in excess of 2.0%*)
- $75 \text{ tons} \times \$45.00 = \$3,375.00$ (*original delivery cost*)
- $\$3,375.00 \times 1.5\% = \50.63 (*1.5% of the original delivery cost*)
- $\$3,375.00 - \$50.63 = \$3,324.37$ (*total adjusted price*)

3.2.5 Unacceptable Material: Upon visual observation and, at the discretion of the WVDOH District Engineer or designee, if sodium chloride provided by Vendor is deemed unsatisfactory or in violation of ASTM D632, the Agency reserves the right to accept and exercise the price adjustment formula outlined in Section 3.2.4 or reject the delivery.

3.2.5.1 Sodium chloride that contains large clumps or foreign material (i.e., dark colored contaminants, charcoal, cinders, or debris) will be rejected immediately.

3.2.5.2 The decision of the WVDOH District Engineer or their designee regarding unacceptable materials shall be final per Standard Specs Section 105.1, as amended. Rejected material shall be removed immediately by the Vendor at no cost to the Agency and arrangements shall be made with the ordering Agency to replace the rejected order amount within five (5) days of its notice of unacceptable material. Vendor shall not charge a restocking fee if returned materials are in resalable condition.

3.2.5.3 If the supplier disputes the WVDOH District Manager or designee's determination, they may file a complaint with the WVDOH Operations Division Director for a review and final decision within seven (7) business days of receiving notification of the unacceptable material.

4. CONTRACT AWARD: This Contract is intended to provide Agencies with a purchase price per ton for roadway salt. A Contract shall be awarded to all qualified Vendors providing the lowest bid per County (delivery) and whose materials meet the required specifications of this Contract. A WVDOH District/County map is provided as Exhibit 4 ("EXH 4")

4.1 Pricing Pages: Vendor shall complete ATT A by providing a bid price per ton for sodium chloride and factor into its bid price any equipment, materials, delivery, and labor to provide the Contract Item. Vendor shall NOT add, delete, or modify spreadsheet column and row headers, descriptions, units of measure, or estimated

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quantities on ATT A. Making any such changes to the format or failure to complete ATT A in its entirety may result in the disqualification of Vendor's bid.

4.1.1 Vendor should type or electronically enter the information into the Pricing Page spreadsheets to prevent errors in the evaluation. In most cases, the Vendor can request an electronic copy of the Pricing Page spreadsheets for bid purposes by sending an email request to: John.W.Estep@wv.gov.

4.1.2 Vendor shall provide a price per ton for the delivery of roadway salt, F.O.B., to any or all District/County delivery sites identified on ATT A. Detailed Agency delivery site information by District is provided as Exhibit 3 ("EXH 3").

4.1.3 Vendor may provide a price per ton and storage location information for Agency pick-up of roadway salt on ATT A. Vendor pricing shall include the loading of Agency vehicles by Vendor in its pricing.

4.1.4 Vendor entries of bid prices or other notations made in wvOASIS Commodity Line Descriptions will not be considered for bid evaluation or award. Submitting Pricing Pages other than those provided with this solicitation shall result in the disqualification of all Contract Items bid.

4.2 Cooperative Contracting: Purchase prices on all Contract Items in this contract, available for the WVDOH and the West Virginia Parkways Authority, shall be adoptable for other public agencies upon their request. Agencies under the authority of the West Virginia Purchasing Division must receive prior approval by the Purchasing Director.

5. ORDERING, DELIVERIES, GUARANTEES, AND REPORTS:

5.1 Ordering: Vendor shall accept orders through regular mail, facsimile, email, or any other written forms of communication. Vendor shall maintain and keep current its phone numbers, fax number, email address, locations, and ordering/billing/ payment addresses with WVDOH and in wvOASIS. Vendor may, but is not required to, accept online orders through a secure internet ordering portal/website. If Vendor can accept online orders, it shall include in its response a brief description of how Agencies may utilize the online ordering system. Vendor shall ensure that its online ordering system is properly secured prior to processing Agency orders online.

