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

RECEIVED
FEB 07 2014
Division of Oil and Gas Resources Management

1. Name of Applicant: K&H Partners, LLC. Phone #: 304-863-8867
Address: 2130 Harris Highway Washington, WV 26181
Date: 2-6-2014 eMail Address: jharper@centralenvironmentalservices.com
For an Order or a Permit to Operate: ☒ Existing Facility ☐ New Facility

2. **PURPOSE OF FACILITY:** ☐ Storage ☐ Recycling ☐ Treatment
(Check all that Apply) ☐ Processing ☒ Disposal

3. **TYPE OF MATERIAL:**
☒ Brine ☐ Drill Cuttings
☐ Drilling Mud ☒ Other Waste Substance (explain) **Flowback water, Produced fluids**

4. **If a Business Entity, list the statutory agent and include a certified copy of their appointment:**
Name:
Address:

5. **Engineer of Record:**
Name: Pickering and Associates
Address: Marietta, Ohio
Ohio Professional Engineering License Number:

6. **Address of Facility:**
Address: 28333 West Belpre Pike Coolville Ohio
County: Athens
Township: Troy
Municipal Corporation:
Latitude: 39.2348151708694
Longitude: -81.7571665787049

7. **Write a brief description of the facility and operations:** UIC injection facility

8. **Include all information as set forth in the "*Guidelines for Application for Chief's Order*". AttachAdditional Documents**

I, the undersigned, being first duly sworn, depose and state under penalties of law, that I am authorized to make this application, that this application was prepared by me or under my supervision and direction, and that the facts stated herein are true, correct, and complete, to the best of my knowledge.

I certify that the facility will comply with or is currently in compliance with all provisions of Chapter 1509 ORC, Chapter 1501 OAC, and all terms and conditions of orders and permits issued by the Chief, Division of Oil and Gas Resources Management.

Signature of Authorized Agent

Name (Type or Print) Jeff D Harper Title C.O.O.

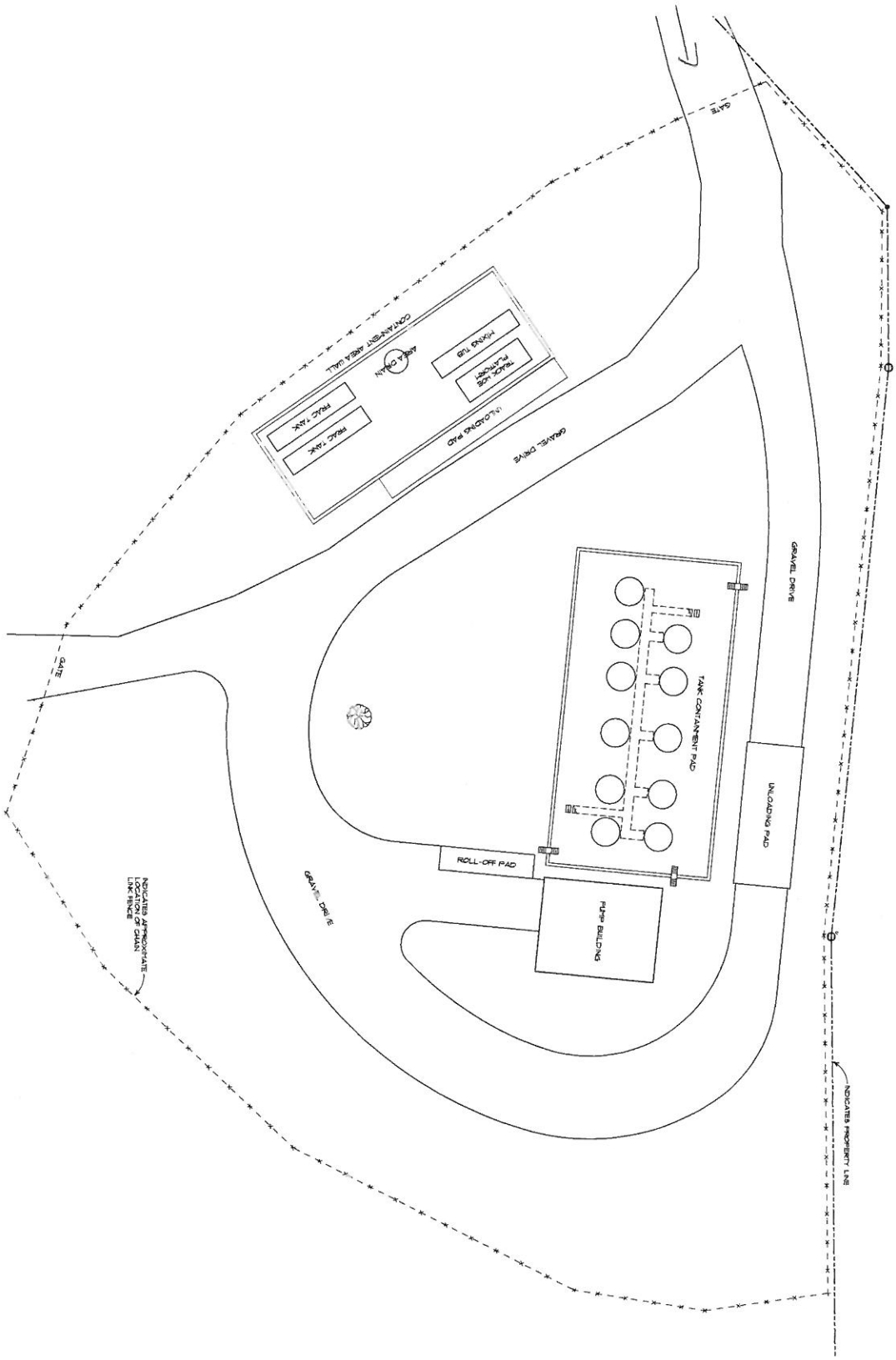
Sworn to and subscribed before me this the 6th day of Feb, 2014.

