APPLICATION TO OPERATE A FACILITY

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT
2045 MORSE ROAD, BUILDING F-2
COLUMBUS, OHIO 43229-6693
(614) 265-6922

1	Name of Applicant: Liquid Waste Solidification LLC Phone #: 330-502-4454				
	Address: 2337 Watson Marshall Rd McDonald, OH 44437				
	Date: 12/19/13 eMail Address: John@liquidwastesolidificationllc.com				
_	For an Order or a Permit to Operate: Existing Facility New Facility				
2.	PURPOSE OF FACILITY: Storage Recycling Treatment				
	(Check all that Apply)				
3.	TYPE OF MATERIAL:				
	☐ Brine ☑ Drill Cuttings				
	Drilling Mud Other Waste Substance (explain)				
-	Carte Trace Substance (explain)				
4.	If a Business Entity, list the statutory agent and include a certified copy of their appointment:				
Name: N/A					
_	Address:				
5.	Engineer of Record:				
	Name: N/A				
	Address:				
	Ohio Professional Engineering License Number:				
6.	Address of Facility:				
	Address: 440 South Third St Steubenville, OH 43952				
	County:Jefferson				
	Township: N/A				
	Municipal Corporation: Steubenville				
	Latitude:40°21'4.50"N				
	Longitude: 80°37'3.39"W				
7.	Write a brief description of the facility and operations: Liquid Waste Solidification LLC is a Pre Frac Non Hazardous solidifation				
	racinty. We solidily 100% of all liquids that are brought into our facility. We are a fully in the state of the				
	The state of the s				
	and mix with an exclusion. Once the material is to all the material is the mat				
	pass the paint little tests we then load it into a truck and ship it to our local landful appropriate				
	material when it arrives to assure that it is all pre frac non hazardouse material and to ensure it isn't flow back. It is manifested and tracked from the point of orgin the rig site, to the haulers, to Liquid Waste Solidifcation LLC, and then to its final disposal site APEX				
	Landfill. We are a newer facility average handeling anywhere from 100 to 500 barrels a week presently.				
	desing anywhere from 100 to 500 parreis a week presently.				
8.	An application for a facility shall in the state of				
	An application for a facility shall include the information Application for Order. Attach Additional Documents				
or un	andersigned, being first duly sworn, depose and state under penalties of law, that I am authorized to make this application, that this application that this application, and that the facts stated herein are true, correct, and complete, to the best of my knowledge.				
I cert	er my supervision and direction, and that the facts stated herein are true, correct, and complete, to the best of my knowledge. The facility will comply with or is currently in compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms are compliance with all provisions of Chapter 1509 ORC, chapter 1501 OAC, and all terms are completed with a chapter 1501 OAC, and all terms are completed with a chapter 1501 OAC, and all terms are chapter 1501 OAC, and all terms are chapter 1501 OAC, and all terms are chapter 1501 OAC,				
	of the state of th				
Signa	ure of Authorized Agent				
Nam	(Type or Print) John Ackworth Title UP				
Swor	to and subscribed before me this the day of le combat 20 /3.				
	DATA 1.				
2812 4	09.22 (12/2013) (Notary Public)				
ב אמכ	09.22 (12/2013) (Notary Public)				



O Ø / 27 / 20 / 7 (Date Commission Expires)