5.2 Agency Delivery Orders ("ADO"): District personnel must issue an ADO from wvOASIS for specific quantities of material to be delivered to Agency locations listed on ATT A or for pick-up from Vendor locations listed on ATT A as well as the agreed upon date(s) of delivery and/or pick-up of material. The ADO must be created in wvOASIS and approved to "Final", prior to placing the order with the Vendor. The

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Agency is responsible for creating the ADO in wvOASIS and is required to submit the approved order, in writing, directly to the Vendor via mail, email or fax. **Verbal communication with the Vendor is not considered an official order.** In the event the Vendor denies an order or if there are changes to an ADO, the District must process a change order to the approved ADO issued from wvOASIS.

5.2.1 Emergency Requests: Emergency requests received from an Agency shall be initiated within two (2) business days of receipt by Vendor. The determination of an emergency request will be in accordance with Section 2.6 of this Solicitation and will be prominently noted on the ADO. Once complete, the ADO shall be sent to Vendor via fax, email, or mail.

5.2.1.1 Emergency requests shall be treated as a priority and fulfilled by Vendor without delay. Emergency orders shall be paid at a rate of 105% of the Vendor's awarded price.

5.2.2 Extended Delivery Orders: The WVDOH may submit an ADO to Vendor for multiple, successive deliveries of sodium chloride over a series of dates, as designated on the ADO. The Agency shall prominently note "Extended Delivery Order" on associated ADOs and monitor order fulfillment. Vendor shall communicate in writing any issues or potential disruption in the shipment of an extended delivery order.

5.2.2.1 The ordering Agency guarantees acceptance of the total extended order amount, per the delivery dates designated on the ADO.

5.2.2.2 Upon acceptance of an extended delivery order, Vendor guarantees fulfillment of the order to its completion, per the delivery dates designated on the ADO.

5.3 Deliveries: Vendor shall deliver standard orders within 10 business days and emergency orders within two (2) business days after orders are received/accepted by Vendor, unless otherwise directed by the Agency. If the entire order cannot be delivered as indicated on the ADO, an initial delivery must be made by the date indicated on the ADO and arrangements for successive deliveries of the remaining amount must be made with the ordering Agency.

5.3.1 Vendor shall ship all orders in accordance with Sections 5 and 6 of these contract specifications and shall not hold orders until a minimum quantity is met.

5.3.2 Vendor shall provide a delivery/weight scale ticket with each shipment of material transported to an Agency delivery site. The delivery/weight scale ticket must be signed by the delivery driver and a copy must be provided for the ordering Agency at the time of delivery.

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- 5.3.2.1** Vendor shall provide a pick-up/weight scale ticket for material orders obtained directly from a Vendor's storage site by an Agency. The pick-up ticket must be signed by Vendor storage site personnel and a copy must be provided to the ordering Agency at the time of pick-up.
- 5.4 Purchase Guarantee:** The WVDOH shall guarantee order fulfillment of 60% of the estimated quantity awarded statewide to Vendor. The purchase guarantee shall apply to the statewide total tonnage awarded to Vendor, not individual estimated totals per District, County, or Agency delivery site locations. For example, if a Vendor's statewide estimated quantity comes to 43,000 tons, the purchase guarantee amount shall be calculated as follows:
- 43,000 tons x 60% = 25,800 tons. The WVDOH guarantees a minimum purchase of 25,800 tons to be ordered throughout the term of the contract.
- 5.5 Supply Guarantee:** Vendor shall guarantee the availability of 120% of its estimated statewide awarded quantity for WVDOH delivery and/or pick-up. The supply guarantee shall apply to the statewide total tonnage awarded to Vendor, not individual estimated totals per District, County, or Agency delivery site locations. For example, if a Vendor's statewide estimated quantity comes to 43,000 tons, the source guarantee amount shall be calculated as follows:
- 43,000 tons x 120% = 51,600 tons. Vendor shall guarantee the availability of 51,600 tons for WVDOH pick-up and/or delivery throughout the term of the contract.
- 5.5.1 Orders Beyond 120%:** The Agency reserves the right to place orders that exceed a Vendor's 120% source guarantee. Orders placed in excess of a Vendor's 120% source guarantee shall be paid at a rate of 110% of the Vendor's awarded price. Placement of these orders and commencement of deliveries shall be in accordance with Sections 5 and 6 of these contract specifications.
- 5.6 Vendor Reports:** Vendor shall provide reports to the WVDOH Operations Division upon request. Reports shall be submitted in a spreadsheet format and detail: order date, ADO purchase order (P.O.) number, tons ordered, and tons delivered/picked up for the requested period of time. Order data for delivery orders shall also detail the District/County delivery sites, as listed on ATT A. Order data for pick-up orders shall also identify the vendor storage site that material was obtained from. Failure to supply such reports may be grounds for cancellation of this Contract.