Official Seal
Notary Public, State Of West Virginia
John P Kiser
J P K Inc
1215 Avery St
Parkersburg WV 26101
My commission expires October 21, 2021

(Notary Public)

10-21-21
(Date Commission Expires)

DNR 1509.22 (12/2013)



SITE PLAN

1" = 20'-0"

N
E
S
W

SHEET	S1
OF	
JOB NO.	2001301
DATE	November 22, 2013
SCALE	
DRAWN	
CHECKED	

BRADLEY S. PAYNE, ARCHITECT
319 PUTNAM STREET LL, MARIETTA, OH 45750
P.O. BOX 534, WATERTOWN, OH 45787
(740) 373-3910
(740) 749-3038
MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

NEW DISPOSAL WELL SITE
FOR
K & H PARTNERS, LLC.
CO. RD. 40 & U.S. 36 TROY TOWNSHIP, OHIO

REVISIONS	BY

Chief's Order Application Requirements

1. Application; Completed and attached
2. Map/Site layout : Attached
3. Detailed explanation of process: Included in UIC injection facility application and supplements.
4. Estimated volume Pre-treatment area: The pre-treatment area will process 300-1,000 barrels per day of water that needs solids removed. All water that does not meet criteria established for acceptance into the UIC injection holding tanks will be sent to the pre-treatment area for solids removal.
5. MSDS for polymer used in conjunction with the centrifuge attached.

Volume: Daily: 300-1,000 barrels Monthly: 9,000-30,000 Barrels yearly: 108,000-360,000 Barrels

6. Methods of documentation.

Type: Visual and electronic metering to show density and total suspended solids

Volume: Electronic metering

Disposition: All solids will be tracked via non-hazardous waste manifest and weigh tickets after disposal at an approved solid waste facility. All liquids will be tracked via standard UIC tracking paperwork .

K&H #1 Pre-treatment Area:

Waste Management Procedures

1. **Characterization of Waste Materials**

a. Acceptance: materials deemed as non-candidates for entry into the injection well facility will be sent to the pre-treatment area and transferred into holding tanks. These materials will have solids above what is acceptable without pre-treatment.

b. Visual tests and subsequent laboratory conformation will be used to characterize loads going to the pre-treatment area.

c. Analytical will be completed to ascertain the solids content of each load. This will be done by a third party laboratory. The following tests will be performed on solids removed by the centrifuge process as required by the landfill. (TPH, DRO, GRO, PAH and 8-RCRA metals) These testes will be done on a periodical basis as required by the accepting landfill.

d. Oil and oil equivalent materials: Any saleable/recyclable product such as condensate or crude oil, discovered in the holding tanks will be pumped and transported for beneficial reuse as a product. Load tickets and chain of custody paperwork will be maintained at the office.

e. MSD Sheets will be available upon request for solidification materials stored on-site.

