	N	WR
D) [1] 0) State of Oregon Department of Environmental Quality	Application for a Solid Waste Beneficial Use Determination	DEQ USE ONLY - BUSINESS OFFICE Date Received:
A. REFERENCE INFOR	MATION (Please type or print clearly.)	

Ciller Lan	nt	Business name of	<u>ацрзим, Ш</u>	<u></u>	
8823 N.J. Mailing address	Harborgat	City	State	97203 _{Zip}	
<u>503-239-6</u> Phone	K54 Mobile	<u>Сизеу, анес</u> E-mail	elauecoinc.com	503-232-6 Fax	130
Willamette c Generator of solid wast <u>Mailing</u> address	e (may be same as applicar	city	rlan Gypsu State	Zip	
Phone	Mobile	E-mail		Fax	-

- B. TYPE OF BENEFICIAL USE DETERMINATION REQUESTED Beneficial Use Determination applications are categorized based on the type of information and potential amount of work required by DEQ staff to review application materials and render a decision. A tiered review and fee system has been established in rule. The tiers are:
 - Tier 1 For a beneficial use of a solid waste that does not contain hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product and that will be used in a manufactured product;
 - Tier 2 For a beneficial use of a solid waste that contains hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product, or involves application on the land;
 - Tier 3 For a beneficial use of a solid waste that requires research, such as a literature review or risk assessment, or for a demonstration project to demonstrate compliance with this rule.

I am applying for a Tier 1 Tier 2 Tier 3 determination.

- C. DOES THIS PROPOSED BENEFICIAL USE INVOLVE LAND APPLICATION OF ANY MATERIAL?
- D. SIGNATURE I hereby certify by my signature below that the information contained in this application, and the documents I have attached, are true and correct to the best of my knowledge and belief.

Carmolan	Casey Lane	President	9/14/18
Signature of legally authorized representative	Print name	Title	Date

E. REQUIRED ATTACHMENTS TO THIS APPLICATION (For an application to be complete, it must provide the required information for each listed item of the tier which is being applied for.)

Tier 1

- A description of the material, manner of generation, and estimated quantity to be used each year;
- A description of the proposed use;
- A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace;
- A demonstration of compliance with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing; and
- Any other information that DEQ may require to evaluate the proposal.

See ATTAChed A3L LAB WORK

Tier 2

- The information required for a Tier 1 application;
- Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable;
- A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ
- approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels; Location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk;
- Contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude); and
- A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.

Tier 3

- The information required for a Tier 1 & 2 application;
- A discussion of the justification for the proposal;
- An estimate of the expected length of time that would be required to complete the project, if it is a demonstration: and
- If it is a demonstration project, the methods proposed to ensure safe and proper management of the material.
- F. PERFORMANCE CRITERIA (For all tiers An application for a beneficial use determination must demonstrate satisfactory compliance with the following performance criteria.)

The use is productive, including:

- There is an identified or reasonably likely use for the material that is not speculative;
- The use is a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by DEQ, and does not constitute disposal; and <u>See Lab ray</u>
- The use is in accordance with applicable engineering standards, commercial standards, and agricultural in OPP P or horticultural practices.

The use will not create an adverse impact to public health, safety, welfare, or the environment, including:

- ♦ The material is not a hazardous waste under ORS 466.005;
- Until the time the material is used in accordance with a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions;
- Hazardous substances in the material do not significantly exceed the concentration in a comparable raw material or commercial product, or do not exceed naturally occurring background concentrations, or do not exceed acceptable risk levels, including evaluation of persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

The use will not result in the increase of a hazardous substance in a sensitive environment.

The use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions.

The use will comply with all applicable federal, state, and local regulations.

G. FEES (Must accompany the application for it to be considered complete)

Tier 1 beneficial use determination	\$1,000
Tier 2 beneficial use determination	\$2,000
Tier 3 beneficial use determination	\$5,000

Make checks out to: Oregon DEQ

Total fees included:

H. APPLICATION PROCEDURE

<u>Step 1</u>

Contact a DEQ staff person for assistance with the preparation of the application. DEQ staff will help with: 1) Determination of the eligibility for a beneficial use determination of a particular waste or process; and, 2) If eligible, establish the tier of beneficial use determination review required and associated fee to submit with the application.

