

March 27, 2018

Via Electronic and First-Class Mail

Dana Drake, P.E.
Environmental Program Manager
Waterway and Wetlands Program
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222-4745

**Re: Hydrogeological Reevaluation Report
Hildenbrand Road Crossing (S1B-0190)
Permit No. E65-973
Sewickley Township, Westmoreland County**

Dear Ms. Drake:

In compliance with the Corrected Stipulated Order dated August 10, 2017 a Reevaluation Report on the above-referenced horizontal directional drill (“HDD”) was submitted to the Department on November 27, 2017. The Department requested more information on the Reevaluation Report by letter dated December 15, 2017, to which Sunoco Pipeline, LP (“SPLP”) responded to on January 4, 2018. The Department requested more information by letter dated February 8, 2018 to which SPLP responded to on February 27, 2018. In a letter dated March 14, 2018, the Department is requesting further information. Please accept this letter as a response. Your requests are bolded below followed by the response.

- 1. SPLP provided water quality data for the private water supplies tested, however, it is unclear which parcel each private water supply result corresponds to. Please identify the associated private water supply for each water quality test result provided.**

In addition, the well location map provided on March 7, 2018 was current as of December 11, 2017 and indicates that a future testing location was scheduled and that the location of a third well was approximate. Did SPLP conduct water quality testing and verify the location of the well? SPLP also stated that a fourth well exists that is used to service a horse barn. This water supply well does not appear to be depicted on the map provided. Please update the map accordingly with the most current information.

The parcel identification numbers (ID) for the tested water wells has been added to the revised water well location map provided as Attachment 1 with this response and the locations of the three wells have been survey verified. The parcel ID numbers for the tracts within the 450’ buffer can be found in the upfront cover page(s) of the testing results provided to the Department.

The revised water supply map, as referenced above, is current, and accounts for all water supply

sources for all tracts within 450' of the HDD alignments.

The landowner of the well servicing the horse barn did not request testing of the well; therefore this well is not included on the illustration and sampling data for this well is not available.

2. SPLP has stated that two parcels have three private water supply wells in total and have accepted temporary water for these parcels. Please provide the documentation of SPLP's agreements with these owners for temporary water

These referenced landowners, which are north of the HDD as shown on the water supply illustration, have rescinded their request for temporary water because their household water is supplied via public infrastructure.

3. In its February 8, 2018 comment letter, DEP requested justification, sealed by a Pennsylvania Professional Geologist, for the statement that HDD activities could affect individual well use during active drilling for wells located within 150 linear feet of either side of the profile. SPLP did not provide the requested information. Please provide the requested information.

The basis for the Department's request in the February 8, 2018 comment letter for a sealed justification of SPLP's statement concerning the 150 ft radius was a concern by the Department that the radius should be extended beyond 150 ft. As a result of the Consent Order Agreement dated February 8, 2018, SPLP has authored - and DEP has approved - a new Operations Plan that provides that SPLP will offer all landowners with a private water supply source located within 450 ft of the HDD alignment an alternative temporary water supply. Accordingly, the previous statement concerning the potential effects within 150 ft is now moot. In accordance with the Operations Plan, SPLP has made this offer via letter to the one (1) landowner referenced in SPLP's response to Item 1.

4. SPLP is proposing the use of "DrilPlex" to mitigate the potential risks to private water supplies. Please provide information regarding the American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 60 certification for DrilPlex. Also, please demonstrate that the manner in which SPLP anticipates using the additive is consistent with the manner indicated in the ANSI/NSF Standard 60 certification for that additive. Merely stating that the additive is ANSI/NSF Standard 60 certified is not sufficient.

During the progression of the pilot hole phase on this HDD, SPLP will add DrilPlex to its drilling mud for the entire length of pilot hole progress. DrilPlex is an ANSI/NSF-60 approved drinking water certified additive that allows the drilling mud to gel in the formation thereby minimizing the risk of impact to any of the nearby wells in question. SPLP will add DrilPlex in a 1:10 ratio to the raw bentonite during mixing of the drilling fluid, in accordance with the manufacturer's

recommendations. In addition, SPLP intends to follow all conditions included as part of DrilPlex's ANSI/NSF-60 certification. An application guide and Safety Data Sheet for DrilPlex is provided as Attachment 2 for the Department's reference.

