

ROADS and GROUNDS

BRINE TANK T-06

Reg. # 031-00000134



Spill Prevention Response Plan

Roads and Grounds Brine Tank (T-06)
Tank Registration Number 031-00000134

Site Activities

Bulk salt brine is transported to this site from the West Virginia University, Roads and Grounds Facility. Salt brine is loaded into this aboveground storage tank for use during the winter as a pre-treatment or deicing process on sidewalks, steps, parking lots or steep slopes on roads. As salt brine is needed, it is removed from the tank by a gravity feed valve on the lower side of the tank. The salt brine is placed into small portable tanks in the back of pickup trucks or Utility Terrain Vehicles.

Applicable Hazards and Process Information

The Roads and Grounds Brine Tank stores a 30% by weight mixture of salt brine. This is a solution of water and salt. The following is the information regarding salt (sodium chloride) and water.

Sodium Chloride (salt) CAS # 7647-14-5

Water CAS # 7732-18-5

The Roads and Grounds tank stores a maximum volume of 2,500 gallons of brine.

There are no wastes stored in the aboveground storage tank at this site.

(Material) Safety Data Sheets

(Material) Safety Data Sheets for each material are attached to this plan. **Attachment A** is the (M)SDS for Salt. **Attachment B** is the (M)SDS for Water. **Attachment C** is the (M)SDS for salt Brine Solution. According to the (M)SDS provided for salt the health rating is one (1). According to the (M)SDS for water, the health rating is (0). According to the (M)SDS for Salt Brine Solution, the health rating is (1).

Site Map of Aboveground Storage Tank Facility

Attachment D indicates all pertinent information regarding the aboveground storage tank location.

Preventative Maintenance Program

This tank does not have a leak detection system. However, the employees that work at the tank conduct a visual inspection prior to adding or removing salt brine to or from the tank. All employees are required to visually inspect the secondary containment area for any liquids. Also, the operator must inspect the valves, gaskets and flange for deterioration and/or leaking before removing brine from the tank.

Tank Inspection

The tank will be inspected on a quarterly basis utilizing the inspection checklist found in **Attachment E**. Further, all tanks will be inspected, using the checklist found in **Attachment F**, on an annual basis with respect to the minimum standards set forth in Appendix B of 47 CSR 62.

AST System Stress Points

One stress point for this tank can be found at the pipe, flange and gasket leaving the tank at the lower side. One additional stress point for this tank is the bottom of the tank where it rests. The final stress point for this tank is the center section of the tank when the tank is full. This section of the tank is a weak point when the tank is at full capacity.

Employee Training Program

Tank operators are trained with respect to proper operation of the tank, as well as, the equipment associated with the filling and dispensing of brine from the tank. Also, operators are trained with respect to visual cues for the early detection of leaks around valves, flanges, gaskets or hoses from the tank. Also, the operator is instructed when and who to contact if there are any concerns regarding the integrity of the tank, or its secondary containment system.

Corrosion Protection and Monitoring

This tank is a plastic polymer tank and does not require corrosion protection.

Security System

Tank valves are placed in the closed position after dispensing operations are complete. The tank valve handle is removed and stowed in a secure location to prevent unauthorized discharge or dispensing when the tank is not in use.

Spill Prevention Measures

During the filling process tank volumes can be visually gauged since the tanks are opaque and the volume of liquid inside the tank can be seen. Overfill prevention is prevented by visual inspection during the filling process. Overfill prevention during the dispensing process is also prevented by visual inspection. All tanks utilized on pickup trucks or Utility Terrain Vehicles are opaque plastic polymer construction, and are open hatch top loaded. This allows for the visual inspection during the dispensing of brine into the smaller day use tanks. Finally, all hoses are placed into a 55 gallon drum to prevent any spills into the environment. All liquid that is collected in the 55 gallon drum is pumped back into the brine tank.

Emergency Response Information

John Hando, Emergency Response Coordinator, Environmental Health and Safety

Brian Lemme, Environmental Health and Safety Specialist, Stormwater Specialist

Chain of Command

Byron Smith, Director, Grounds and Labor

Richard Hott, Operations Manager, Landscape Construction

Robert Frame, Manager II, Landscape Maintenance

Robert Sine, Operations Manager, Grounds Maintenance

Brian Lemme, Environmental Health and Safety Specialist, Environmental Health and Safety

John Hando, Emergency Response Coordinator, Environmental Health and Safety

Attachment G is a list of all employees who handle or potentially handle or transfer salt brine for winter deicing operations.

