

**INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) and OTHER STATE AGENCIES (OSAs)**  
**2018/2019 SALT SPECIFICATIONS & SPECIAL PROVISIONS**  
**FOR UNTREATED SODIUM CHLORIDE & SODIUM CHLORIDE TREATED WITH MAGNESIUM CHLORIDE**

These specifications, terms, and conditions apply to salt for INDOT and Other State Agency locations identified within this solicitation. *These specifications will not apply to the Local Governmental Entities included in this solicitation.*

## **1.0 SCOPE OF WORK**

The work to be performed consists of furnishing and delivering sodium chloride to various locations throughout Indiana for use in winter maintenance operations. Sodium Chloride will be in accordance with the 2016 Indiana Department of Transportation Standard Specifications (Sections 913.03) and the Supplemental Specifications at bid due date and time, and all applicable rules and regulations at the federal, state, and local levels.

## **2.0 SPECIFICATIONS**

All material furnished shall be (1) uniform in appearance, free flowing, free of visual evidence of foreign matter including but not limited to dirt, stone, trash, or any other material; (2) chemically treated to prevent caking, and shall be free of foreign matter, lumps, and free water.

### Sodium Chloride

Sodium Chloride shall be rock salt or solar salt conforming to the requirements of AASHTO M 143, Type I Grade I, with a moisture content not exceeding two (2) percent.

### Sodium Chloride treated with Liquid Magnesium Chloride

Sodium Chloride treated with Liquid Magnesium Chloride shall be rock salt or solar salt conforming to the requirements of AASHTO M 143, Type I Grade I, treated with Liquid Magnesium Chloride with a moisture content not exceeding five and three tenths (5.3) percent.

The finished product shall not be less than 91.3% sodium chloride determined as follows: Apparent total % sodium chloride shall be determined in accordance with ASTM-D-632. Magnesium and calcium content shall be determined in accordance with ASTM E-534 and computed as % magnesium chloride and % calcium chloride respectively. % sodium chloride shall then be computed as follows:

$$\% \text{ sodium chloride} = \% \text{ apparent sodium chloride} - (\% \text{ magnesium chloride} + \% \text{ calcium chloride})$$

Sampling shall be in accordance with Indiana Testing Method (ITM) 810. Sampling frequency shall be as set out in the INDOT manual entitled, "Manual for Frequency of Sampling and Testing and Basis for Use of Materials, revised January 2016" The rapid test method referenced in AASHTO M 143, Annex A1 shall be used for both routine acceptance testing and for resolution of disputes concerning chemical composition. Material not complying with these requirements shall be paid for at a reduced price as set out under "Deductions" in the Special Provisions (See Section 8.0).

### **3.0 INSPECTION**

All Sodium Chloride delivered will be visually inspected at time of delivery and samples taken for laboratory analysis of gradation, purity and moisture content in accordance with ITM 810.

### **4.0 REJECTION**

Any material delivered which contains lumps, foreign matter or free water shall be rejected. In the event the material has been loaded or dumped prior to rejection it shall be immediately reloaded or removed by the Contractor within 48 hours of notification of rejection. Failure to remove the material will result in liquidated damages in the amount of \$10.00 per ton for each calendar day the salt remains on INDOT/OSA property.

### **5.0 DELIVERY**

Deliveries shall be made during regular working hours when possible, and will be accepted at other times only when prior arrangements have been approved by the District Highway Maintenance Director, designee, or the District personnel responsible for coordinating salt deliveries (INDOT only). For OSAs, prior arrangements will need to be approved by the OSA contact responsible for coordinating salt deliveries. No payments from INDOT will be made for any load for which a delivery ticket, signed by an Indiana Department of Transportation representative, cannot be produced. Delivery tickets for all deliveries shall indicate gross, tare, and net weights, order number, locations of stockpile from which shipment is made, and point of delivery. Weights will be checked at random for accuracy of the delivery ticket weights. The Indiana Department of Transportation and OSAs reserve the right to require any truck to go to the nearest available certified scales to check weights at no additional cost to the Indiana Department of Transportation or OSA.

#### **A. Routine Deliveries Beyond Early Delivery Final Date**

Contractor shall make delivery in trucks with solid or waterproof tarps to stockpile locations within any Sub-District location for which it has received Award of Contract. Deliveries must be pre-scheduled with district designated personnel a minimum of 1 business day prior to the anticipated delivery date. Scheduling must include anticipated quantities, locations and timeframe for delivery.