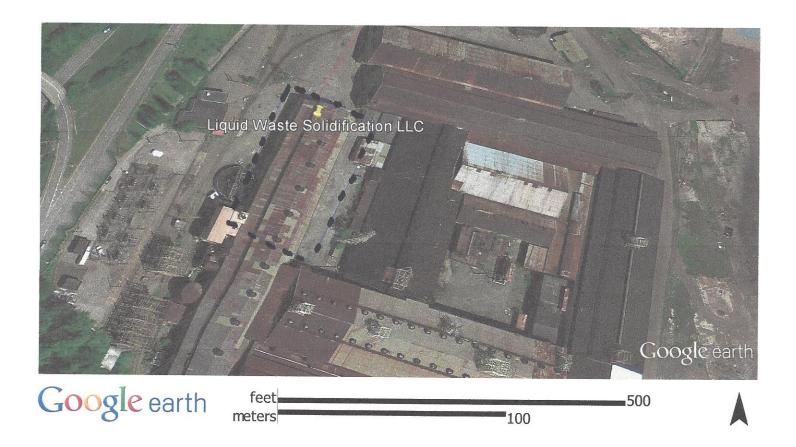


View of full facility

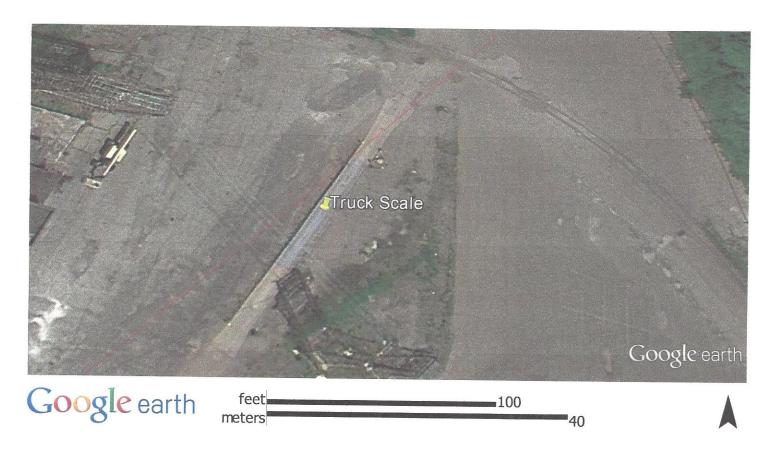
Red line High lights road way to LWS Building

Blue line High lights facility Building.

Half Building being used by us now second half available for future growth.



----- High light current facility Space.