2. **Management and Tracking of Waste Materials**

a. All waters received will be accompanied by Bill Of Ladings (BOL's) as required by the ODNR.

b. A non-hazardous waste manifest for all waste materials will be generated and accompany each load to the landfill. Copies of these documents will be maintained in an e-file as well as hard copy files. Daily spreadsheets that track site activities will be maintained in connection with all waste manifests.

c. The accepting facility (Northwestern landfill WM) will provide K&H with a signed manifest copy that certifies the load was disposed of at their facility.

3. **TENORM Management**

a. The waste receiving facility (Northwestern landfill WM, Parkersburg, WV.) does not currently require TENORM testing on waste material sent to their facilities in WV. WM does maintain detection equipment that would alert management of any TENORM issues.

4. **Pre-treatment Area Operating Rules**

a. The pre-treatment area will operate under Process Safety Management (PSM) Rules in conjunction with the injection well operating procedures. (PSM operating rules available upon request)

b. All material will be sent through an onsite centrifuge for solids removal.

c. Solids will be collected in roll-off containers for shipment to an off-site landfill.

d. All waste materials or solidification materials will be stored and contained in approved containers at the end of each work shift.

e. All unloading and loading activities will be conducted on the concrete pad constructed for this purpose.

f. All rainwater water will be removed from the containment area and sent to the injection well facility for injection.
g. Additional rules for the area will be added as deemed necessary.

Pre-treatment / Containment Area Details.

Material Type: 60 Mil polyethylene UV resistant liner with textured surface.

Cross Section: (Centrals architect is preparing final drawing to include a cross section of the containment) Drawings will be forwarded to the DOGRAM upon receipt.

Mix Tank: Northeast Industrial Mix Tank. 7.5' x 40' Covered with water proof tarp.

Mixing equipment: Mini-excavator 7500 LBs.

Solidification agent: Wood Pellets/Sawdust (Dried)

Pumps: Vacuum pumps or Double Diaphragm

Storage Tanks: 500 BBL lined carbon steel frac tanks. These tanks will have grounding and lightning systems installed after placement into the containment. These tanks will be lifted into place with a crane to prevent damage to the liner system.

Piping Detail: Victaulic Corp (Piping and Valve Supplier) will provide a CAD drawing of ail piping to include valves used in this process and overfill protection devises. This drawing will be forwarded to DOGRAM upon receipt.

Heat Tracing: Explosion proof electronic heat trace will be applied to valves and piping to prevent ice conditions.

Centrifuge equipment: See spec sheet attached

Polymer injection system: See spec sheet attached.

PRODUCT DATA SHEET

GSE HD Textured Geomembrane

GSE HD Textured is a co-extruded textured high density polyethylene (HDPE) geomembrane available on one or both sides. It is manufactured from the highest quality resin specifically formulated for flexible geomembranes. This product is used in applications that require increased frictional resistance, excellent chemical resistance and endurance properties.

AT THE CORE:
An HDPE geomembrane used in applications that require increased frictional resistance, excellent chemical resistance and endurance properties.