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6. ORDER ACCEPTANCE, PAYMENT, AND FAILED DELIVERY:

6.1 Order Acceptance and Written Verification of Receipt: Upon receipt of a standard or extended delivery ADO, the Vendor shall advise the WVDOH in writing within five (5) calendar days of their acceptance or refusal of the ADO. As verification of receipt, Vendor must provide written acknowledgement of any ADOs and any revisions/modifications thereto sent by WVDOH. Failure to provide the WVDOH with written acknowledgement of any ADOs/revisions within five (5) days of a standard order being sent shall be considered refusal of the ADO. In the event of refusal, the WVDOH, at its own discretion, shall cancel the ADO and may seek to obtain the goods or services from the next low bid Vendor or proceed with an emergency purchase from the open market. The quantity of materials requested on the rejected ADO shall still be applied to the Agency's purchase guarantee amounts with that specific Vendor.

6.2 Payment: Upon completion of an order, as indicated on the ADO, Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, as well as Electronic Funds Transfer as methods to process payment for goods and services. The Vendor shall accept the State of West Virginia's Purchasing Card and Electronic Funds Transfer for payment of orders under this Contract. Electronic Funds Transfer for payment is available through the WV State Auditor's Office. The Vendor may visit the WV State Auditor's website (wvsao.gov) for all necessary forms and instructions. Payment method may be dictated at WVDOH's discretion.

6.3 Failed Delivery and Risk of Loss: The Agency placing an order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party. The Agency placing the Delivery Order under this Contract must be notified in writing by the Vendor within 36 hours of acceptance of the Agency's Delivery Order. Any failure to notify, acknowledge receipt of WVDOH's written Delivery Orders/revisions resulting in delivery delay, or failure to start or complete the project per the WVDOH scheduled due dates may be determined by the WVDOH at its sole discretion as harmful to the Agency and as such, shall result in WVDOH's cancellation of the Delivery Order and application of Liquidated Damages.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3.1 Liquidated Damages: If the vendor's delivery of goods/services or corrections thereto exceeds the Delivery Order completion due date or timeframe, the Vendor shall agree that no extension of contract time will be

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granted unless Liquidated Damages are applied by the WVDOH in the form of an off-set reduction to the total amount of the Vendor's final invoice. The WVDOH shall calculate Liquidated Damages per project beginning on day one (1) after the WVDOH's specified Delivery Order due date and in accordance with this Section, the Contract's Terms and Conditions, Standard Specs Section 108.7, and the following Standard Specs Section Table 108.7.1 - Schedule of Liquidated Damages, as amended:

**Table 108.7.1
Schedule of Liquidated Damages**

Original Contract Amount		Daily Charges Per Calendar Day
For More Than	To and Including	
\$0	\$500,000	\$300
\$500,000	\$2,000,000	\$600
\$2,000,000	\$10,000,000	\$1,500
\$10,000,000	\$25,000,000	\$3,000
\$25,000,000		\$4,000

6.3.2 Force Majeure: It shall be further noted that the Vendor is not responsible for and shall not be penalized for delays in its delivery of goods and/or services when caused by factors or events outside Vendor's control, including but not limited to acts or omissions of the Agency or third parties, acts of civil or military authority, civil disturbance, war, terrorism, pandemics, explosions, fire, floods, tornadoes or other natural disasters, or acts of God.