Step 2

Mail the original signed application, all attachments, including the fee payment plus one extra copy to the appropriate regional office (see listing below.) Note that DEQ review work will not begin until a complete application packet is received. Incomplete applications may be returned. DEQ recommends the applicant keep a full copy of all application materials to guard against possible loss in transit.

Step 3

DEQ will contact the applicant, acknowledging receipt of the application, and will identify the staff person assigned to carryout the review. This staff person will contact the applicant if any additional information is needed.

Region	Counties Served	Address & Phone
Eastern Region	Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler	Eastern Region Department of Environmental Quality 400 E Scenic Drive, Ste 2.307 The Dalles, OR 97058 (541) 298-7255 ext. 221
Northwest Region	Clatsop, Clackamas, Columbia, Multnomah, Tillamook, and Washington	Northwest Region DEQ Solid Waste Programs 700 NE Multnomah Street, Suite 600 Portland, OR 97232 (503) 229-5353
Western Region	Benton, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Polk, and Yamhill	Western Region DEQ Solid Waste Programs 750 Front St. NE Suite 120 Salem, OR 97301 (503) 378-5047

Solid Waste Beneficial Use

Determination Application

Tier 1

Drywall will be recycled. The recycling will concussed of drywall run through a trammel. The gypsum will be separated from the paper backing. The estimated quantity of tons is 144,000.

Urban Gypsum will be for recycling drywall and for the reuse of gypsum. The Gypsum will be used in agriculture as a soils amendment, cement construction and to be re-introduced back into drywall production.

Mind gypsum is fast running out worldwide. Mined gypsum does not break down and release nutrients quickly; it takes three years for this process to occur. Powder gypsum breaks down and releases nutrients in five months. Also gypsum is a soil amendment allowing the soil to both drain the soil and hold water for root growth. The cost to mine gypsum is five times the cost of recovered virgin drywall. Recycled gypsum is a viable replacement to the mined gypsum. Urban Gypsum charges a tipping fee to dump clean gypsum. The amount to tip is less than the tipping fee at metro area fee's. Urban Gypsum can give receipts showing that we are a recycling facility. This will be a big incentive for the general contractor when applying for LEED points.

Tier 2

See attached Lab report from A&L Lab (fertilizer) (metals) there are no heavy metals in our material.

Gypsum is a soil amendment allows the soil to drain also hold water for better root growth the processed gypsum holds and promotes nutrient to easily breakdown to be absorbed through the roots. Urban Gypsum will be selling to agricultural end users.

When gypsum is applied in agronomic rates this material has a beneficial use for agriculture.

F. Performance Criteria:

See A&L Agriculture Lab

Respectfully submitted

Casey Lane Owner Urban Gypsum 503 710 0751

Operations Plan

9/05/18

Urban Gypsum LLC.

Address of facility is 8823 N. Harborgate, Portland, Oregon 97203.

SWBUD Tier #2: Proposal to permit the construct and operate under roof in a contained facility that would recover and process source-separated pre- and post-costumer drywall. The drywall (gypsum) would be generated during construction and demolition projects undertaken by Laneco/Green Demolition Services and other unaffiliated sources/businesses. Per current DEQ requirements all project materials being delivered to any MRF and or landfill facility must be accompanied by a sampling laboratory survey. That survey will be viewed and approved prior to receiving any material at Urban Gypsum. The storage of processed gypsum will be in bagged containers, with an average of 100 tons.

PREVENTING ACCEPTANCE OF ACM IN TO THE URBAN GYPSUM PROCESSING

- . Urban Gypsum requires drywall to have proof of laboratory approved and analytical survey before each load can be accepted at the scale house prior to weighing in. Urban Gypsum will be working with our other company's LaneCo Inc, and Green Deconstruction and a very limited number of pre-approved drywall hanging companies.
- . Load spotters are responsible for reviewing the survey, analytical test results and Urban Gypsum waste acceptance form and verifying the load contents match the description of material on the documents. This is accomplished by visual inspection from a ladder or ground. This process is problematic since materials are often buried or hidden in loads. A second screening occurs after the load is tipped.
- . Urban Gypsum will prohibit the acceptance of all non-drywall related products.
- Rejected loads will be documented by spotters and kept on file at scale-house.
- If the load contains non-drywall material, the spotter records it on a log, collects key documents, assigns the load a unique tracking number and adds the number to the documentation, spotter's log. If the documentation is inadequate or shows the load may still contain ACM, the load is rejected and logged as such.
 - Customers who do not comply with procedures will be rejected and escorted off the property.