5. In its response to item 3.e. of DEP's February 8, 2018 letter, SPLP states that water supply owners have not asked to perform any water quantity tests at any well location, however, SPLP provided results of at least one well yield test. SPLP did not provide results for three other wells indicating that one well did not have a pump the day of the water quality test, a second well was a dug well and that the interviewee was unable to switch from the drilled well to the dug well, and the owner of the third well declined the yield test the day of the water sampling event. It is unclear whether the owners declined to have the yield tests completed or if they simply could not be completed the day SPLP was collecting water quality samples. Did SPLP offer to conduct the tests at an alternative date and time?

There are two wells within 450' of HDD S1B-0190. One (1) of these is a modern drilled well and one (1) is hand dug. A yield test was offered for both wells. On the day of the testing the landowner was unable to switch over from the drilled well to the dug well so a yield test could not be conducted for the dug well. Prior to HDD activities at this location, the landowner will again be offered the opportunity to have a yield test conducted for both the wells within the 450' buffer of HDD S1B-0190. SPLP will provide the results of this testing, if agreed to, to the Department upon receipt.

SPLP submits that we have been, and are, in complete compliance with the agreed terms and requirements of analysis of the Order, as agreed to by the Department, and that no further analysis is required for the Department to consent to the start of this HDD. SPLP therefore requests that the Department approve the Reevaluation Report for Hildenbrand Road Horizontal Directional Drills (S2-0157) as soon as possible.

Sincerely,

Matthew Gordon
Project Director

Attachments:

1-Water Supply Illustration

2-DrilPlex Additive Information

Attachment 1
Water Supply Illustration

Parcel Identification Number	GES Well ID	Distance to HDD Perpendicular (Feet)	Distance to HDD Entry/Exit (Feet)	Well Information		
				Reported DTB (Feet)	Reported DTW (Feet)	Reported Pump Depth
58-10-00-0-132	DW-08222016-499-01	223	226	10	9	Unknown
58-10-00-0-132	WL-08222016-499-02	90	106	200	Unknown	Unknown
58-10-00-0-050	WL-08222016-499-03	907	907	200	Unknown	NA

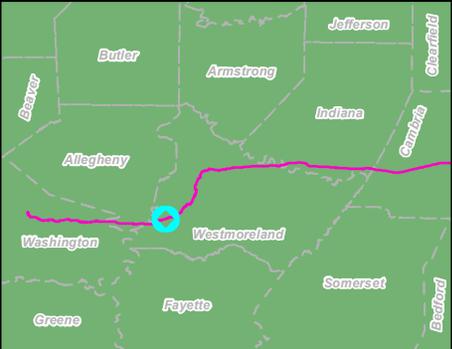
Legend

- LOD
- Parcel
- PPP Centerline
- HDD
- 450 foot buffer of HDD alignment
- Public Water Supply/Landowner Confirmed No Well

****Testing locations current as of 03/12/2017**

- GES Testing Location

Location



Well Location Map
HDD# PA-WM1-0023.0000-RR
Westmoreland County, PA.