Contact Information

Brian Lemme
975 Rawley Lane
Morgantown, WV 26506
Office (304) 293-8742
Cell (304) 692-4005

John Hando
975 Rawley Lane
Morgantown, WV 26506
Office (304) 293-5799
Cell (304) 680-2165

Response Contractors

Miller Environmental
7 Pixler Hill Road
Morgantown, WV 26508
Office (304) 292-8655
Cell (304) 692-5300

Ryan Environmental, LLC
5793 West Veterans Memorial Highway,
Suite 101
Bridgeport, WV 26330
Office (304) 842-5578

Response Actions

Stop the leak if possible.

If leak cannot be stopped, all liquid remaining in tank will be transferred into temporary holding containers (drums or portable tanks). Any spilled free product will be immediately collected and placed into 55 gallon drums for proper disposal.

The extent of contamination will be determined by sampling. Sample results will be provided to the West Virginia Department of Environmental Protection for further guidance. All sample results will be compared to the de minimis levels established in Table 60-3B of the West Virginia Department of Environmental Protection.

Contacts in Event of Release

City of Chester, Water Department	(304) 387-0114
Hancock County Emergency Management	(304) 564-4040
City of Chester, Police Department	(304) 387-2820
Chester Volunteer Fire Department	(304) 387-1690
Hancock County, Health Department	(304) 564-3343
Morgantown Utility Board	(304) 292-8443
City of Morgantown, Fire Department	(304) 284-7481
City of Morgantown, Police Department	(304) 284-7522
Monongalia County Emergency Management	(304) 598-0301
Monongalia County Dispatch	(304) 599-6382
Monongalia County Health Department	(304) 598-5100
East Dunkard Water Authority, Dilliner, PA	(724) 943-3713
Dunkard Valley Joint Municipal Authority	(724) 943-3000
Masontown, PA Water Authority	(724) 583-7731
WVDEP Spill Line	800-642-3074
WVDNR-Wildlife	(304) 825-6787

ATTACHMENT A



SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	Salt
Other means of identification	Sodium Chloride Sifto Safe Step Standard Salt Sifto Ice Salt Sifto Sodium Chloride Sifto Safe Step EnviroGuard QwikSalt Ice-A-Way IceAway Turbo IceAway Turbo Blue Safe Step 3300 Aspen Aspen Blue Safe Step 4300 Dual Blend Safe Step 4300 Dual Blend Blue EconoBlend 370 Winter Storm Winter Storm Blue Safe Step Pro Series 550 Safe Step Pro Series 570 Safe Step 6300 Enviro Blend Safe Step Pro Series 960 Choice Formula Safe Step Sure Paws Sifto Safe Step Sure Paws American Stockman Animal Nutrition Products Nature's Own water care products Sure Soft water care products Natural Salt water care Pro Soft water care products
Recommended use	De-icer. General industrial and water softening/conditioning purposes. Animal Nutrition.
Recommended restrictions	None known.
Manufacturer	Compass Minerals International 9900 West 109th Street, Suite 100 Overland Park, KS 66210 US Phone 913-344-9200 Emergency US CHEMTREC 1-800-424-9300 Emergency Canada CANUTEC 1-800-996-6666
CHEMTREC	1-800-424-9300
CANUTEC	1-800-996-6666

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The product and/or 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, i.e, strong oxidizing agents (see Section 10)
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/Information on Ingredients

Salt and/or Salt Mixtures

Composition comments

The criteria for listing components in this section are: Carcinogens, Respiratory Sensitizers, Mutagens, Teratogens and Reproductive toxins are listed when present at 0.1% or greater; components which are otherwise hazardous according to WHMIS/OSHA are listed when present at 1.0% or greater. Non hazardous components are not listed. The products pertaining to this SDS have various proportions of components which do not meet the listing criteria.

4. First Aid Measures

Inhalation

Avoid breathing dust. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact

Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. If ingestion of a large amount does occur, seek medical attention.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire Fighting Measures

Suitable extinguishing media

Salt and salt mixtures are non-combustible.

Unsuitable extinguishing media

Not applicable.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Use appropriate firefighting PPE as a general precaution.

Fire-fighting equipment/instructions

Salt is not combustible and is thus not the material of concern for firefighting equipment or methods.