Product Specifications

These product specifications meet GRI GM13

Tested Property	Test Method	Frequency	Minimum Average Value				
			30 mil	40 mil	60 mil	80 mil	100 mil
Thickness, mil Lowest individual reading	ASTM D 5994	every roll	30 27	40 36	60 54	80 72	100 90
Density, g/cm³	ASTM D 1505	200,000 lb	0.940	0.940	0.940	0.940	0.940
Tensile Properties (each direction) Strength at Break, lb/in-width Strength at Yield, lb/in-width Elongation at Break, % Elongation at Yield, %	ASTM D 6693, Type IV Dumbell, 2 ipm G.L. 2.0 in G.L. 1.3 in	20,000 lb	 45 63 100 12	 60 84 100 12	 90 126 100 12	 120 168 100 12	 150 210 100 12
Tear Resistance, lb	ASTM D 1004	45,000 lb	21	28	42	56	70
Puncture Resistance, lb	ASTM D 4833	45,000 lb	45	60	90	120	150
Carbon Black Content, % (Range)	ASTM D 1603*/4218	20,000 lb	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	Note(1)	Note(1)	Note(1)	Note(1)	Note(1)
Asperity Height, mil	ASTM D 7466	second roll	16	18	18	18	18
Notched Constant Tensile Load(2), hr	ASTM D 5397, Appendix	200,000 lb	300	300	300	300	300
Oxidative Induction Time, mins	ASTM D 3895, 200°C; O_2, 1 atm	200,000 lb	>100	>100	>100	>100	>100
TYPICAL ROLL DIMENSIONS							
Roll Length(3), ft	Double-Sided Textured Single-Sided Textured		830 1,010	700 780	520 540	400 410	330 330
Roll Width(3), ft			22.5	22.5	22.5	22.5	22.5
Roll Area, ft²	Double-Sided Textured Single-Sided Textured		18,675 22,725	15,750 17,550	11,700 12,150	9,000 9,225	7,425 7,425

NOTES:
- (1)Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
- (2)NCTL for GSE HD Textured is conducted on representative smooth membrane samples.
- (3)Roll lengths and widths have a tolerance of ±1%.
- GSE HD Textured is available in rolls weighing approximately 4,000 lb.
- All GSE geomembranes have dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77°C when tested according to ASTM D 746.
- *Modified.

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

GSE ENVIRONMENTAL™

DURABILITY RUNS DEEP

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.

TENCATE
Mirafi

Mirafi® 180N

Mirafi® 180N is a nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi® 180N geotextile is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632	N (lbs)	912 (205)	912 (205)
Grab Tensile Elongation	ASTM D 4632	%	50	50
Trapezoid Tear Strength	ASTM D 4533	N (lbs)	356 (80)	356 (80)
CBR Puncture Strength	ASTM D 6241	N (lbs)	2225 (500)	
Apparent Opening Size (AOS) [1]	ASTM D 4751	mm (U.S. Sieve)	0.18 (80)	
Permittivity	ASTM D 4491	sec^{-1}	1.1	
Flow Rate	ASTM D 4491	$l/min/m^2$ ($gal/min/ft^2$)	3870 (95)	
UV Resistance (at 500 hours)	ASTM D 4355	% strength retained	70	

[1] ASTM D 4751: AOS is a Maximum Opening Diameter Value

Physical Properties	Test Method	Unit	Typical Value	
Weight	ASTM D 5261	g/m^2 (oz/yd^2)	271 (8.0)	
Thickness	ASTM D 5199	mm (mils)	1.8 (72)	
Roll Dimensions (width x length)	--	m (ft)	3.8 x 110 (12.5 x 360)	4.5 x 91 (15 x 300)
Roll Area	--	m^2 (yd^2)	418 (500)	
Estimated Roll Weight	--	kg (lb)	120 (265)	

TENCATE
materials that make a difference

FGS000351
ETQR30

OmniSource Energy Services
PO BOX 472
Whitehouse NJ 08888
877-597-5676
info@osenergyservices.com

Material Safety Data Sheet

TRADE NAME OSES Pelletized Absorbent

SYNONYMS Pelletized Absorbent

INGREDIENTS > 99% Wood Fiber CAS. No. 9004-34-6

< 1% Proprietary Additives specific chemical identity is being withheld as a trade secret. The properties, effects and designated exposure limits are as disclosed in this MSDS.

NFPA HAZARD LABEL	Health	Flammability	Reactivity	Special Notice
	1	1	0	None

DESCRIPTION

Wood particles extruded in a proprietary process into cylindrical pellets for use as an absorbent.

PHYSICAL DATA

Boiling Point..... Not Applicable
Specific Gravity..... 1.24
Bulk Density..... 40 lbs/ft³
Vapor Density..... Not Applicable
Percent Volatiles by Volume..... Not Applicable
Melting Point..... Not Applicable
Vapor Pressure..... Not Applicable
Solubility in H_20 (% by weight)..... Not Applicable
Evaporation Rate (Butyl Acetate = 1)..... Not Applicable
pH..... Not Applicable
Appearance and Odor..... Light to dark colored cylinders 3/16" to 3/8" in diameter. Approximately ¼" to 1" long with some crumbled absorbent and dust, Slight wood odor.