7. VENDOR DEFAULT:

7.1 The following shall be considered a vendor default under this Contract.

- 7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.
- 7.1.2** Failure to comply with other specifications and requirements contained herein.
- 7.1.3** Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
- 7.1.4** Failure to remedy deficient performance upon request.

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7.2 The following remedies shall be available to Agency upon default.

7.2.1 Immediate cancellation of the Contract.

7.2.2 Immediate cancellation of one or more release orders issued under this Contract.

7.2.3 Any other remedies available in law or equity.

8. MISCELLANEOUS:

8.1 No Substitutions: Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.

8.2 Vendor Supply: Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

8.3 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary Contract Manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract Manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract Manager and his or her contact information below.

Contract Manager: Suzanne Stem
Telephone Number: 610-348-7962
Fax Number: 267-273-0350
Email Address: sstein@mid-atlanticsalt.com

Vendor shall inform the Agency in writing of any changes to the information provided above within ten (10) calendar days of such changes. Failure to comply may be grounds for cancellation of this contract.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

Term Contract

Initial Contract Term: The Initial Contract Term will be for a period of one (1) year from the effective date. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to zero (0) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Alternate Renewal Term – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

Fixed Period Contract: This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

Fixed Period Contract with Renewals: This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

the contract will continue for _____ years;

the contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's Office (Attorney General approval is as to form only).

One-Time Purchase: The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

Construction/Project Oversight: This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

Other: Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

Open End Contract: Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

Service: The scope of the service to be provided will be more clearly defined in the specifications included herewith.

Combined Service and Goods: The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

One-Time Purchase: This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

Construction: This Contract is for construction activity more fully defined in the specifications.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One-Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:

LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

- Commercial General Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.
- Automobile Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.
- Professional/Malpractice/Errors and Omission Insurance in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.
- Commercial Crime and Third Party Fidelity Insurance in an amount of: _____ per occurrence.
- Cyber Liability Insurance in an amount of: _____ per occurrence.
- Builders Risk Insurance in an amount equal to 100% of the amount of the Contract.
- Pollution Insurance in an amount of: _____ per occurrence.
- Aircraft Liability in an amount of: _____ per occurrence.
-
-
-
-

9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. VENUE: All legal actions for damages brought by Vendor against the State shall be brought in the West Virginia Claims Commission. Other causes of action must be brought in the West Virginia court authorized by statute to exercise jurisdiction over it.

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

_____ for _____.

Liquidated Damages Contained in the Specifications.

Liquidated Damages Are Not Included in this Contract.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence regarding all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in www.state.wv.us/admin/purchase/privacy.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR NON-CONFLICT: Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
 1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
 2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES: This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Suzanne Stem

(Address) P.O. Box 135

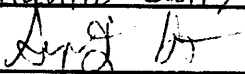
(Phone Number) / (Fax Number) 610-348-7962 / 267-273-0350

(email address) sstem@mid-atlanticsalt.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Mid-Atlantic Salt, LLC
(Company)


(Signature of Authorized Representative)

Suzanne Stem, VP 10/25/23

(Printed Name and Title of Authorized Representative) (Date)

724-287-0770 Fax: 724-287-0540

(Phone Number) (Fax Number)

SALES@mid-atlanticsalt.com

(Email Address)

SAFETY DATA SHEET

This sheet has been compiled in response to customer requests. It is not required by OSHA.

1. Product and Company Identification

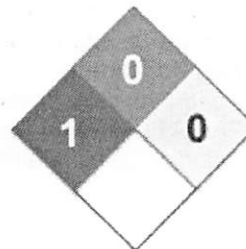
Product Name: Sodium Chloride, Salt



Mid-Atlantic Salt, LLC
P.O. Box 353
Lyndora, PA 16045-0350
Phone: (724) 287-0770
Email: sales@mid-atlanticsalt.com
Website: <https://www.mid-atlanticsalt.com>

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Sodium Chloride	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



2. Hazards Identification

Emergency overview: CAUTION
EYE AND SKIN IRRITANT

Potential short term health effects

Routes of exposure: Eye, skin contact, inhalation, ingestion

Eyes: May cause irritation

Skin: May cause irritation

Inhalation: Dusts of this product may cause irritation of the nose, throat, and respiratory tract.