Specific methods

In the event of a fire, equipment and methods that are consistent with the combusting material should be utilized.

General fire hazards

No unusual fire or explosion hazards noted.

Hazardous combustion products

Chlorine. Hydrogen chloride. Oxides of sodium.

Explosion data

Sensitivity to mechanical impact

Not available.

Sensitivity to static discharge

Not available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Restrict area to facilitate clean up.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Prevent direct entry into waterways and sewers. Following product recovery, flush area with water if necessary. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid direct release into waterways and sewers.

7. Handling and Storage

Precautions for safe handling

Use care in handling/storage. Avoid breathing dust.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials, i.e, strong oxidizing agents (see Section 10)

8. Exposure Controls/Personal Protection

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate 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.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Safety glasses if eye contact is possible.

Skin protection**Hand protection**

If there is constant skin contact, rubber gloves are recommended.

Other

Wear suitable protective clothing.

Respiratory protection

No personal respiratory protective equipment normally required.

Thermal hazards

Not applicable.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment.

9. Physical and Chemical Properties

Appearance	Crystalline.
Physical state	Solid.
Form	Solid.
Color	Varies
Odor	Odorless
Odor threshold	Not applicable
pH	6 - 8 (Neutral)
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Pour point	Not applicable
Specific gravity	Not applicable
Partition coefficient (n-octanol/water)	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable
Flammability limit - upper (%)	Not applicable
Explosive limit - lower (%)	Not applicable
Explosive limit - upper (%)	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not applicable
Solubility(ies)	Not available.
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable

10. Stability and Reactivity

Reactivity	None known.
------------	-------------

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials, i.e strong oxidizing agents.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Chlorine gas. Hydrogen chloride. Oxides of sodium.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not classified.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Not classified.

Further information This product has no known adverse effect on human health.

Name of Toxicologically Synergistic Products Not available.

12. Ecological Information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.

Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers in accordance with applicable regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

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 SDS contains all the information required by the Controlled Products Regulations.
WHMIS status	Not Controlled
US federal regulations	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	
Not regulated.	
CERCLA Hazardous Substance List (40 CFR 302.4)	
Not listed.	
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	
Not regulated.	
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	
Not regulated.	
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
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No
SARA 313 (TRI reporting)	
Not regulated.	
Other federal regulations	
Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.
US state regulations	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance	
Not listed.	
US. Massachusetts RTK - Substance List	
Not regulated.	
US. Pennsylvania RTK - Hazardous Substances	
Not regulated.	

Not regulated.

Inventory status

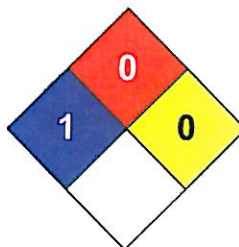
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. 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

29-August-2014

Effective date

01-August-2014

Expiry date

01-August-2017

Further information

Not available.

Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

ATTACHMENT B

SAFETY DATA SHEET

Version 5.3
Revision Date 10/01/2014
Print Date 11/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Water

Product Number : 320072

Brand : Sigma-Aldrich

CAS-No. : 7732-18-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : H₂O H₂O

Molecular weight : 18.02 g/mol

CAS-No. : 7732-18-5

EC-No. : 231-791-2

No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled

If not breathing give artificial respiration

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

No data available

5.4 Further information

The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

6.2 Environmental precautions

No data available

6.3 Methods and materials for containment and cleaning up

Wipe up with absorbent material (e.g. cloth, fleece).

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice.

Personal protective equipment

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Respiratory protection

No special protective equipment required.

Control of environmental exposure

Prevent product from entering drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: colourless
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	6.0 - 8.0 at 25 °C (77 °F)
e) Melting point/freezing point	0.0 °C (32.0 °F)
f) Initial boiling point and boiling range	100 °C (212 °F) - lit.
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	1.000 g/cm ³ at 3.98 °C (39.16 °F)
n) Water solubility	completely miscible
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: ZC0110000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Taking into account local regulations the product may be disposed of as waste water after neutralisation.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Water