FIRE AND EXPLOSION DATA

Flash Point..... Not Applicable
Auto-ignition Temperature..... Variable (typically 400-500° F)
Explosive Limits in Air..... 40 grams/M³ (LEL) for wood dust
Extinguishing Media..... Water, Sand, Carbon Dioxide, Nitrogen
Special Fire Fighting Procedures..... Use water to wet down dust to reduce the likelihood of ignition or dispersion of dust into the air. Remove burned or wet dust to open area after fire is extinguished. Use inert gases to smother fires in enclosed spaces.
Unusual Fire and Explosion Hazard..... Wood dust is a strong to severe explosion hazard if a dust "cloud" contacts an ignition source. Wood heated with limited oxygen will produce CO, CO_2 and hydrocarbons which can explode if oxygen is introduced.

HEALTH EFFECTS INFORMATION

Exposure Limit..... ACGIH TLV®: TWA-5.0 mg/m³; STEL (15 min.) – 10 mg/m³(softwood) TWA – 1.0 mg/m³ (certain hardwoods such as beech or oak)[1]*See footnote below concerning* OSHA PEL: TWA – 15.0 mg/m³ (total dust); *OSHA PELs for wood dust* 5.0 mg/m³ (respirable fraction) Western red cedar: TWA – 2.5 mg/m³
Skin and Eye Contact..... Wood dust can cause eye irritation. Various species of wood dust can elicit allergic contact dermatitis in sensitized individuals.
Ingestion..... Do not ingest. Absorbent will expand in volume when wet. No known harmful effects. If there is any discomfort, consult a physician.
Skin Absorption..... Not known to occur
Chronic Effects..... Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.

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REACTIVITY DATA

Conditions Contributing to Instability..... Stable under normal conditions.
Incompatibility..... Avoid open flame. Product may ignite at temperatures in excess of 400° F.
Hazardous Decomposition Products..... Thermal-oxidative degradation of wood (combustion) may produce irritating and toxic fumes and gases, including carbon monoxide, carbon dioxide, terpenes and polycylic aromatic hydrocarbons.
Conditions Contributing to Polymerization..... Not Applicable

PRECAUTIONS AND SAFE HANDLING

- Avoid Eye Contact.
- Avoid Repeated or Prolonged Contact with Skin. Careful bathing and clean clothes are indicated after exposure.
- Avoid Prolonged or Repeated Breathing of Wood Dust in Air.
- Avoid Open Flame.
- Do Not Ingest.

GENERALLY APPLICABLE CONTROL MEASURES

Ventilation: Provide adequate general and local exhaust ventilation to maintain healthful working conditions. Wear goggles or safety glasses. Other protective equipment such as gloves and approved dust respirators may be needed depending upon dust conditions.

EMERGENCY AND FIRST AID PROCEDURES

Eyes ..... Flush with water to remove dust particles. If irritation persists, get medical attention.
Skin ..... If a rash or persistent irritation or dermatitis occurs, get medical advice before returning to work where wood dust is present.
Inhalation..... Remove to fresh air. If persistent irritation, severe coughing, breathing difficulties occur, get medical advice before returning to work where wood dust is present.
Ingestion..... Do not ingest. Absorbent will expand when wet. If there is any discomfort, consult a physician.

SPILL/LEAK CLEAN UP PROCEDURES

Sweep or vacuum spills for recovery or disposal; avoiding creating dust conditions. Provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for disposal. Absorbent on the floor present a slip and fall hazard.

****

IMPORTANT: The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. OSES makes no warranty of any kind, express or implied, concerning the accuracy or completeness of the information and data herein. OSES will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.

[1]In AFL-CIO v. OSHA 965 F. 2d 962 (11th Cir. 1992) the court overturned OSHA's 1989 Air Contaminants Rule, including the specific PELs for wood dust that OSHA had established at that time THE 1989 PELS WERE: TWA – 5.0 mg/m³; STEL (15 MIN.) – 10.0 mg/m³ (ALL SOFT AND HARD WOODS EXCEPT WESTERN RED CEDAR); WESTERN RED CEDAR: TWA – 2.5 mg/m3.
Wood dust is now officially regulated as an organic dust under the Particulates Not Otherwise Regulated (PNOR) or Inert or Nuisance Dust categories at PELs noted under Health Effects information section of the MSDS. However, A NUMBER OF STATES HAVE INCORPORATED PROVISIONS OF THE 1989 STANDARD IN THEIR STATE PLANS. ADDITIONALLY, OSHA HAS ANNOUNCED THAT IT MAY CITE COMPANIES UNDER THE OSH ACT GENERAL DUTY CLAUSE UNDER APPROPRIATE CIRCUMSTANCES FOR NON-COMPLIANCE WITH THE 1989 PELS.