Ingestion: May cause stomach distress, nausea or vomiting.

Target Organs: Eyes, skin, respiratory system

Chronic Effects: Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms: Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Sodium chloride	7647-14-5	60-100

4. First Aid Measures

First aid procedures

Eye contact: Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Skin contact: Brush away excess of dry material. Flush with water. Obtain medical attention if irritation persists.

Inhalation: If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion: DO NOT induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

Notes to physician: Symptoms may be delayed.

General advice: None available

5. Fire Fighting Measures

Flammable properties: Not flammable by WHMIS/OSHA criteria. May be combustible at high temperatures.

Extinguishing media

Suitable extinguishing media: Treat for surrounding material.

Unsuitable extinguishing media: Not available

Protection of firefighters

Specific hazards arising from the chemical: Not available

Protective equipment for firefighters: Firefighters should wear full protective clothing including self contained breathing apparatus.

6. Accidental Release Measures

Personal precautions: Before attempting clean up, refer to hazard data provided above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Methods for containment: None necessary

Methods for cleaning up: Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Finish cleaning by spreading water to the contaminated surface and dispose of according to local and regional authority requirements.

7. Handling and Storage

Handling: Avoid breathing dusts from this material.

Storage: Keep out of reach of children. Keep containers tightly closed in a cool, well-ventilated place.

8. Exposure Controls / Personal Protection

Exposure limits

OSHA Permissible Exposure Limit (PEL): Not established

ACGIH Threshold Limit Value (TWA): Not established

Engineering controls: TWA PEL: No specific limits have been established for sodium chloride (a soluble substance). As a guideline, OSHA (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 5mg/cu. m. Respirable Dust 8-Hour TWA PEL, 15mg/cu.m. Total Dust 8-Hour TWA PEL.

TWA TLV: No specific limits have been established for sodium chloride (a soluble substance). As a guideline, ACGIH (United States) has established the following limits which are generally

recognized for inert or nuisance dust. Particulates (insolubles) Not Otherwise Classified (PNOC): 10mg/cu.m. Inhalable Particulate 8-Hours TWA TLV, 3mg/cu.m. Respirable Particulate TWA TLV.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If user operations generate dust, fumes, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protective equipment

Eye/face protection: Safety glasses

Hand protection: Rubber gloves

Skin and body protection: As required by employer code

Respiratory protection: Where exposure guideline levels may be exceeded, use an approved NIOSH respirator or NIOSH-approved filtering face piece.

General hygiene considerations: Handle with good industrial hygiene and safety practice. When handling do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance: Crystalline

Color: White

Form: Crystals

Odor: Odorless

Odor threshold: Not available

Physical state: Solid

pH: 6-8 (Neutral)

Melting point: 800.9 °C (1473.8 °F)

Freezing Point: Not available

Boiling point: 1413 °C (2575.4 °F)

Flash point: Not available

Evaporation rate: Not available

Flammability limits in air, lower, % by volume: Not applicable

Flammability limits in air, upper, % by volume: Not applicable

Vapor pressure: 0.1 kPa (1 mmHg) @ 865 °C

Vapor density: Not applicable

Specific gravity: 2.17 (H₂O=1)

Relative density: 2.17 g/cm³

Octanol/water coefficient: Not applicable

Solubility (H₂O): 36 g/100g H₂O @ 20°C

Auto-ignition temperature: Not available

Viscosity: Not available

Percent volatile: 0% w/w

Molecular weight: 58.440 g/mole

Molecular formula: NaCl

10. Chemical Stability & Reactivity Information

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: Do not mix with incompatible materials.

Incompatible Materials: Reactive with oxidizing agents, acids, lithium, bromine trifluoride.