CAS-No.
7732-18-5

Revision Date

New Jersey Right To Know Components

Water

CAS-No.
7732-18-5

Revision Date

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating

Health hazard:	0
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

Further information

Copyright 2014 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.3

Revision Date: 10/01/2014

Print Date: 11/10/2014

ATTACHMENT C

Material Safety Data Sheet

Material Name: **Brine Solution**

MSDS ID: NOVA-0087

Section 1 - Product and Company Identification

Synonyms: Salt water, Brine recycle stream, Sodium chloride solution

Chemical Name: Brine solution

Chemical Family: Mixture

Material Use: Operation of underground storage caverns and for salt manufacturing

Chemical Formula: Na^+ (aq) Cl^- (aq); sodium chloride in solution

NOVA Chemicals

P.O. Box 2518, Station M
Calgary, Alberta, Canada T2P 5C6

EMERGENCY Telephone Numbers:

North America (Canada and US):

1-800-561-6682, 1-403-314-8767 (NOVA Chemicals) (24 hours)

1-800-424-9300 (CHEMTREC-USA) (24 hours)

1-613-996-6666 (Canutec-Canada) (24 hours)

Product Information: 1-412-490-4063

MSDS Information Email: msdsemail@novachem.com

Section 2 - Hazards Identification

HMIS Ratings: Health: 1 Fire: 0 Physical Hazard: 0

*Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard*

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Emergency Overview

CAUTION! Product is a clear to cloudy white liquid with no odour. This product may be irritating to the eyes, skin, and respiratory system.

Potential Health Effects: Eye

This product may cause eye irritation. Symptoms may include itching, reddening, excess tearing and swelling.

Potential Health Effects: Skin

This product may cause drying, irritation and possible dermatitis.

Potential Health Effects: Ingestion

Ingestion of very large quantities may cause nausea, vomiting, dehydration, diarrhoea, oedema, and possible death. Prolonged over consumption may result in high blood pressure and heart problems.

Potential Health Effects: Inhalation

This product may cause irritation to the respiratory system.

Section 3 - Composition/Information on Ingredients

CAS No.	Component	Percent by Wt.
7732-18-5	Water	74-82
7647-14-5	Sodium chloride	18-26

Additional Information

This product is hazardous under 29 CFR 1910.1200 (Hazard Communication).

This material is a controlled product under Canadian WHMIS regulations.

This material is not regulated as a hazardous material / dangerous goods for transportation.

See Section 8 for applicable exposure limits. See Section 11 for applicable toxicity data.

Section 4 - First Aid Measures

First Aid: Eyes

Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

First Aid: Skin

Remove contaminated clothing and shoes. Wash immediately with soap and water. Seek medical attention if symptoms develop or persist.

Material Safety Data Sheet

Material Name: **Brine Solution**

MSDS ID: NOVA-0087

First Aid: Inhalation

Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

First Aid: Notes to Physician

Treat symptomatically. Treatment for overexposure should be directed at controlling the symptoms and clinical condition of the patient. Unless symptoms reappear, no further treatment is required. For more detailed medical emergency support information call 1-800-561-6682 or 1-403-314-8767 (24 hours, NOVA Chemicals Emergency Response).

Section 5 - Fire Fighting Measures

See Section 9: Physical Properties for flammability limits, flash point and auto-ignition information.

General Fire Hazards

Not a fire hazard. Does not burn.

Explosion Hazards

Not an explosion hazard.

Hazardous Combustion Products

None. Does not burn.

Extinguishing Media

Does not burn. Use extinguishing media suitable to surrounding fire conditions; e.g. dry chemical, foam, carbon dioxide, water fog or water spray.

Fire Fighting Equipment/Instructions

Firefighters should wear personal protective equipment suitable for the fire conditions and the materials burning.

Section 6 - Accidental Release Measures

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Small Spills

Stop or reduce discharge if safe to do so. Prevent entry into water intakes and waterways. Remove liquid material with approved pumps or vacuum equipment.

Large Spills

Stop or reduce leak. Isolate, contain, and attempt to recover. Prevent entry into water intakes and waterways. Remove liquid material with approved pumps or vacuum equipment. Spill area may be washed down with water, with wash waters collected for testing and proper disposal.

Special Procedures

Contact local police/emergency services and appropriate emergency telephone numbers provided in Section 1. Ensure that statutory and regulatory reporting requirements in the applicable jurisdiction are met. Wear appropriate protective equipment and clothing during cleanup. Individuals without appropriate protective equipment should be excluded from area of spill until cleanup has been completed.

See Section 8 for recommended Personal Protective Equipment and see Section 13 for waste disposal considerations.