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Material Safety Data Sheet

TRADE NAME OSES-1 NON-Pelletized Absorbent

SYNONYMS NON-Pelletized Absorbent

INGREDIENTS > 99% Wood Fiber CAS. No. 9004-34-6

< 1% Proprietary Additives specific chemical identity is being withheld as a trade secret. The properties, effects and designated exposure limits are as disclosed in this MSDS

NFPA HAZARD LABEL	Health	Flammability	Reactivity	Special Notice
	1	1	0	None

DESCRIPTION

Light/dark colored granular solid of wood particles treated in a proprietary process for use as an absorbent.

PHYSICAL DATA

Boiling Point..... Not Applicable
Specific Gravity..... Not Applicable
Bulk Density..... 14.5 lbs/ft³
Vapor Density..... Not Applicable
Percent Volatiles by Volume..... Not Applicable
Melting Point.....Not Applicable
Vapor Pressure..... Not Applicable
Solubility in H_20 (% by weight)..... Not Applicable
Evaporation Rate (Butyl Acetate = 1)..... Not Applicable
pH..... Not Applicable
Appearance and Odor..... Light/dark colored granular solid slight wood odor.

FIRE AND EXPLOSION DATA

Flash Point..... Not Applicable
Auto-ignition Temperature..... Variable (typically 400-500° F)
Explosive Limits in Air..... 40 grams/M³ (LEL) for wood dust
Extinguishing Media..... Water, Sand, Carbon Dioxide, Nitrogen
Special Fire Fighting Procedures..... Use water to wet down dust to reduce the likelihood of ignition or dispersion of dust into the air. Remove burned or wet dust to open area after fire is extinguished. Use inert gases to smother fires in enclosed spaces.
Unusual Fire and Explosion Hazard..... Wood dust is a strong to severe explosion hazard if a dust "cloud" contacts an ignition source. Wood heated with limited oxygen will produce CO, CO_2 and hydrocarbons which can explode if oxygen is introduced.

HEALTH EFFECTS INFORMATION

Exposure Limit..... ACGIH TLV®: TWA-5.0 mg/m³; STEL (15 min.) – 10 mg/m³(softwood) TWA – 1.0 mg/m³ (certain hardwoods such as beech or oak)[1]*See footnote below concerning* OSHA PEL: TWA – 15.0 mg/m³ (total dust); *OSHA PELs for wood dust* 5.0 mg/m³ (respirable fraction) Western red cedar: TWA – 2.5 mg/m³
Skin and Eye Contact..... Wood dust can cause eye irritation. Various species of wood dust can elicit allergic contact dermatitis in sensitized individuals.
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Skin Absorption..... Not known to occur
Chronic Effects..... Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.

NEWALTA

What if waste wasn't?

Fact Sheet

DRILL SITE SERVICES

2008

There's a better way to think about waste.

Newalta is Canada's leading industrial waste management and environmental services company. We push beyond conventional thinking about waste, finding solutions that transform it into new products that will contribute to our customer's bottom line and reduce the environmental footprint. Where by-product recovery isn't possible, we find ways to reduce the production of waste at the source.