Hazardous decomposition products: May include and are not limited to: Chlorine, sodium oxides.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis – LC50

Ingredient(s)	LC50
Sodium chloride	>21000 mg/m ³ rat
Component analysis – Oral LD50	
Ingredient(s)	LD50
Sodium chloride	3000 mg/kg rat
Effects of acute exposure	
Eye: May cause irritation.	
Skin: May cause irritation.	
Inhalation: Dusts of this product may cause irritation of the nose, throat, and respiratory tract.	
Sensitization: Not classified or listed by IARC, NTP, OSHA and ACGIH.	
Chronic effects: Not classified or listed by IARC, NTP, OSHA and ACGIH.	
Carcinogenicity: Not classified or listed by IARC, NTP, OSHA and ACGIH.	
Mutagenicity: Not classified or listed by IARC, NTP, OSHA and ACGIH.	
Reproductive effects: Not classified or listed by IARC, NTP, OSHA and ACGIH.	
Teratogenicity: Not classified or listed by IARC, NTP, OSHA and ACGIH.	

12. Ecological Information

Ecotoxicity: May be harmful to freshwater aquatic species and to plants that are not saline tolerant.

Environmental effects: Not available

Aquatic toxicity: Not available

Persistence / degradability: Not available

Bioaccumulation / accumulation: Not available

Partition coefficient: Not available

Mobility in environmental media: Not available

Chemical fate information: Not available

13. Disposal Considerations

Waste codes: Not available

Disposal instructions: Waste must be disposed of in accordance with federal, state/provincial and local environmental control regulations.

Waste from residues / unused products: Not available

Contaminated packaging: Not available

14. Transport Information

Department of transportation (DOT): Not regulated as dangerous goods

Transportation of dangerous goods (TDG): Not regulated as dangerous goods

15. Regulatory Information

Canadian federal regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

U.S. federal regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910. 1200.

All components are on the U.S. EPA TSCA inventory list.

CERCLA/SARA Hazardous Substances – Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910. 1200 hazardous chemical: No

CERCLA (superfund) reportable quantity: None
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard: No
Delayed hazard: No
Fire hazard: No
Pressure hazard: No
Reactivity hazard: No

Section 302 extremely hazardous substance: No

Section 311 hazardous chemical: No

Clean Air Act (CAA): Not available

Clean Water Act (CWA): Not available

Safe Drinking Water Act (SDWA): Not available

Drug Enforcement Agency (DEA): Not available

Food and Drug Administration (FDA): Not available

WHMIS status: Not controlled

State regulations: California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Inventory Name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

16. Other Information

Disclaimer: Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date: September 9, 2005

Update date: February 27, 2019

Prepared by: Dell Tech Laboratories Ltd. (519) 858-5021

Updated by: Mid-Atlantic Salt, L.L.C

Safety Data Sheet

Date of Revision: 11/27/2017

Sodium Ferrocyanide

Section 1 - Chemical Product and Company Identification

WEGO CHEMICAL GROUP
239 Great Neck Road - Great Neck, NY 11021 - USA
Tel: +1 (516) 487 3510 - Fax: +1 (516) 487 3794
sales@wegochem.com - wegochem.com

Product/Chemical Name: Sodium Ferrocyanide

Chemical Formula: $\text{Na}_4\text{Fe}(\text{CN})_6 \cdot 10\text{H}_2\text{O}$

CAS Number: 14434-22-1

Other Designations: Sodium Ferrocyanide decahydrate; sodium hexacyanoferrate; YPS

Derivation:

General Use: Manufacture of sodium ferricyanide, blue pigments, blueprint paper, anti-caking agent for salt, ore flotation, pickling metals, polymerization catalyst, photographic fixing agent.

Emergency Telephone: (ChemTel) Contract MIS0000335; 800 255-3924; INTL 813 248-0585

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

MAY CAUSE EYE AND SKIN IRRITATION. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING. MAY BE HARMFUL IF SWALLOWED.

HMIS

H	2
F	0
R	0

PPE†

†Sec. 8

Potential Health Effects

Primary Entry Routes: Inhalation, Ingestion

Target Organs: None listed

HAZARDS IDENTIFICATION

Label elements

None

Hazard symbol

None

Signal word

None

Hazard statement

The mixture does not meet the criteria for classification.

Precautionary statement

Prevention

Observe good industrial hygiene practices.