Section 7 - Handling and Storage

Handling Procedures

Material is slowly corrosive to metal. Handle in properly designed and approved equipment systems. Periodically inspect pipelines and other equipment for integrity and corrosion. Do not ingest or inhale. If ingested, seek medical advice immediately. Avoid contact with skin and eyes. Keep away from incompatible materials. After handling, always wash hands thoroughly with soap and water.

Storage Procedures

Storage area should be clearly identified, well-illuminated, clear of obstruction and accessible only to trained and authorized personnel. Adequate security must be provided so that unauthorized personnel do not have access to the product. Storage ponds and tank areas should be periodically inspected and kept separate from fresh water supply or outlets.

Material Safety Data Sheet

Material Name: **Brine Solution**

MSDS ID: NOVA-0087

See Section 8: Exposure Controls/Personal Protection for appropriate Personal Protective Equipment. See Section 10 for information on Incompatibilities.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Keep formation of airborne dusts or mists to a minimum. Ensure that eyewash stations and safety showers are in close proximity to the work locations.

B: Component Exposure Limits

ACGIH, OSHA, NIOSH, EPA, Alberta and Ontario have not developed exposure limits for any of this product's components. Other exposure limits may apply, check with proper authorities.

ENGINEERING CONTROLS

Provide adequate ventilation to maintain worker exposure below levels that are irritating to the eyes or skin.

Administrative (procedure) controls and use of personal protective equipment may also be required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Chemical goggles are recommended. If splashing is possible use chemical goggles and a full-face shield.

Carefully rinse off contaminated goggles before removing.

Personal Protective Equipment: Skin/Hands/Feet

Use chemically resistant gloves when handling product. Wear chemical-resistant safety footwear with good traction to prevent slipping. Work clothing that sufficiently prevents skin contact should be worn, such as coveralls and/or long sleeves and pants. If splashing or contact with liquid material is possible, consider the need for an impervious overcoat.

Personal Protective Equipment: Respiratory

If engineering controls and ventilation are not sufficient to prevent buildup of aerosols or vapours, appropriate NIOSH approved respiratory protection should be used.

Personal Protective Equipment: General

Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain, and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.

Section 9 - Physical & Chemical Properties

Physical State and Appearance:	Clear/Cloudy Liquid	Colour:	Clear to white
Odour	Odourless	pH:	Range: 6.5 to 8.5
Vapour Pressure:	Not applicable	Vapour Density at 0°C (Air=1):	Not applicable
Boiling Point:	>100°C (>212°F)	Freezing Point:	-10°C (14°F)
Solubility (H2O):	Miscible (water-based solution)	Specific Gravity (Water=1):	1.2 at 15°C (60°F)
Auto Ignition:	Not applicable	Flash Point:	Not applicable
Flash Point Method:	Not applicable	Upper Flammable Limit (UFL):	Not applicable
Lower Flammable Limit (LFL):	Not applicable	Flammability Classification:	Non-flammable

Section 10 - Stability & Reactivity Information

Chemical Stability

This product is a stable material.

Chemical Stability: Conditions to Avoid

None identified.

Incompatibility

In presence of air, liquid contact or mists will slowly corrode most metals.

Possibility of Hazardous Reactions or Hazardous Polymerization

Hazardous polymerization will not occur.

Corrosivity

Corrosive to most metals upon prolonged contact.

Material Safety Data Sheet

Material Name: **Brine Solution**

MSDS ID: NOVA-0087

Hazardous Decomposition

None identified. Does not burn.

Section 11 - Toxicological Information

A: Acute Toxicity - General Product Information

This product has not been tested.

B: Acute Toxicity - LD50/LC50

Water (7732-18-5)

Oral LD50 Rat: >90 mL/kg

Sodium chloride (7647-14-5)

Inhalation LC50 Rat: >42 g/m³/1H; Oral LD50 Rat: 3 g/kg; Dermal LD50 Rabbit: >10 g/kg

C: Chronic Toxicity - General Product Information

This product has not been tested.

D. Chronic Toxicity - Carcinogenic Effects

None of this product's components are listed by ACGIH, EPA, IARC, OSHA, NIOSH, or NTP as a carcinogen.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

This product has not been tested. A concentrated brine solution (~26% sodium chloride) will dehydrate animal and vegetative species. Sodium chloride is practically non-toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity – Aquatic/Terrestrial Toxicity

Sodium chloride (7647-14-5)

Test and Species

96 Hr LC50 *Lepomis macrochirus*

96 Hr LC50 *Lepomis macrochirus*

96 Hr LC50 *Pimephales promelas*

96 Hr LC50 *Pimephales promelas*

96 Hr LC50 *Pimephales promelas*

96 Hr LC50 *Oncorhynchus mykiss*

48 Hr EC50 *Daphnia magna*

48 Hr EC50 *Daphnia magna*

Results and Conditions

5560-6080 mg/L [flow-through]

12,946 mg/L [static]

6020-7070 mg/L [static]

7050 mg/L [semi-static]

6420-6700 mg/L [static]

4747-7824 mg/L [flow-through]

1000 mg/L

340.7 - 469.2 mg/L [static]

Environmental Fate/Mobility

This product has not been tested. Brine does not partition to air. When spilled into a body of water, the brine will disperse in and mix with the water. A large brine spill into a body of water could result in stratification with the water floating on top of the brine. Eventually the two will mix. When spilled onto soil, brine will behave similar to spilled water. Sodium chloride may leach from soil into groundwater.

Persistence/Degradability

This product has not been tested. Brine (sodium chloride) is not biodegradable.

Bioaccumulation/Accumulation

This product has not been tested.

Section 13 - Disposal Considerations

U.S./Canadian Waste Information

A: General Product Information

This product is not expected to be a hazardous waste according to US regulations. This product may meet the definition of a hazardous waste according to Canadian regulations. The use, mixing or processing of this product may alter its properties or hazards. Contact federal, provincial/state and local authorities in order to generate or ship a waste material associated with this product to ensure materials are handled appropriately and meet all criteria for disposal of hazardous waste.

See Section 7: Handling and Storage and Section 8: Exposure Controls/Personal Protection for additional information that may be applicable for safe handling and the protection of employees.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Material Safety Data Sheet

Material Name: **Brine Solution**

MSDS ID: NOVA-0087

Section 14 - Transportation Information

US DOT Information

Shipping Name: NOT REGULATED as a Hazardous Material for Transportation.

Canadian TDG Information

Shipping Name: NOT REGULATED as a Dangerous Good for Transportation.

International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO) Information

Shipping Name: NOT REGULATED as a Dangerous Good for Transportation.

International Maritime Dangerous Goods (IMDG) Code

Shipping Name: NOT REGULATED as a Dangerous Good for Transportation.

Section 15 - Regulatory Information

A: International Regulations

Component Analysis - International Inventory Status

Component	CAS No.	US - TSCA	EU - EINECS	CANADA - DSL
Water	7732-18-5	Yes	Yes	Yes
Sodium chloride	7647-14-5	Yes	Yes	Yes

B: USA Federal & State Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by federal or state regulations. Check for applicable regulations.

USA OSHA Hazard Communication Class

This product is hazardous under 29 CFR 1910.1200 (Hazard Communication). HCS Classes:

HCS CLASS: Irritating substance.

USA Right-to-Know - Federal

None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

USA Right-to-Know - State

None of this product's components are listed on the state lists from NJ or PA. Some components (including those present only in trace quantities, and therefore not listed in this document) may be included on the Right-To-Know lists of other U.S. states. The reader is therefore cautioned to contact his or her NOVA Chemicals' representative or NOVA Chemicals' Product Integrity group for further U.S. State Right-To-Know information.

C: Canadian Regulations - Federal and Provincial

Canadian Environmental Protection Act (CEPA): This product is a mixture of naturally-occurring substances. All components are on the Domestic Substances List (DSL), and are acceptable for use under the provisions of CEPA.

Ingredient Disclosure List (IDL)

No components are listed under the Canadian Hazardous Products Act - Ingredient Disclosure List (IDL).

WHMIS Classification

Workplace Hazardous Materials Information System (WHMIS): This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all the information required by the CPR.

WHMIS CLASS D2B: Toxic (Skin/eye irritant)

Other Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by federal or provincial regulations. Check for applicable regulations.

Section 16 - Other Information

Label Information

CAUTION! Product is a clear to cloudy white liquid with no odour. This product may be irritating to the eyes, skin, and respiratory system.

FIRST AID:

SKIN: Remove contaminated clothing and shoes. Wash immediately with soap and water. Seek medical attention if symptoms develop or persist.

EYES: Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical if symptoms develop or persist.

Material Safety Data Sheet

Material Name: **Brine Solution**

MSDS ID: NOVA-0087

INHALATION: Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist.

INGESTION: DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention.

IN CASE OF LARGE SPILL: Stop or reduce leak. Isolate, contain, and attempt to recover. Prevent entry into water intakes and waterways. Remove liquid material with approved pumps or vacuum equipment. Spill area may be washed down with water, with wash waters collected for testing and proper disposal.

References

Available on request

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Transport of Dangerous Goods by Road; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; BOD = Biochemical Oxygen Demand; CAS = Chemical Abstracts Service; CEPA = Canadian Environmental Protection Act; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EC50 = Effective Concentration 50%; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; FDA = Food and Drug Administration; GHS = Globally Harmonized System for the Classification and Labelling of Chemicals; HCS = Hazard Communication Standard; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life or Health; IMDG = International Maritime Dangerous Goods; IMO = International Maritime Organization; ISHL = Industrial Safety and Health Law; Kow = Octanol/water partition coefficient; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; LEL = Lower Explosive Limit; LFL = Lower Flammable Limit; LLV = Level Limit Ceiling Limit (Sweden dust); MAK = Maximum Concentration Value in the Workplace; MITI = Ministry of International Trade and Industry; MSDS = Material Safety Data Sheet; NAB = Threshold Values (Indonesia); NCEC = National Chemical Emergency Centre; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OEL = Occupational Exposure Limit; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; PNOC = Particulates Not Otherwise Classified; PPE = Personal Protective Equipment; PRTR = Designated Chemical Substance Law (Japan); PSD = Short Term Exposure Limit (Indonesia); RCRA = Resource Conservation and Recovery Act; REACH = Registration, Evaluation, Authorisation and Restriction of Chemical Substances; REL = Recommended Exposure Limit; RID = Transport of Dangerous Goods by Rail; SARA = Superfund Amendments and Reauthorization Act; SCBA = Self Contained Breathing Apparatus; SDS = Safety Data Sheet; SEPA = State Environmental Protection Administration; STEL = Short Term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average; UEL = Upper Explosive Limit; UFL = Upper Flammable Limit; VLA-ED = Valor límite Ambiental de Exposición Diaria (Environmental Exposure Daily Limit Value); VME = valeur limite d'exposition (Occupational Exposure Limits); WHMIS = Workplace Hazardous Materials Information Systems

MSDS Prepared By: NOVA Chemicals

MSDS Information Phone Number: 1-412-490-4063

Other Information

Notice to Reader:

ALTHOUGH THE INFORMATION CONTAINED IN THIS DOCUMENT IS PRESENTED IN GOOD FAITH, BASED ON AVAILABLE INFORMATION BELIEVED TO BE RELIABLE AT THE TIME OF PREPARATION OF THIS DOCUMENT, NOVA CHEMICALS MAKES NO WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION OR THE PRODUCT/MATERIALS DESCRIBED HEREIN, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES AND CONDITIONS (INCLUDING ALL WARRANTIES AND CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). NO FREEDOM FROM INFRINGEMENT OF ANY PATENT OWNED BY NOVA CHEMICALS OR OTHERS IS TO BE INFERRED. THIS INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE. PLEASE CONTACT NOVA CHEMICALS FOR THE MOST CURRENT VERSION OF THIS MSDS. NOVA CHEMICALS DOES NOT ASSUME RESPONSIBILITY FOR MSDS OBTAINED FROM THIRD PARTY SOURCES.

UNLESS SPECIFICALLY AGREED OTHERWISE, NOVA CHEMICALS DOES NOT TAKE RESPONSIBILITY FOR USE, TRANSPORTATION, STORAGE, HANDLING OR DISPOSAL OF THE PRODUCT/MATERIALS DESCRIBED HEREIN.

 **NOVA Chemicals**[®] is a registered trademark of NOVA Brands Ltd.; authorized use/ utilisation autorisée.

This is the end of MSDS # NOVA-0087.