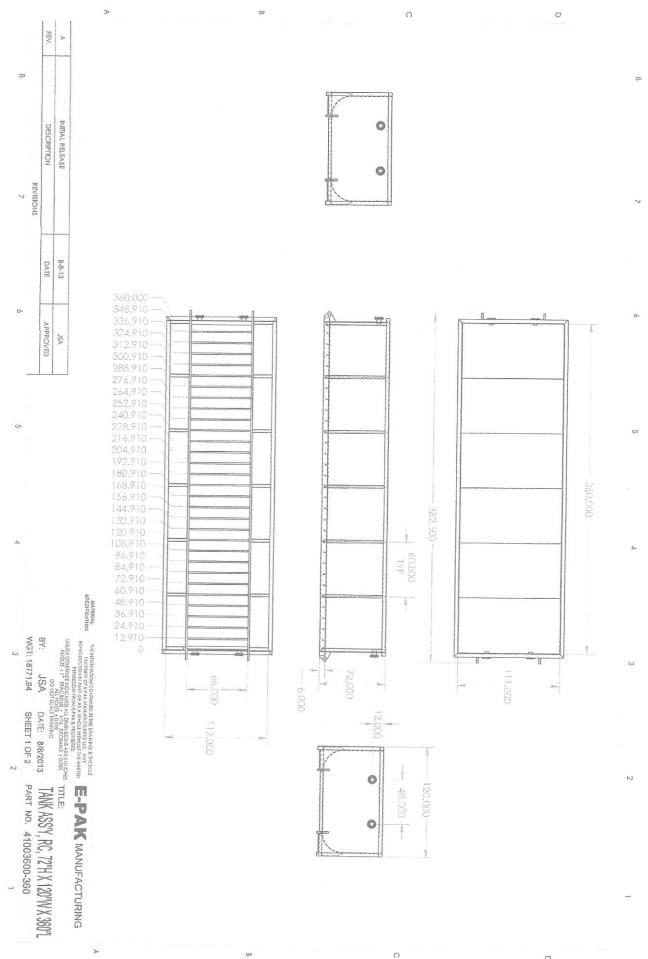


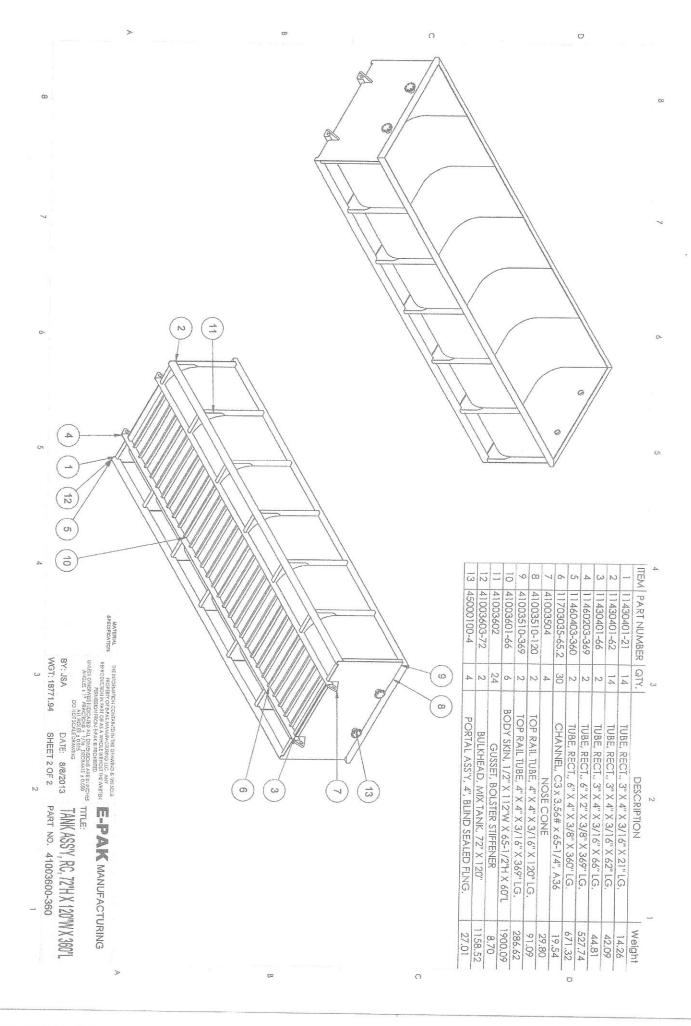
If needed truck Scale on site

Facility Interior Layout. Schematic Storage & Capacity

201,40 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4	clast
	5 Bin 6 7,000 golon cap.
	3 fin 4 Troco gellencer.
8 Bin 7 7,000 gillen Capacity	2 Bin 2 good flow cap.
10 Bin 9 8 Bin 7	Schidification Naterial Standon 2 Standon 15 Grap 10' wide Each Bin 15 Grap 10' wide

Facility Casedillities; 35,000 gallons Capacity, can be turned twice a day (70,000 gall perday) Facility could handle up to 600,000 bannels for year







Carmeuse Lime & Stone 11 Stanwix Street, 21st Floor Pittsburgh, PA 15222 Phone: 412-995-5500

Fax: 412-995-5594

Date of Origin: 06/05/2002 Date of Revision: 9/14/2012 Revision No.

Material Safety Data Sheet

Product Name:

DOLOMITIC QUICKLIME

* Lime only being used for binding moisture in solidification. INFOTRAC: 800-535-5053 [In case of an emergency call this number 24 HOURS a day 7 DAYS a week.]

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1. Identification of the substance:

Chemical name:

Calcium magnesium oxide

Product name:

InjectoLimeTM Pebble Lime-Large, Pebble Lime-Small, Pebble Lime-

Rescreened, Mini Pebble, Pebble Lime, Rice, Fines, Pulverized Lime,

Dolopel, Dolopel Fines, HD Dolopel

Formula: CAS#:

MgO · CaO

Molecular Weight:

37247-91-9 96.38

Material Uses:

Water treatment, steel flux, caustic agent, pH adjustment, acid gas

absorption, construction

1.2. Company:

Main Office:

11 Stanwix Street, 21st Floor

Pittsburgh, PA 15222

Telephone: 412-995-5500

412-995-5594

Canadian Office:

P.O. Box 190

Telephone: 519-423-6283

Ingersoll, Ontario N5C 3K5

Fax:

519-423-6545

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	% by Weight	CAS#	Exposure Limits
Calcium oxide	> 55	1305-78-8	OSHA PEL: 5 mg/m ³ ACGIH TLV: 2 mg/m ³ O. Reg. 833 TWAEV: 2 mg/m ³
Magnesium oxide	>21	1309-48-4	OSHA PEL: 10 mg/m ³ ACGIH TLV: 10 mg/m ³ O. Reg. 833 TWAEV: 10 mg/m ³
Iron Oxide	< 2	1309-37-1	OSHA PEL: 10 mg/m ³ ACGIH TLV: 5 mg/m ³ O. Reg. 833 TWAEV: 5 mg/m ³
Silica - crystalline quartz	<2	14808-60-7	OSHA PEL*: 7.5 mg/m³ (total dust); 2.5 mg/m³ (respirable) ACGIH TLV: 0.025 mg/m³ (respirable) O. Reg. 845: 0.1 mg/m³
*PEL (total dust) = (30 mg/m ³) / (%	silica + 2); PEL (respirable) =	(10 mg/m ³)/(% silic	ca + 2)

DOLOMITIC QUICKLIME (continued)

3. HAZARDS IDENTIFICATION AND CLASSIFICATION

Overview: Dolomitic Quicklime is in the form of lumps, pebbles, granules or powder and is odorless, white

or grayish-white in color. Contact can cause irritation to eyes, skin, respiratory system, and gastrointestinal tract. Contact may aggravate disorders of eyes, skin, gastrointestinal tract, and

respiratory system.

Eyes: Can cause severe irritation or burning of eyes, including permanent damage.

Skin: Can cause severe irritation or burning of skin, especially in the presence of moisture.

Ingestion: Can cause severe irritation or burning of gastrointestinal tract if swallowed.

Inhalation: Can cause severe irritation or the respiratory system. Long-term exposure may cause permanent

damage. Dolomitic Quicklime is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product may contain crystalline quartz silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled. Inhalation of silica can also cause a chronic lung

disorder, silicosis.

Irritant: Eyes, mucous membranes, moist skin, respiratory tract.

Flammability: This product is not flammable or combustible Explosive: This product is not explosive in dust form

Reactivity: May react violently with strong acids producing heat and possible steam explosion in confined

space

Symbols: WHMIS Symbol: "E" Corrosive Material; "D2A" Materials causing other toxic effects

4. HEALTH EFFECTS AND TREATMENTS

Health Effects:

Inhalation: Acute: irritation, sore throat, cough, sneezing. Chronic: persistent coughing and breathing

problems. Long-term exposure to silica can cause a chronic lung disorder, silicosis.

Eyes: <u>Acute</u>: severe irritation, intense tearing, burns. <u>Chronic</u>: possible blindness when exposure is

prolonged.

Skin: Acute: removes natural skin oils, blotches, itching and superficial burns in case of sweating.

Chronic: no known effects.

Ingestion: Acute: sore throat, stomach aches, cramps, diarrhea, vomiting. Chronic: no known effects.

Treatments:

Inhalation: Move victim to fresh air. Seek medical attention if necessary. If breathing has stopped, give

artificial respiration.

Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes. Pull back the eyelid

to make sure all the lime dust has been washed out. Seek medical attention immediately. Do

not rub eyes.

Skin: Flush exposed area with large amounts of water. Seek medical attention immediately.

Ingestion: Give large quantities of water or fruit juice. Do not induce vomiting. Seek medical attention

immediately. Never give anything by mouth if victim is rapidly losing consciousness or is

unconscious or convulsing.

DOLOMITIC QUICKLIME (continued)

5. FIRE FIGHTING MEASURES

Flash point:

Non-flammable

Autoignition temperature:

Non-flammable

Inflammability limits:

None

Explosion risk:

None by itself, but heat produced by reaction with strong acids can

generate steam and pressure

Hazardous combustion products:

None

Extinguishing media:

Use dry chemical fire extinguisher. Do not use water or halogenated compounds, except that large amounts of water may be used to deluge small quantities of hydrated lime. Use appropriate extinguishing

media for surrounding fire conditions.

Fire fighting instructions:

Keep personnel away from and upwind of fire. Wear full fire-fighting

turn-out gear (full Bunker gear), and respiratory protection (self-

contained breathing apparatus).