Response

Wash hands after handling.

Storage

Store away from incompatible materials.

Disposal

Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None

Acute Effects

Inhalation: May cause respiratory tract irritation. May cause anoxia, characterized by weakness, headache, dizziness, confusion, cyanosis, weak and irregular heartbeat, collapse, unconsciousness, convulsions, coma and death.

Eye: May cause mild eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Carcinogenicity: IARC, NTP, and OSHA do not list sodium ferrocyanide as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure:

Chronic Effects: unknown

Sodium Ferrocyanide

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	EINECS/ELINCS	% wt or % vol
Sodium Ferrocyanide	14434-22-1	237-081-9	100

Limit values: No limit values have been established for this product for use in the USA and Canada.

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Sodium Ferrocyanide	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

Section 4 - First Aid Measures

Inhalation: Supply fresh air. If required, provide artificial respiration.

Eye Contact: Rinse opened eye for several minutes under running water. Then consult a doctor if irritation persists.

Skin Contact: Immediately wash with water and soap and rinse thoroughly. Seek medical advice if irritation persists.

Ingestion: If material is swallowed, induce vomiting if patient is conscious. Never give anything by mouth to an unconscious person. Seek medical advice.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Treat symptomatically and supportively.

Section 5 - Fire-Fighting Measures

Flash Point: not applicable

Flash Point Method:

Burning Rate:

Auto-ignition Temperature: not determined

LEL: not determined

UEL: not determined

Flammability Classification: Product is not flammable.

Extinguishing Media: Product is not flammable. Use firefighting measures that suit the surrounding fire.

Unusual Fire or Explosion Hazards: none

Hazardous Combustion Products:

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

NFPA



Section 6 - Accidental Release Measures

Spill /Leak Procedures: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Avoid raising dust. Eliminate flammables. Eliminate all ignition sources. Dispose contaminated material as waste according to official regulations.

Large Spills

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Water, if necessary with cleansing agents.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Keep container tightly sealed.

Storage Requirements: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Sodium Ferrocyanide

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: solid

Appearance and Odor: yellow semi-transparent crystals/odorless

Odor Threshold: not determined

Vapor Pressure: N/A

Vapor Density (Air=1):

Formula Weight: 484.06

Density/Specific Gravity (H₂O=1, at 4 °C): 1.458

pH: N/A

Flash Point: not applicable

Flash Point Method:

Burning Rate: not determined

Auto-ignition Temperature: not determined

Water Solubility: 318.5 g/l @ 20 °C

Other Solubilities: not determined

Boiling Point: N/A

Freezing/Melting Point: N/A

Decomposition Point: 815 °F (435 °C)

Viscosity: not determined

Refractive Index: not determined

Surface Tension: not determined

% Volatile: N/A

Evaporation Rate: N/A

LEL: not determined

UEL: not determined

Section 10 - Stability and Reactivity

Stability: Sodium Ferrocyanide is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Oxidizing agents, ammonia, chromic acid and strong acids.

Conditions to Avoid: incompatibilities. **ACIDS:** Evolution of highly toxic and flammable hydrogen cyanide gas. **OXIDIZERS (STRONG):** Fire and explosion hazard.

Hazardous Decomposition Products: Thermal oxidative decomposition of Sodium Ferrocyanide can produce oxides of nitrogen, carbon monoxide, carbon dioxide and hydrogen cyanide.

Section 11- Toxicological Information

SODIUM FERROCYANIDE:

ADDITIONAL DATA: Because of the strong chemical bond between the cyanide group and the iron, ferrocyanides do not release cyanide under normal conditions. However, certain industrial processes may release hydrogen cyanide which is a chemical asphyxiant.

Toxicity

Oral (rat) LD₅₀: 5100 mg/kg

HEALTH EFFECTS:

INHALATION:

ACUTE EXPOSURE: SODIUM FERROCYANIDE: May cause irritation to the respiratory tract. Ferrocyanides have a low order of toxicity. However, certain industrial processes may release hydrogen cyanide which is a chemical asphyxiant.

CHRONIC EXPOSURE: SODIUM FERROCYANIDE: No data available.