ATTACHMENT D



1 in = 25 ft



Inlet

Outfall

AST

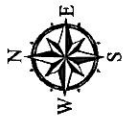
Storm line





	Inlet		Outfall		AST		Storm line
--	-------	--	---------	--	-----	--	------------

Closest Street: North - Chestnut Ridge Rd (210.14')
Nearby Waterway: Southwest - Popenoe Run (2,495.58')
Abutting Property: North (282.91')



ATTACHMENT E

TANK IN-SERVICE INSPECTIONS CHECKLIST

	Satisfactory	Unsatisfactory	Non Applicable	Comments
Foundation and Supporting Structure				
Check for settlement around perimeter of tank.				
Check for settlement of structure supporting tank.				
Check for settlement of tank into the base.				
Stormwater and Housekeeping				
Inspect site for drainage away from the tank and associated stormwater system.				
Inspect the area for build up of trash, vegetation, or other debris.				
Shell and Supporting Appurtenances				
Visually inspect for paint failures, pitting, corrosion, dents, punctures, cracks or cuts.				
Check bracing and supports for lines and equipment.				
Inspect visible metallic parts for corrosion and wear.				
Inspect condition and functioning of hatch cover.				
Inspect scaffold support for corrosion, wear, and structural soundness.				
Piping and Valves				
Inspect manifold piping, hoses, and valves for leaks.				
Inspect flanges and around bolting for leaks.				
Inspect connections for leaks and for proper valve operation.				
Locate and document any leaks by sketch or photo.				
Overfill devices				
Check freedom of movement of marker and float.				
Inspect alarm system				

ATTACHMENT F

Aboveground Storage Tank Initial and Annual Inspection Checklist

Item to Be inspected	Yes	No	N/A
Does the AST meet current design standards?			
Is there settling around the tank?			
Does runoff go away from tank?			
Does foundation of tank appear to be adequate for tank?			
Is AST compatible with material stored in tank?			
Are there any cracks in the tank shell?			
Are there any worn areas on the tank?			
Is there any damage or defects to the tank?			
Are the connections tight and aligned?			
Is there any discoloration to the tank shell?			
Are there any stains around the tank?			
Are there signs of a recent release around the tank?			
Does tank have galvanic protection?			
Does the tank have some other corrosion protection?			
Does the external shell have pits, corrosion or chips in paint or coating?			
Does tank have a release detection system?			
Does tank have written release prevention procedures?			
Is the tank a double walled tank?			
Does the tank have secondary containment?			
Can secondary containment hold 110% of the largest single tank?			
Is there sufficient freeboard for precipitation events?			
Is the secondary containment compatible with the tank contents?			
Are there cracks in the secondary containment?			
Are there low spots in the secondary containment?			
Is there vegetation growing in the secondary containment?			
Is there debris or trash in the secondary containment?			
Does the tank have a leak detection system?			
Are leak detection files available and up to date?			
Does tank have corrosion Protection?			
Are corrosion protection document available and up to date?			
Are Operation and Maintenance records available and up to date?			

ATTACHMENT G

Chain of command for employees that handle or potentially handle transfer of salt brine for winter deicing operations.

Employees performing transfer operations at facility tank

1	Al Harper	27	Larry Matthews
2	Alvie Blosser	28	Lewis McCauley
3	Charlie Cupp	29	Mark Rupke
4	Clark Dunn	30	Matt Phillips
5	Clayton Shaffer	31	Mike Morrell
6	Dan Brown	32	Norm Watts
7	Darrell Moreland	33	Phil Starsick
8	David Collins	34	Randy Dodson
9	David Mitchell	35	Richard Coddington jr.
10	David O'Malley	36	Richard Klink
11	Delmon McKenney	37	Rick Kelly
12	Dewayne Stalley	38	Rob Zembar
13	Edward Sanders	39	Robert Skipper
14	Frank Walker	40	Robert Snyder
15	Frankie Moore	41	Robert Swift
16	George Ray	42	Rodney Morris
17	Gordon Mayle	43	Roxann Springer
18	Grayson Rowe	44	Sam Clawson
19	Greg Britton	45	Scott Boggs
20	Greg Howell	46	Spencer Kelly
21	Harley Winters	47	Ted Neyman
22	James Ryan	48	Tom Berkshire
23	Jesse Morgan	49	Tom Moser
24	Joe Friend	50	Troy Forquer
25	John Erdy	51	William Shaffer
26	Ken Lipscomb		

Supervisors for Employees

Robert Frame	304-293-0428
Richard Hott	304-293-2885
Robert Sine	304-293-8116

Director of Facilities Management

Byron Smith	304-293-6022
-------------	--------------