IF SUSPECT ASBESTOS MATERIAL IS DISCOVERED IN THE TRANSFER STATION

If the suspect material has been delivered in a dry waste load (no food waste):

- 1. Assume the suspect material is asbestos unless analytical results demonstrate otherwise.
- 2. All unprotected personnel must leave the area.
- 3. All responding staff must have a least two-hour asbestos awareness training.
- 4. Don respiratory protection (HEPA cartridges on a half-mask or full-face respirator), Tyvek coveralls and gloves.
- 5. Wet the entire suspect load to minimize the potential for airborne dust. Do not soak to the point that runoff is created.
- 6. To collect a sample (even just to look at it more closely (, use Level C PPE, wear gloves, make sure the sample is wet and seal it into a zip-lock bag. Do not carry uncontained asbestos materials around the site or take them

indoors. Do not disturb the material any more than is necessary. Date and label the sample. Take the sample to a laboratory for analysis.

- 7. Cover the load with six-mil plastic sheeting.
- 8. While waiting for the test results, the suspect ACM should be segregated and cordoned off to prevent inadvertent mixture or disposal of the material. Facility staff will continue to monitor the material for potential release due to the material drying out and becoming airborne. Continue to wet the material as needed. Document the load on the load check form, attach photos and include information obtained from the driver and scale-house.
- 9. If the analytical results prove the material does not contain asbestos, it may be processed as solid waste. Attach analytical data to the load check form.

In some cases, it may be effective and efficient to assume the material does contain ACM and handle it as such without sampling the materials.

If the analytical results prove the material DOES contain more than 1% asbestos, follow the procedures outlined below.

Cleanup Procedures for Asbestos in the Transfer Station

Urban Gypsum staff who have completed the two-hour asbestos awareness training will determine whether the material to be cleaned up is below or exceeds the threshold amount referenced in OAR340-248-0250 2(g), which provides an exemption from many asbestos handling requirements for a project that involves <u>less than three square feet</u> <u>or three linear feet of ACM</u>. In most cases, a load that contains a small amount of asbestos should not be picked through in order to remove the asbestos. Doing so may release expose workers to fibers that are already mixed with the other waste.

If the material to be cleaned up exceeds this amount, a certified asbestos abatement contractor will be utilized to clean up the material. While awaiting the contractor, the material must be kept wet, covered, delineated and anyone not wearing adequate PPE is to be kept away from the area.

DEQ shall be notified, in writing by the Urban Gypsum staff, within 24 hours of sample results that indicate the material is indeed ACM. Notification should be made to DEQ report line (<u>degnwrasbestos@deq.state.or.us</u>) the report should include a copy of the incident report, analytics and any other supporting information.

The Urban Gypsum contractor shall contact and schedule the incident remediation whenever Urban Gypsum staff are not able to complete cleanup. Whether the material is to be cleaned up by Urban Gypsum staff or by a contractor, <u>DEQ</u> must provide a variance to the negative pressure enclosure (NPE) requirement prior to cleanup.

If the total quantity of material is below the exemption threshold, Urban Gypsum or contractor personnel who have received the two-hour asbestos training may clean it up according to the following procedure:

- 1. Ensure ACM is adequately wetted and covered at all times to prevent airborne exposure.
- 2. Safe work methods and PPE are the best protection from potential asbestos exposure. Use a full-face air purifying respirator or self-contained breathing apparatus. Tyvek suits and hoods provide good protection from asbestos dust.
- 3. Plan to use wet methods for clean-up: spray down the entire area before disturbing any of the material. Use overhead misters throughout the process if possible. Spray surfactant may be used.
- 4. If possible, place six-mil plastic sheet on the ground in the work area to prevent additional contamination. Contain all of the material into six-mil drum liner and seal it with duct tape. Each bag must then be double-

bagged into a yellow asbestos bag and sealed again. The bags must be properly disposed of as asbestoscontaining waste material (ACWM). Note that picking through the debris to recover asbestos may create more potential for exposure. It may be more feasible to contain other debris along with the asbestos material.