Delivery must be 100% completed within nine (9) calendar days after placement of order. For each calendar day that delivery extends beyond this 9-day limit, INDOT and OSAs reserve the right to assess liquidated damages at two percent (2%) per day not to exceed a maximum of 10% of the order and will be deducted from any money due the Contractor, not as a penalty but as liquidated damages. When the Contractor contacts INDOT or the OSAs to confirm delivery (as stated in previous paragraph), should the Ordering Entity no longer need the salt originally ordered, the Contractor will provide the liquidated damages amount in the form of a check to the Ordering Entity. In this instance, the amount shall be calculated beginning on the tenth calendar day and spanning to the date of order cancellation, but not to exceed the maximum amount previously stated. Should there be any discrepancies, the State Vendor Manager shall evaluate the situation and provide guidance.

Orders shall be placed by telephone or email during regular working hours to the office specified by the Contractor. The Contractor should provide a single telephone number and a single email address for all orders made for each purchase order. The Contractor shall provide order confirmation via e-mail or fax, so that each INDOT District and OSA can provide verification for each telephone or email order.

## B. Early Delivery Period

The Contractor shall furnish and deliver the Early Storage Requirements at the locations listed on the attached sheets (Bid List.xls, "Early Storage Requirements" spreadsheet) at all salt storage buildings or outside storage areas as follows:

- La Porte and Fort Wayne INDOT Districts: 50% of order delivered on or before October 15, 2018 and 100% delivered on or before November 15, 2018.
- Crawfordsville, Greenfield, Seymour, and Vincennes INDOT Districts: 50% of order delivered on or before November 1, 2018 and 100% delivered on or before December 1, 2018.

For each calendar day that early storage requirements for each bidding unit are not complete after the time specified, INDOT reserves the right to assess liquidated damages at two percent (2%) per day not to exceed a maximum of 10% of the order and will be deducted from any money due the Contractor, not as a penalty but as liquidated damages. INDOT is committed to purchasing 100% of the Early Fill amounts listed by INDOT district (as listed in the INDOT Early Fill Requirement spreadsheet), not sub-district.

## 6.0 BASIS OF PAYMENT

The Indiana Department of Transportation and OSAs shall pay the negotiated Contract per-ton-price for the type of salt (as specified in Bid List.xls), furnished and delivered to the various locations as designated. There shall be no other charges. Pricing submitted by respondents will be the price for purchases from 0% to the maximum of the commitment range of 120%. *Any additional tons needed beyond the maximum commitment range (120%) will be by mutual agreement of the parties, including the price thereof.*

The quantities shown by INDOT sub-district are estimates only and may be adjusted at the option of the Indiana Department of Transportation. INDOT commits to purchase at least 80% of the total tonnage listed by district; each OSA commits to purchase 80% of each entity's requested tonnage. The quantities in the Bid List.xls are 100%.

- 80-120% Commitment Range - All INDOT Districts (Crawfordsville, Fort Wayne, Greenfield, LaPorte, Seymour, and Vincennes)
  - "Delivered" is price of salt per ton delivered to the INDOT or OSA location
  - "Delivered + Loaded" is price of salt per ton to deliver to the INDOT or OSA location and load the salt via a conveyor (see section 9.0 for loading requirements)
  - "Pick-Up" is the price of the salt per ton

## 7.0 INVOICING

The Indiana Department of Transportation and OSAs require the Contractor to invoice the Indiana Department of Transportation or OSA for each Subdistrict location (or OSA facility) where business has been transacted. Invoices shall itemize the daily activity for that Subdistrict/location.

In accordance with Section 5.0, DELIVERY and Section 8.0, DEDUCTIONS of the Specifications & Special Provisions, the Indiana Department of Transportation and OSAs will notify the Contractor(s) in writing no more than twice a month for each Unit or Subdistrict location (or OSA facility) when liquidated damages for late deliveries or

deductions for non-compliance with specifications are being assessed. The Contractor(s) shall submit a credit memorandum to INDOT (or OSA) for the assessed liquidated damages or deductions within fifteen (15) calendar days from the date of written notification from INDOT or OSA.

Payment will be made following necessary testing and evaluation as described in the contract terms. INDOT and OSAs shall complete necessary testing and evaluation within ten (10) calendar days after receipt; if the department fails to test and evaluate within this timeframe, payment shall at such time be authorized.