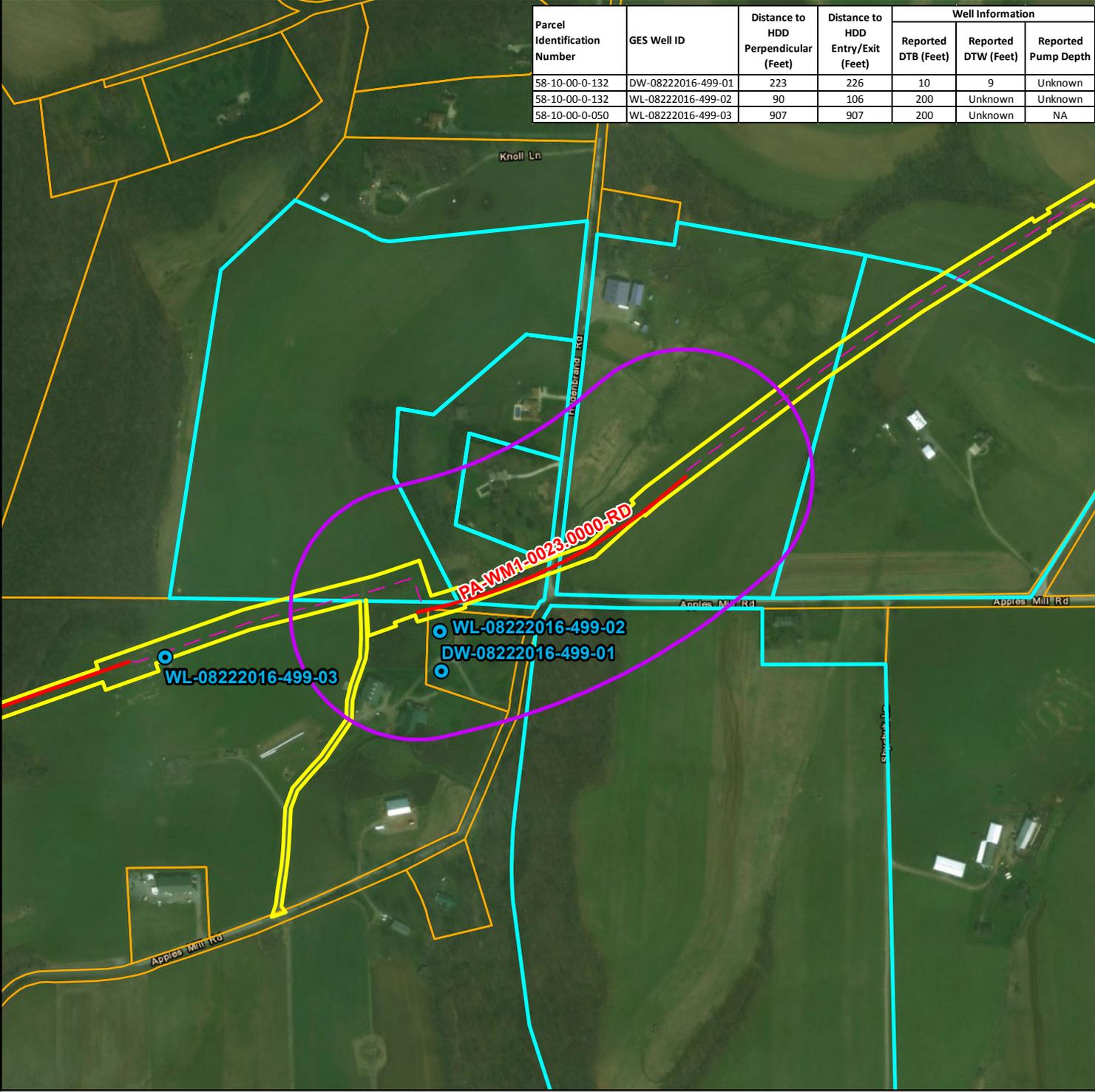
Prepared By:



Date:
3/16/2018

Base Map:
 ESRI World Imagery, 09/24/2015

Coordinate System: NAD 83 Stateplane, PA South, Feet



C:\GIS\workspace\122018058\PA-WM1-0023.0000-RR\WellLocations\WellLocation_PA_WM1_0023_0000.mxd

Attachment 2
DrilPlex™, Additive Use, and Safety Data Sheet



The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Monday, March 26, 2018** at 12:15 a.m. Eastern Time. Please [contact NSF International](#) to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information: <http://info.nsf.org/Certified/PwsChemicals/Listings.asp?TradeName=drilplex&>

NSF/ANSI 60 Drinking Water Treatment Chemicals - Health Effects

M-I L.L.C.