- 5. Make sure the load is thoroughly wetted during the removal and loading process.
- 6. Clean up the area where the load was to ensure that there is no visible debris remaining. If using brooms, make sure the area is wet. A HEPA vacuum is also effective for this purpose.
- 7. Once the area is cleaned up so there is no visible debris, hose down the area completely. If other waste in the area is wetted, load that waste into transport trailers as well.
- 8. Properly dispose of the isolated ACM. Urban Gypsum's solid waste permits allow for the HWF to accept up to two 25-pound bags of ACM from a single source. Any cleanup of an exempt amount should be well under this limit. Follow the HWF asbestos standard operating procedure (SOP) for asbestos storage and disposal.

Follow-up and Cost Recovery

Copies of all documentation from unacceptable waste incidents will be submitted to the transfer station operations manager. Customers will be contacted and costs recovered, if appropriate.

Cost recovery may include analytical testing, Urban Gypsum or transfer station staff labor, supplies such as personal protective equipment, abatement, transport and disposal costs, lost operating capacity, and all other fees or penalties under Metro Code.

Urban Gypsum has built into its process to go above and beyond the DEQ mandated survey by performing secondary periodic sampling of materials in and out for ACM.

Approved clean source separated drywall would then be fed into our T42Turbo Separator, manufactured by SCOTT equipment. This tromell style equipment will separate the gypsum from the paper backing. Recovered gypsum would then be sold to industrial and agricultural markets.

Example #1: Gypsum is used as a soil amendment aiding in the ability to break clay type soils allowing for the farm product to have suitable soil conditions.

Example #2: Wallboard manufactures can also utilize recycled gypsum into the production of new wallboard.

Example #2a: Recycled gypsum is a more refined product that helps to take steps away during the manufacture process while accomplishing the same result with mined material.

Example #3: The end use of gypsum is a product used by concrete manufactures as a curing agent in their mix design.

Urban Gypsum has also identified there is a market for the "<u>clean backing paper"</u>. This market for clean backing material can be used for Pressed paper for potted plants also feed stock bedding. The separated backing paper has a beneficial use due to the gypsum residue left on the paper. This gypsum lined paper helps to neutralize urea as opposed do other forest products like wood shavings. Feed stock bedding will be compressed, balled and stored on pallets. The amount of feed stock stored inside our facility at any one time may be 10,000 pounds. "Green board" backing will not to be utilized as a bedding product.

At this time we estimate the gypsum quantity to be a minimum of approximately 23,500 tons and a maximum of approximately 144,000 tons annually. This site at 8823 N Harborgate has an indefinite life span.

Our under roof, enclosed processing facility will utilize the use of wet methods, bag houses for dust collection and the use of positive pressure and air filtration. The Scott equipment process of separating the gypsum from the paper has its own vacuum dust collection system. Dust control measures will be paramount insuring air quality at the site. Recovered gypsum does not have any off gassing because our facility is totally controlled environment and will not be mixed with other material or become wet in any way. The drywall is not detrimental to this site, because of the fully enclosed nature of the site construction. Any kind future use of this facility would not be hampered a in any way because of the drywall recovery process. Once we have the pneumatic processing in place by November 1 2018 we can define the level of air quality controls to be implemented.

Hours of operation will be Monday through Saturday 6am to 12pm. The number of onsite employees will be 2-4.

A & L WESTERN AGRICULTURAL LABORATORIES, INC.

1311 Woodland Avenue, Suite 1 • Modesto, California 95351 • (209) 529-4080

Report No: 18-109-040

Account No: 99999-D



Send to: URBAN GYPSUM 8823 N HARBORGATE PORTLAND, OR 97203

Lab Number: 26446

Sample ID: 1

Date Received: 04/19/2018

Date Reported: 05/02/2018

Submitted by: SCOTT FREEMAN

NON-NUTRITIVE METALS

Sample Preparation Method: EPA SW846-3050B

Detection Limit mg/kg	Analyte	Level Found mg/kg	Method Reference
0.25	Arsenic	0.83	EPA SW846-6010
0.03	Cadmium	0.05	EPA SW846-6010
0.1	Cobalt	0.1	EPA SW846-6010
0.5	Lead	BDL	EPA SW846-6010
0.1	Molybdenum	0.7	EPA SW846-6010
0.1	Nickel	0.8	EPA SW846-6010
0.5	Selenium	2.0	EPA SW846-6010
0.05	Zinc	5.24	EPA SW846-6010
0.05	Mercury	0.12	EPA SW846-7471A
0.1	Copper	1.5	EPA SW846-6010

BDL - INDICATES THE LEVEL FOUND IS BELOW THE ESTABLISHED DETECTION LIMIT FOR THAT ANALYTE. ANALYZED ON AN AS RECEIVED BASIS

A & L Western Agricultural Laboratories

Robert Butterfield Laboratory Director

terfield

A & L WESTERN AGRICULTURAL LABORATORIES

1311 WOODLAND AVE #1 . MODESTO, CALIFORNIA 95351 . (209) 529-4080 . FAX (209) 529-4736



REPORT NUMBER: 18-109-040 AMENDED

DATE OF REPORT: 05/08/18

-

CLIENT: 9999-D

SUBMITTED BY: SCOTT FREEMAN

CUSTOMER:

SEND TO: URBAN GYPSUM 8823 N HARBORGATE PORTLAND, OR 97203-

FERTILIZER AND LIME ANALYSIS REPORT

PAGE: 1

Sample Identification	Lab Number	Nitrogen % N	Tolai Phosphala % P2Os	Polash % KgO	Sulfur % S	Zinc % Zn	Availab!e Phosphate P ₂ O ₅	Non-Ortho Phosphate % of Total P2Os		Ca'cium % Ca	Magneslum % Mg	Calcium Carbonate Equiv, % CaCO ₃	GYP. %		
1	26446				18.52				18.49	22.75			99.28		
				с. С						`.					

REMARKS:

This report apples only to the sample(s) lested. Samples are relained a maximum of thirty days after lealing.

Chin Binin

Robert Butterfield A & L WESTERN LABORATORIES, INC.

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ENTERPRISES, INC.

July 18, 2018

Scott Freeman, Operations Manager Urban Gypsum 8823 N Harborgate Portland, Oregon 97203

Mr. Freeman,

As requested this is a follow up on our phone conversation from last Friday outlining our expressed in interest in your gypsum from some of our agriculture clients. A few of these clients have taken the samples the were provided to us by you and tested them through there own labs. The results they received confirmed the test results that you had given to us and they expressed a desire to move forward with your gypsum.

As of today, we have initial commitments of almost 1,500 to 2,000 tons. We will continue to give out samples to more of our clients. Based on the initial response, we see a tremendous growth opportunity once we can get your product into the field.

Please keep me informed of when you secure a Department of Ag label and your production schedule at your facility. We look forward to working with Urban Gypsum as your grow.

Sincerely,

Jay Horner, President Horner Enterprises, Inc. 541-979-2099 Jay@hornerent.com

North West Gypsum, LLC

620 W 800 S Alpine, UT 84004 john@northwestgypsum.com

May 5, 2018

To Whom It May Concern:

North West Gypsum has been selling raw gypsum to several farmers in the Moses Lake area. After having my own analysis performed by Best Test Analytical in Moses Lake, WA, it is something that I would use in our agricultural business.

Sincerely,

John G. Boley



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A	Oregon Secretary of State:
	- WCSI Articles of Incorporation (Annual Report)
	- Application of Registration - LANECO ABN
	- Amendment of Registration - GDSI ABN
	- Application of Registration - Green Deconstruction Services ABN
	- Application of Registration - JDL General Contracting ABN
В	Washington Secretary of State:
	- WCSI Certificate of Registration (Annual Report)
	- Business License with City Endorsements
	- Shoreline
	- Longview
	- Port Orchard
	- Vancouver
	- Battle Ground
	- Puyallup
C	Oregon Department of Revenue:
	- WCSI Oregon Business Identification Number (BIN)
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D	Washington Department of Revenue:
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E	Oregon Construction Contractors Board:
	- WCSI Contractor License Certificate
	- WCSI Certified Lead Based Paint Renovation Contractors License Certificate
	- Amendment of Registration - GDSI ABN
	- Application of Registration - Green Deconstruction Services ABN
	- Application of Registration - JDL General Contracting ABN

F	Washington Department of Labor & Industries:
	- WCSI Contractor Registration - LANECO
	- WCSI Contractor Registration - GDSI
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	- WCSI Asbestos Abatement Contractor Registration
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К	Washington - City Business Licenses:
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