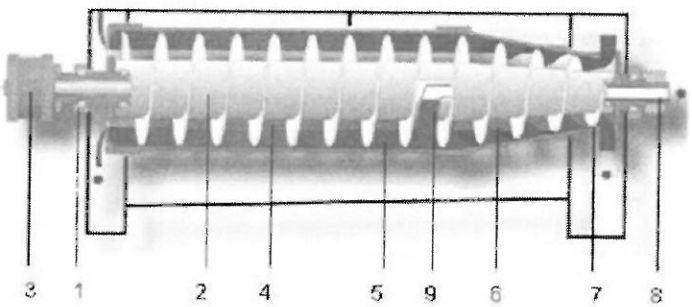
PRINCIPLE OF OPERATION

The process liquid is fed into the cylindrical section, where it forms a layer (the pond) around the bowl wall. The thickness of this layer is established by a series of discharge weirs at the end of the cylindrical section and over which the clarified liquid is decanted, aided by centrifugal force. The solids, being heavier, are collected at the peripheral of the bowl wall, from which they are continuously removed by the screw conveyor. The solids are transported up the conical section (the beach) and out though the discharge ports at the narrow end. At this point, the discharged solids fall into a tank designed for collection of the solids for disposal. The effluent or clarified liquid is gravity fed through piping back to the clean product collection tank.

WORKING PRINCIPLES OF A DECANTER

1. Main Bearing
2. Conveyor
3. Direct drive gearbox
4. "Pond" of clarified liquid
5. Solids deposited on bowl wall
6. Tapered beach section of bowl for discharge of solids
7. 360° solids discharge ports
8. Hollow drive shaft with stationary feed tube
9. Advanced feet inlet

Decanter



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LYNX 40 CENTRIFUGE (FULLY VARIABLE)

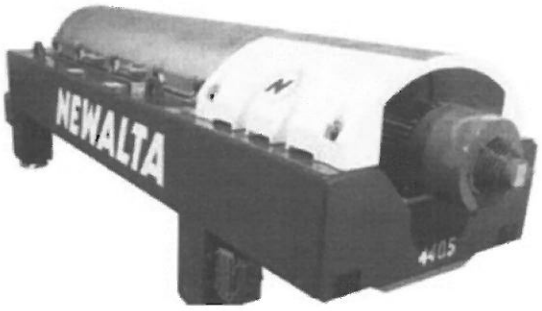
FEATURES

- Variable Main Drive; Variable Back Drive; Variable Feed Pump; (VFD)
- Simple, compact and robust design
- Minimized power consumption with direct drive Gearbox
- Stainless steel critical parts
- Reliability with long service life
- Versatile for use with all types of drilling fluids
- Safety controls

BENEFITS

- Solids removal up to 12.5 tonnes per hour
- Designed to work with all kinds of drilling muds for installations that require a large capacity drilling fluids decanter
- Works with both newer water/synthetics-based mud types and conventional oil-based fluids
- A smaller footprint than a dual decanter solution
- Twice the capacity of conventional decanters
- Increased penetration rates, decreased formation damage
- Lower drilling fluids costs
- Enhanced separation of solids
- Better centrate clarity
- Optimal waste management
- Highest G-Force generated in industry

Lynx 40 Centrifuge (Fully Variable)



LYNX 40 CENTRIFUGE (FULLY VARIABLE)

EQUIPMENT SPECIFICATIONS

MAIN BOWL

- Variable Frequency Drive (VFD)
- Main bowl speed: 1,200 - 3,650 rpm
- Bowl length x diameter: 480 mm x 2,035 mm (19" x 80")
- Type: Duplex stainless steel

BACK DRIVE

- Variable Frequency Drive (VFD)
- Differential conveyor speed: 2 - 40 rpm

CONVEYOR

- Pitch: 1 mm x 152 mm
- Type: Duplex stainless steel

LIQUID LEVELS

- Adjustable
- Plate dam selection: 113 mm - 180 mm

HYDRAULIC CAPACITY

- Water: L/H 120,000 L/M 2,000 GPM 528

Note: Operating flow rate depends on the individual properties of the feed, the solids loading and the separation results required.

SOLIDS REMOVAL

- Rated up to 12.5 tonnes per hour

WEIGHT

- 5,000 kg (11,000 lbs)

DIMENSIONS

- 5.08 m x 1.49 m x 1.36 m (198" x 58" x 53")

ELECTRICAL CLASSIFICATIONS

- Class I, Division II, Group C,D

POWER REQUIREMENT

- Main Drive: 125 HP
- Back Drive: 20 HP
- Feed Pump: 30 HP

PLUG INS REQUIRED

- Two (2) 480 volt, 100 amp

GEAR BOX

Ratio: 169:1

Maximum Torque: 6.0 kNm
53,104 lbf/in

G-FORCE

RPM	G's
1,600	691
2,000	1,079
2,400	1,554
2,800	2,115
3,200	2,763
3,650	3,594