**8.0 DEDUCTIONS**

After testing sodium chloride, deductions will be made for non-compliance with specifications on the following basis:

**A. CHEMICAL COMPOSITION**

Sodium Chloride

Results of the purity test shall be rounded up to the nearest whole percentage point. (.5 rounded up). A deduction of \$1.00 (one dollar) per ton will be made for each percentage point from 94 percent through 90 percent and \$2.00 (two dollars) per ton for each percentage point from 89 percent through 85 percent. Material with purity less than 84.5 percent will be paid for as snow and ice abrasives at a rate of \$4.00 (four dollars) per ton.

Sodium Chloride treated with Liquid Magnesium Chloride

Results of the purity test shall be rounded up to the nearest whole percentage point. (.5 rounded up). A deduction of \$1.00 (one dollar) per ton will be made for each percentage point from 91 percent through 87 percent and \$2.00 (two dollars) per ton for each percentage point from 86 percent through 82 percent. Material with purity less than 81.5 percent will be paid for as snow and ice abrasives at a rate of \$4.00 (four dollars) per ton.

Deduction	Sodium Chloride	Sodium Chloride treated with Liquid Magnesium Chloride
\$1.00 per Ton	94 – 90 %	91 – 87 %
\$2.00 per Ton	89 – 85 %	86 – 82 %
Paid at \$4.00 per Ton	Less than 84.5 %	Less than 81.5 %

**B. MOISTURE**

### Sodium Chloride

If the moisture content exceeds two (2) percent, the weight to be paid for will be the gross weight of the Sodium Chloride minus twice the weight of the excess moisture computed as follows:

$$\text{Weight to be paid for} = G \times (104 - 2(m)) / 100$$

G=Gross weight of material (wet).

M=Percent of moisture to the nearest 0.5 percent based on oven dry weight.

### Sodium Chloride treated with Liquid Magnesium Chloride

If the moisture content exceeds five and three tenths (5.3) percent, the weight to be paid for will be the gross weight of the Sodium Chloride minus twice the weight of the excess moisture computed as follows:

$$\text{Weight to be paid for} = G \times (104 - 2(m)) / 100$$

G=Gross weight of material (wet).

M=Percent of moisture to the nearest 0.5 percent based on oven dry weight.

## **C. GRADATION**

Sieve Sizes	Percent Passing
½ inch (12.5mm)	100
3/8 inch (9.5 mm)	95 - 100
No. 4 (4.75 mm)	20 - 95
No. 8 (2.36 mm)	10 - 65
No. 30 (0.60 mm)	0 - 20

When test results for the Sodium Chloride furnished exceed the gradation requirements above, adjustment points will be assessed as follows:

### **ADJUSTMENT POINTS FOR GRADATION**

#### **Sieve Size**

Adjustment Points	½ inch	3/8 inch	No. 4	No. 8	No.30
	12.5 mm	9.5 mm	4.75 mm	2.36 mm	0.60 mm

<b>For each 1.0% up to 3.0%</b>					
<b>Out of Tolerance</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>2.0</b>
<b>For each 1.0% &gt; 3.0%</b>					
<b>Out of Tolerance</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>3.0</b>

Gradation adjustment points for the quantity represented shall be the sum of points calculated for up to 3% out of tolerance and the points calculated for greater than 3% out of tolerance.

The minimum required number of tests will be as set out in “INDOT Manual for Frequency of Sampling and Testing and Basis for Use of Material,” revised January 2016. Samples will be taken by or under the supervision of a representative of the department. All materials being used are subject to inspection, test, or rejection at any time.

Where the Indiana Department of Transportation or OSA determines that a sample does not meet specifications in chemical composition, moisture and gradation, the following shall be the method of determining the final price per ton:

- 1) First, tons eligible for payment shall be calculated as noted in **Section B. Moisture**.
- 2) Second, a deduction, as specified above, will be made for gradation failure.
- 3) Finally, the deduction will be determined for chemical composition, unless the chemical composition falls below 84.5 percent at which time the entire amount will be paid for as snow and ice abrasives as noted in **Section A. Chemical Composition**.

## 9.0 REQUIREMENTS FOR DELIVERY

The following special provisions apply to all Indiana Department of Transportation salt storage sites and OSA facilities, except where noted on the Special Provision pages.

- Venders will provide weekly documentation due every Monday once deliveries have started. Documentation must be provided via email to the ordering district representative and to the State Winter Operations Manager. OSA locations are not included in this INDOT report.

Documentation must include the following by district:

1. Order totals (tons) filled the previous week
2. Order totals (tons) outstanding to date
3. Order totals (tons) that are delinquent beyond 9 calendar days
4. Depot locations with on ground totals of INDOT stockpiles.

- Vendors will be required to attend bi-weekly teleconferences with district representatives when scheduled by INDOT. Vendors should be prepared to brief INDOT logistics and operations staff on current status on above items and any additionally inquires that INDOT may have.
- A. Delivered and Loaded; shall mean placement of salt in the departments designated storage buildings, with equipment and labor furnished by the Contractor or the Contractor's appointed hauler. Loading shall be directly from the truck to the storage building, by way of loading equipment, and salt shall **not** be placed on the ground outside a building prior to loading in the building.
  - B. Loading equipment shall be provided by the Contractor or the Contractor's appointed hauler, which shall be capable of fully loading INDOT's storage buildings. The Contractor may review specific sites in order to determine equipment required. A pre-planned time for such visits is required. Loading equipment should include conveyors or other equipment as **approved** by INDOT (or OSA). The Contractor shall use commercially reasonable best efforts to make additional conveyors (more than one) available to INDOT Districts that have larger amounts of salt needing conveyed.
  - C. Failure to load salt in the INDOT (or OSA) salt storage building will result in a deduction, as liquidated damages, from the price bid for salt delivered and loaded. The amount shall be \$1.00 per ton plus the price differential charged for the loaded price.
  - D. Delivered No Deduction; shall mean salt that is delivered but not loaded in the Department's designated storage buildings. **This delivery method must be pre-approved by the INDOT District Highway Management Director (or OSA contact) and marked on the delivery ticket as such.** Deliveries without prior authorization and the salt not loaded in the building will result in liquidated damages as listed above.
  - E. Delivery tickets must be marked by the Department as:
 

**"Delivered and Loaded"** to indicate full payment for delivery and loaded as bid. (Salt properly placed in the building.)

**"Delivered"** to indicate material delivered but not loaded resulting in the deduction for liquidated damages above. (This represents dumped without authorization.)

**"Delivered - No Deductions"** to indicate that the Department or OSA required a delivery outside a storage building. (This represents dumped with permission.)

The Contractor is required to provide delivery ticket in the format that contains the above terms to facilitate faster actions.
  - F. The Contractor will be responsible for any damage to the salt shed resulting from improper piling of salt. Further, the Contractor may be required to move any material improperly stacked.
  - G. Conveyor loading only is acceptable at all Districts. Slinger loading is not acceptable. The Indiana Department of Transportation and OSA's reserve the right to reject Contractor loading if the price or quantity being delivered is unacceptable.

## **10.0 DEFINITIONS AND TERMS**

For the purposes of this contract, calendar day and business day shall be defined as:

Calendar Day – Every day shown on the calendar.

Business Day – A calendar day, exclusive of Saturdays, Sundays, and State recognized legal holidays.

## **REFERENCED**

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS 2016

(With Supplemental Specifications in affect at time of letting)

<http://www.in.gov/dot/div/contracts/standards/book/index.html>

## **SECTION 913 – MISCELLANEOUS**

(913.03 Sodium Chloride. Sodium chloride shall be in accordance with AASHTO M 143). Rock salt shall be used for de-icing purposes. Either rock salt or evaporated salt may be used for stabilization.

MANUAL FOR FREQUENCY OF SAMPLING AND TESTING AND BASIS FOR USE OF MATERIAL, REVISED, JANUARY 2016.

<http://www.in.gov/indot/files/FreqOfSamplingAndTesting.pdf>

### **Indiana Test Method or Procedure**

ITM 810-15T Deicing Material, Dated June 6, 2015

[http://www.in.gov/indot/div/mt/itm/pubs/810\\_testing.pdf](http://www.in.gov/indot/div/mt/itm/pubs/810_testing.pdf)

## **11.0 FAILURE TO MEET OBLIGATIONS**

If the Contractor is unable to meet its agreement obligations as set out in this invitation, the Indiana Department of Transportation and Other State Agencies, at the State's option may purchase materials from any other available source on the open market, cancel the agreement or applicable portions thereof, and/or may award the portions so cancelled to another supplier.

In the event the State is required to purchase the materials from another source as a result of the Contractor not being able to meet their commitment, any additional expenses in excess of the agreement price will be deducted from any money due the Contractor.