SKIN CONTACT:

ACUTE EXPOSURE:

Sodium Ferrocyanide

SODIUM FERROCYANIDE: May cause irritation.

CHRONIC EXPOSURE:

SODIUM FERROCYANIDE: No specific data available. No dermatitis was reported in workers handling potassium ferrocyanide over a number of years.

EYE CONTACT:

ACUTE EXPOSURE:

SODIUM FERROCYANIDE: Dust may cause irritation.

CHRONIC EXPOSURE:

SODIUM FERROCYANIDE: No data available.

INGESTION:

ACUTE EXPOSURE: SODIUM FERROCYANIDE: The reported probable lethal dose in humans is 0.5-5.0 gm/kg. Ferrocyanide salts are rapidly excreted in urine without metabolic alteration.

CHRONIC EXPOSURE: SODIUM FERROCYANIDE: No data available.

* See NIOSH, *RTECS*, for additional toxicity data.

Section 12 - Ecological Information

Ecotoxicity: data not available.

Environmental Fate: data not available.

Environmental Degradation: data not available.

Soil Absorption/Mobility: data not available.

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements:

Section 14 - Transport Information

Not regulated for transportation

US DOT(49 CFR 172.101):

PSN:

Hazard Class:

UN Number:

Packing Group:

IATA

PSN:

Hazard Class:

UN Number:

Packing Group:

TDG

PSN:

Hazard Class:

UN Number:

Packing Group:

IMDG/IMO

PSN:

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):
Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):
Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: No

CHRONIC: No

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

Sodium Ferrocyanide

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: D2B. Material causing toxic effects (TOXIC): No products were found.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

Section 16 - Other Information

Disclaimer: All information, recommendations and suggestions appearing herein are based upon sources believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity and suitability for its own use of this product. WEGO CHEMICAL GROUP DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE USE BY OTHERS OF THIS PRODUCT.



ROADWAY SALT - SODIUM CHLORIDE
Attachment A Pricing Pages
District 5 - Delivery

Vendor shall complete ATT A by providing a price per ton for the delivery of roadway salt to any or all Counties listed. Vendor shall NOT add, delete, or modify spreadsheet column and row headers, descriptions, units of measure, or estimated quantities. Exhibit A - "WVDOH Delivery Site Information" contains detailed location and contact information for delivery site locations listed below.

Vendor Name: Mid-Atlantic Salt, LLC

DISTRICT 5			
County	Delivery Site Location	Estimated Quantity	Vendor Bid Price (cost per ton)
<i>Berkeley</i>	Martinsburg Headquarters - 0571 Storage Bldg	500	92
	Tabler Station - 0502 Storage Bldg	500	
	Berkeley County Headquarters	500	
<i>Berkeley County Total</i>		1,500	\$138,000.00
<i>Grant</i>	Grant Co. HQ	200	104
	Mt. Storm Substation	1,000	
	Corridor H @ Knobley Road	500	
<i>Grant County Total</i>		1,700	\$176,800.00
<i>Hampshire</i>	Hampshire Co. HQ	500	101.49
	Capon Bridge Substation	400	
	Stanesville	300	
<i>Hampshire County Total</i>		1,200	\$121,788.00
<i>Hardy</i>	Hardy Co. HQ	500	100.5
	Baker Substation	500	
<i>Hardy County Total</i>		1,000	\$100,500.00
<i>Jefferson</i>	Jefferson County Headquarters - 0519 Storage Bldg	500	90
	9/340 Expressway Headquarters - 0564 Storage Bldg	500	
<i>Jefferson County Estimated Total</i>		1,000	\$90,000.00
<i>Mineral</i>	Mineral Co. HQ	500	102
	Skyline Substation	400	
	Short Gap Substation	300	
	District 5 HQ	100	
<i>Mineral County Total</i>		1,300	\$132,600.00
<i>Morgan</i>	Morgan Co. HQ	500	95
	Largent Substation	300	
<i>Morgan County Total</i>		800	\$76,000.00
DISTRICT 5 TOTAL		8,500	\$835,688.00