6. ACCIDENT PREVENTION MEASURES

Individual and collective precautions:

Avoid creating conditions which release dust - use mechanical

ventilation to remove dust from work spaces

Avoid inhalation of dust:

Wear respiratory protection - minimum NIOSH N-95 Dust Mask

Cleaning methods for spills:

Use personal protective equipment (eyes, skin and inhalation, see Section 8). Use dry methods (vacuuming, sweeping) to collect spilled materials. Avoid generating dust. For large spills, evacuate area downwind of clean-up area operations to minimize dust exposure. For small spills, store spilled materials in dry, sealed plastic or metal containers. Dust residue on surfaces may be washed with water.

Precautions for the protection of

the environment:

May not be released into surface waters without controls (increases pH)

Waste Disposal:

Dispose according to federal, provincial/state and local environmental

regulations

7. HANDLING AND STORAGE

Handling:

In open air or in ventilated places, avoid skin and eye contact, avoid creating airborne dust

Storage:

Store in dry places sheltered from humidity. Keep away from acids and incompatible substances

Keep out of reach of children

DOLOMITIC QUICKLIME (continued)

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits: Calcium oxide: 5 mg/m³ (OSHA); 2 mg/m³ (ACGIH, O. Reg. 833);

Magnesium oxide: 15 mg/m³ (OSHA); 10 mg/m³ (ACGIH, O. Reg. 833)

Iron oxide: 10 mg/m³ (OSHA); 5 mg/m³ (ACGIH, O. Reg. 833)

Silica (crystalline quartz): 7.5 mg/m³ (total dust); 2.5 mg/m³ (respirable) (OSHA);

0.05 mg/m³ (respirable - ACGIH); 0.1 mg/m³ (O. Reg. 845)

Engineering Controls: Use ventilation and dust collection to control exposure to below applicable limits.

Respiratory Protection: Wear NIOSH N-95 Dust Mask.

Eye Protection: Eye protection (chemical goggles, safety glasses and/or face shield) should be

worn where there is a risk of lime exposure. Contact lenses should not be worn

when working with lime products

Hand Protection: Use clean dry gloves

Skin Protection: When there is a risk of skin contact, wear suitable clothing to prevent such

contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Odor & Appearance: Odorless, white, grayish-white powder

pH: 12.4 in saturated water solution at 25°C

Melting point: 2570° C
Boiling point: 2850° C

Vapor pressure:

Vapor density:

Non volatile

Specific Gravity:

2.0 – 2.8

Solubility: Reacts with water to produce Ca(OH)₂ and Mg(OH)₂ with large amounts of heat.

Soluble in acids, glycerin and sugar solutions

10. STABILITY AND REACTIVITY

Stability: Reacts with water to form Ca(OH)₂, Mg(OH)₂ and heat.

Decomposition temperature: None

Reactivity: Reacts with acids to form calcium salts while generating heat.

Reacts with carbon dioxide in air to form calcium carbonate.

Conditions to avoid: Vicinity of incompatible materials

Incompatible materials: Acids; reactive fluoridated, brominated or phosphorous

compounds; aluminum (may form hydrogen gas), reactive powdered metals; organic acid anhydrides; nitro-organic

compounds; interhalogenated compounds

Hazardous decomposition products: None

DOLOMITIC QUICKLIME (continued)

11. TOXICOLOGICAL INFORMATION

Toxicity: This product is not listed by MSHA, OSHA, or IARC as a carcinogen, but this product

may contain crystalline silica, which has been classified by IARC as (Group I)

carcinogenic to humans when inhaled in the form of quartz or cristobalite. No reported

Carcinogenicity, Reproductive Effects, Teratogenicity or Mutagenicity.

Exposure Limits: Refer to Section 8

Irritancy: Can cause severe irritation of eyes, skin, respiratory tract and gastrointestinal tract.

Chronic Exposure: Inhalation of silica can cause a chronic lung disorder, silicosis.

12. ECOLOGICAL INFORMATION

Alkaline substance that increases pH to a maximum of 12.4 in a saturated water solution at 25°C Calcium magnesium oxide gradually reacts with CO₂ in air to form calcium carbonate (CaCO₃) Calcium carbonate is ecologically neutral

Uncontrolled spillage in surface waters should be avoided since the increase pH could be detrimental to fish Harmful to aquatic life in high concentration

13. DISPOSAL CONSIDERATIONS

Dispose according to federal, provincial/state and local environmental regulations.