A Schlumberger Company

5950 North Course Drive

Houston, TX 77072

United States

281-561-1322

[Visit this company's website \(http://www.slb.com/services](http://www.slb.com/services/completions/completions.aspx)

[/completions/completions.aspx\)](http://www.slb.com/services/completions/completions.aspx)

Facility : # 16 USA

Miscellaneous Water Supply Products[1] [2]

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
DRILPLEX HDD	Well Drilling Aid	NA

[1] This product is designed to be flushed out prior to using the system for drinking water. Before being placed into service, the well is to be properly flushed according to the manufacturer's use instructions.

[2] Certification of this product is based on the well drilling model with the following assumptions:

- The amount of well drilling fluid used is 3780 L (1000 U.S. gallons) to which the drilling fluid has been added at the manufacturer's recommended level.
- The aquifer contains 3.1 million liters of water (815,000 gallons) based on a 0.5 acre aquifer of 6.1 meter depth (20 ft.) and 25% porosity.
- The bore hole is 61 meters in total depth (200 ft.), the screen is 6.1 meters in length (20 ft.), and the bore hole is 25.4 cm. in diameter (10 in.).
- The amount of well drilling fluid removed from the well during construction is equal to the combined volumes of the casing and the screen, plus an additional amount removed through the well disinfection and development (90% removed).

Prince Energy, LLC

7707 Wallisville Road

Houston, TX 77020

United States

941-776-8798

Facility : # 2 Houston, TX**Miscellaneous Water Supply Products[1] [2]****Trade Designation**

DRILPLEX HDD

Product Function

Well Drilling Aid

Max Use

NA

[1] This product is designed to be flushed out prior to using the system for drinking water. Before being placed into service, the well is to be properly flushed according to the manufacturer's use instructions.

[2] Certification of this product is based on the well drilling model with the following assumptions:

- The amount of well drilling fluid used is 3780 L (1000 U.S. gallons) to which the drilling fluid has been added at the manufacturer's recommended level.
- The aquifer contains 3.1 million liters of water (815,000 gallons) based on a 0.5 acre aquifer of 6.1 meter depth (20 ft.) and 25% porosity.
- The bore hole is 61 meters in total depth (200 ft.), the screen is 6.1 meters in length (20 ft.), and the bore hole is 25.4 cm. in diameter (10 in.).
- The amount of well drilling fluid removed from the well during construction is equal to the combined volumes of the casing and the screen, plus an additional amount removed through the well disinfection and development (90% removed).

Number of matching Manufacturers is 2

Number of matching Products is 2

Processing time was 0 seconds

DRILPLEX

DRILPLEX* Mixed Metal Oxide (MMO) is a bentonite extender and secondary shale stabilizer designed to give improved carrying capacity and suspending ability in water-base drilling fluids.

It has particular application in drilling of high-angle and horizontal wells, lost circulation zones, production reservoirs as a reservoir drill-in fluids (RDF) and for casing milling operations. It is effective over a broad range of temperatures.

Typical Physical Properties

Physical appearance	Granular, free flowing, off-white powder
Odor	Odorless
Specific gravity	2.6 – 2.9
pH	9.5 – 10.0 (1% slurry in water)
Solubility (in water)	Slight
Bulk density	40.51 lb/ft ³ (648 kg/m ³)

Applications

DRILPLEX mixed metal oxide extends the rheology of bentonite slurries by adsorbing onto the clay platelets to form a strong, stable complex that is sensitive to anionic products and some salts. It provides improvements in shale stabilization and solids tolerance.

The addition of this product structures the bentonite to produce a very flat, shear-thinning rheological profile with low plastic viscosity, high yield point and flat gel strengths.

The high viscosities achieved at lower shear rates (3 and 6 rpm) allow excellent hole cleaning capabilities and suspension properties and reduced flow through fractures. Flow at the wellbore face is low-to-zero, so mechanical washout is minimized.

The DRILPLEX bentonite complex is an excellent bridging agent and acts to prevent solids invasion when drilling into many reservoirs. The filtercake is external and easily removed.

DRILPLEX extender is not compatible with anionic materials. The use of dispersants and anionic polymers (such as CMC and PAC) will destroy the rheological advantages.

A 1:10 ratio of DRILPLEX extender to bentonite specially designed for this application is normally recommended although salinity and density affect the ratio. Typical concentrations are 0.8 to 1.2 lb/bbl (2.3 to 3.4 kg/m) of DRILPLEX extender and 8 to 12 lb/bbl (23 to 34 kg/m) of bentonite.

Higher concentrations may be needed for casing milling applications. The ratio of DRILPLEX extender to bentonite should be increased to 1:8 for reservoir drilling to ensure that an excess of polymer is present.

Advantages

- Excellent milling fluid
- Protects reservoir from solids invasion
- Minimizes mechanical washout
- Superior hole cleaning and suspension
- Controls losses

Limitations

- Sensitive to dispersants and anionic polymers

Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet (MSDS).

Packaging and Storage

DRILPLEX extender is packaged in 25-lb (11.35-kg) multi-wall, polyester bags, impregnated with a 1.0-mm aluminum liner.

Store in a dry location away from sources of heat or ignition, and minimize dust.



P.O. Box 42842
Houston, Texas 77242-2842
www.miswaco.com
E-mail: questions@miswaco.com

This document is supplied solely for informational purposes and M-I SWACO makes no guarantees or warranties, either expressed or implied, with respect to the accuracy and use of this data. All product warranties and guarantees shall be governed by the Standard Terms of Sale.



**SAFETY DATA SHEET
DRILPLEX***

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name DRILPLEX*

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

Identified uses Rheology modifier

1.3. Details of the supplier of the safety data sheet

Supplier M-I Australia Pty Ltd
Level 11
251 Adelaide Terrace
Perth
WA 6000
T = 08 9440 2900

Manufacturer M-I SWACO
A Schlumberger Company
Endeavour Drive
Arnhall Business Park, Westhill
Aberdeen AB32 6UF
Scotland UK
T = +44 (0)1224-742200
F = +44 (0)1224-742288
E-mail = MBXMSDS-EH@miswaco.slb.com

1.4. Emergency telephone number

(24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 561 1600.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Not classified.

2.2. Label elements

Risk Phrases NC Not classified.

Safety Phrases NC Not classified.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

ALUMINIUM OXIDE/HYDROXIDE	30-60%
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.

DRILPLEX*

UREA		10-30%
CAS-No.: 57-13-6	EC No.: 200-315-5	
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.	
MAGNESIUM OXIDE		10-30%
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.	
SODIUM CARBONATE		1-5%
CAS-No.: 497-19-8	EC No.: 207-838-8	
Classification (EC 1272/2008) Eye Irrit. 2 - H319	Classification (67/548/EEC) Xi;R36	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition Comments

The data shown is in accordance with the latest EC Directives.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Get medical attention if any discomfort continues.

Ingestion

Do not induce vomiting. Immediately give a couple of glasses of water or milk, provided the victim is fully conscious. Get medical attention if any discomfort continues.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation.

Irritation of nose, throat and airway.

Ingestion

Nausea, vomiting.

Skin contact

Prolonged skin contact may cause redness and irritation.

Eye contact

Irritating and may cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed

Get medical attention if any discomfort continues.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

DRILPLEX***Extinguishing media**

Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture**Hazardous combustion products**

When heated, vapours/gases hazardous to health may be formed.

Unusual Fire & Explosion Hazards

High concentrations of dust may form explosive mixture with air.

5.3. Advice for firefighters**Special Fire Fighting Procedures**

Containers close to fire should be removed immediately or cooled with water.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Avoid generation and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Product becomes slippery when wet.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Avoid inhalation of dust and contact with skin and eyes. Avoid handling which leads to dust formation.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
ALUMINIUM OXIDE/HYDROXIDE	WEL		10 mg/m ³			
MAGNESIUM OXIDE	WEL		10 mg/m ³			as Mg

WEL = Workplace Exposure Limit.

SODIUM CARBONATE (CAS: 497-19-8)**DNEL**

Inhalation.	Long Term	Local Effects	10 mg/m ³
Inhalation.	Short Term	Local Effects	10 mg/m ³

UREA (CAS: 57-13-6)**DNEL**

Dermal	Short Term	Systemic Effects	580 mg/kg
Inhalation.	Short Term	Systemic Effects	292 mg/m ³
Dermal	Long Term	Systemic Effects	580 mg/kg
Inhalation.	Long Term	Systemic Effects	292 mg/m ³

PNEC

Freshwater	0.047 mg/L
------------	------------

8.2. Exposure controls**Protective equipment**

DRILPLEX*

**Process conditions**

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists. Wear mask supplied with: Dust filter P2 (for fine dust).

Hand protection

Use protective gloves made of: Neoprene. or Nitrile.

Eye protection

Wear approved chemical safety goggles where eye exposure is reasonably probable.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact. Provide eyewash station.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<u>Appearance</u>	Powder, dust
<u>Colour</u>	Off-white
<u>Odour</u>	Odourless.
<u>Solubility</u>	Slightly soluble in water.
<u>Relative density</u>	2.6 - 2.9 sg @20°C
<u>Bulk Density</u>	650 - 800 kg/m ³
<u>pH-Value, Diluted Solution</u>	9.0 - 10.5 @ 1%

9.2. Other information

Not relevant

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not known.

10.4. Conditions to avoid

Avoid wet and humid conditions.

10.5. Incompatible materials**Materials To Avoid**

Not known.

10.6. Hazardous decomposition products

When heated, vapours/gases hazardous to health may be formed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Aspiration hazard:**

DRILPLEX*

Not anticipated to present an aspiration hazard based on chemical structure.

Inhalation

Dust may irritate respiratory system or lungs.

Ingestion

May cause gastric distress, nausea and vomiting if ingested.

Skin contact

Prolonged and frequent contact may cause redness and irritation.

Eye contact

Particles in the eyes may cause irritation and smarting.

Route of entry

No route of entry noted.

Target Organs

No specific target organs noted

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

Contact M-I SWACO's QHSE Department for ecological information at env@miswaco.slb.com.

12.1. Toxicity**Acute Fish Toxicity**

Not considered toxic to fish.

12.2. Persistence and degradability**Degradability**

There are no data on the degradability of this product.

12.3. Bioaccumulative potential**Bioaccumulative potential**

No data available on bioaccumulation.

12.4. Mobility in soil**Mobility:**

Slightly soluble in water.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Recover and reclaim or recycle, if practical. Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION**General**

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

DRILPLEX*

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards**Environmentally Hazardous Substance/Marine Pollutant**

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Uk Regulatory References**

Chemicals (Hazard Information & Packaging) Regulations. Control of Substances Hazardous to Health Regulations 2002 (as amended) Workplace Exposure Limits EH40.

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Water hazard classification

WGK 1

New Zealand Hazard Classification

Not Classified.

HSNO Approval No.

Not required.

15.2. Chemical Safety Assessment**International Chemical Inventories**

Contact REACH@miswaco.slb.com for REACH information. Complies with the following national/regional chemical inventory requirements: Canada (DSL / NDSL), China (IECSC), Europe (EINECS / ELINCS), Japan (METI / ENCS), New Zealand (NZIoC), Phillipines (PICCS),

SECTION 16: OTHER INFORMATION**Abbreviations and acronyms used in the safety data sheet**

*a mark of M-I L.L.C.

General information

HMIS Health - 2 HMIS Flammability - 1 HMIS Physical Hazard - 0 E - Safety glasses, Gloves, Dust Respirator

Information Sources

Product information provided by the commercial vendor(s). Material Safety Data Sheet, Misc. manufacturers. LOLI. European Chemicals Bureau - ESIS (European Chemical Substances Information).

Revision Comments

General revision. Compiled or revised by Sandra McWilliam

Issued By Bill Cameron

Revision Date 17-Apr-12

Revision 4

Supersedes date 05-May-09

SDS No. 12564

Risk Phrases In Full

R36 Irritating to eyes.

NC Not classified.

Hazard Statements In Full

H319

Causes serious eye irritation.

Disclaimer

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.