14. TRANSPORTATION INFORMATION

Classification: TDG Not listed for ground transportation

HMR Not listed for ground transportation

TDG: Transportation of Dangerous Goods Regulation (CAN)

HMR: Hazardous Materials Regulation (USA)

DOLOMITIC QUICKLIME (continued)

15. REGULATORY INFORMATION

Symbol:

WHMIS RATING

D2A, E

NFPA RATING

HEALTH - 3 SPECIFIC HAZARD - ALK FLASH POINTS - 0 REACTIVITY - 1

HMIS RATING

HEALTH - 2 SPECIFIC HAZARD - ALK FLASH POINTS - 0 REACTIVITY - 1

Risk Phases:

Risk of serious damage to the eyes

Keep out of reach of children

Safety Phases:

Keep storage container away from humidity

Avoid contact with skin and eyes. In case of contact with eyes, rinse

immediately with water for at least 15 minutes

CPR (Canada):

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) of Canada and this MSDS contains all

information required by the CPR.

16. MISCELLANEOUS OTHER INFORMATION

Lime dust can be removed from objects (such as vehicles) using rags dampened with dilute vinegar. After applying dilute vinegar, vehicles (especially chrome surfaces) must be washed with water.

The information contained herein is believed to be accurate and reliable as of the date hereof. However, Carmeuse makes no representation, warranty or guarantee as to results or as to the information's accuracy, reliability or completeness. Carmeuse has no liability for any loss or damage that may result from use of the information. Each user is responsible to review this information, satisfy itself as to the information's suitability and completeness, and circulate the information to its employees, customers and other appropriate third parties.

440 South 3rd St. Steubenville, OH 43952 (330) 502-4454



	 /
Time:	AM/PM

	7		
	NON-HAZARDOUS WAS	TE MANIFEST Document	t No: LV/S /22222112
SECTION 1	THIS SECTION TO BE COMPLETED B	Y GENERATOR:	1///
GENERATOR NAME	ADDRESS	CONTACT NAME/PHONE I	VO.
CITY	STATE	ZIP CODE	
NAME OR DESCRIPT	TION OF NON HAZARDOUS MATERIAL TRANSPORTED		
GENERATOR SITE NO	D./ PAD NAME ADDRESS	COUNTY	
CITY	STATE	ZIP CODE	
IN CASE OF AN	NAME P	PHONE	24-YR EMERGENCY NO.
EMERGENCY OR SPILL CONTACT			
proper condition for tra applicable regulations of EPA.	are properly classified, narked and labeled and are in ansportation according to the of the DOT/ODOT and the		DATE
SECTION 2	THIS SECTION TO BE COMPLETED B	Y THE HAULER/TRANSPORTER:	
COMPANY NAME	ADDRESS		PHONE NO.
TRUCK I.D. NO.	STATE BIN #	ZIP CODE BARRALS	JOB /REFERENCE NO.
TRANSPORTATION CO		:	
were accepted for trans	printed material(s) sportation at the Generator's id off-loaded at the Non- ity, both as listed PRINT DRIVER 5 NAME DRIVER'S SIGNATURE		DATE
SECTION 3	THIS SECTION TO BE CO (IPLETED BY	SOLIDIFICATION FACILITY:	
Sawdust	Assessed Assessed Contraction	Other:	
ight Solids/Mud	Wedium/Hoovy Solids (Mad	ement Solids/Oil Based Mud On	
I hereby certify that the	above described d to this Facility, that the d permitted to receive	ment soliday on based wind	her:
ECTION 4	THIS SECTION TO BE COMPLETED BY	RECEIVER AT DISPOSAL SITE:	
ACILITY NAME	ADDRESS		PHONE NO.
ITY	STATE	710 (100)	
OMMENTS		ZIP CODE	
I hereby certify that the a materials were delivered Facility is authorized and such Non-Hazardous Mate	to this Facility, that the permitted to receive		DATE

QUANITY TO BE DETERMINED AT DISPOSAL FACILITY
SOLIDIFICATION FACILITY - COPY 1

Disposal Manifest No:

A State of the

SOLIDIFICATION FACILITY - COPY 1 HAULER/TRANSPORTER - COPY 2 DISPOSAL FACILITY - COPY 3

Please make sure "Transportation" is corrected

Hi-Ligheted Yellow

Liquid Waste Solidification LLC (LWS) Operational Plan for Ohio Department of Natural Resources (ODNR)

LWS is a solidification company for the oil and gas industry. LWS will be only dealing with PRE FRAC NON HAZARDOUS material. LWS operation will be located at 440 South 3rd Street in Steubenville, Ohio 43952. It will be ran out of an old steel mill that is a 58,000sf warehouse. The warehouse is a steel building sitting on 36" thick concrete flooring. There is no plumbing in the building currently and will remain that way. LWS will be bringing in porta potties for restroom facilities for employees. LWS will be complying with all federal, state, and local laws and regulations. LWS will have all necessary permitting and licensing from the local governing agencies. LWS will be solidifying every drop of liquid that comes in its doors and disposing of it at select landfills. LWS will not be removing any dirty surface waters and trying to clean it, it will all be solidified.

Material Process:

Material will be trucked in by sub contractors hired by the rig sites.

Upon arriving at LWS the driver will come into the office and login with the following information:

- 1. Site of material origination
- 2. Type and amount of material
- 3. Transporting Trucking companies Information
- 4. Truckers name, Drivers license number, Truck number, Manifest #, Truck type
- 5. Time / Date In

(Truck drivers will sign for their hauling company, the rig site company, as well as personally stating that all information he provided is true and accurate)

Trucker will be then assigned a bin number to take his material to and be given a material ticket for the LWS employee that assists in the unloading to verify material amounts and type.

Upon arriving at the assigned bin a containment catch container will be placed under the rear of the truck to catch any and all material that may leak out during transfer of material.

Upon completion of transfer of material the truck driver will have their ticket signed by the LWS employee verifying the material consistency was what driver claimed as well as the amount, and that it was placed in the proper bin.

^{*}Plan subject to change at any time to better the company.

Liquid Waste Solidification LLC (LWS) Operational Plan for Ohio Department of Natural Resources (ODNR)

Driver will then take ticket to office window to sign and log out and be given his receipt.

Once material is in bin depending on the material and consistency of it an LWS employee will choose which solidification material will be used (saw dust or quick lime) and how much to get it to the acceptable level of solidification to meet all requirements by the landfill as well as the EPA, ODNR, & ODH. Attached is the MSDS sheets for our solidification materials.

Material will be then mixed by an LWS excavator.

Once material is to acceptable standard it will be tested with the paint strainer test.

Upon passing the material will be then loaded by excavator into lined dump trucks/trailers for transport to the landfill. Upon being loaded the truck driver will login at the office with the following:

- 1. Transporting Trucking companies Information
- 2. Truckers name, Drivers license number, Truck number, Manifest #, Truck type
- 3. Time out

Trucker will be then assigned a dump load ticket with all necessary information for the landfill.

When trucker returns from landfill he will turn in his ticket as well as any and all information and papers issued by the landfill.

Bins:

LWS bins will be 10' wide 30' long and be 5'6" deep. They will be equipped with two 4" fill couplings 2 on each end. They will be made with a 1/2" steel plating . Attached is the engineers drawings of the bins.

Nuisance Issues:

LWS will work with local governing agency to comply will any and all possible issues that may arrive from traffic, dust, and noise. The location is zoned heavy industrial and local officials have given LWS their blessing operating at chosen location.

Closure Plan:

Upon closing business and site LWS will be assuring landlord that they will leave location as it was when first moved in.

^{*}Plan subject to change at any time to better the company.

Liquid Waste Solidification LLC (LWS) Operational Plan for Ohio Department of Natural Resources (ODNR)

Spill Plan:

Because of LWS's centralized location there are multiple clean up companies located within minutes of the plant that can be called at any given time to ensure the spill is cleaned up in a timely matter and to all governing standards. LWS will have absorbent boom snakes on hand and within a moments reach to contain any spill.

Paper Trail:

LWS will have a very thorough and detailed paper trail of every load that comes through its doors from point of origin to point of disposal.

^{*}Plan subject to change at any time to better the company.

Liquid Waste Solidification LLC

General Process Flow Schematic:

