



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

May 13, 2020

Paul Bissett
Project Manager
Global Cellulose Fibers
32901 Weyerhaeuser Way South,
Suite 101
Federal Way, WA 98001

Reference No. 19-0100

Dear Mr. Bissett:

This is in response to your July 31, 2019 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to materials of trade. Specifically, you ask whether the process you describe in your letter for transporting chlorine dioxide, hydrate, frozen is acceptable under the HMR and/or the materials of trade exceptions specified in § 173.6.

This Office is not able to approve a company's transportation process; however, it can determine the material's eligibility for the exceptions in § 173.6. In your letter, you state that the material in question is a Division 5.1 material (oxidizer) with a Division 6.1 (poisonous) subsidiary hazard in Packing Group (PG) II and is being used for research in your Washington facility. You also state that the material is packaged in 1-gallon plastic inners with a 4G PG I outer packaging which is then placed in a cooler with dry ice that is secured within the vehicle. Not more than four gallons of the material are transported at any given time. Finally, you state that it is part of your standard procedure to prepare the necessary shipping papers for the material, and to carry a copy of the Emergency Response Guide.

Given the information you have provided, your material is not eligible for the materials of trade exception. However, provided the outside of the cooler described in your letter is properly marked and labeled, your material can be shipped in the manner described without the need of the materials of trade exemptions in § 173.6.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in blue ink that reads "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Wolcott

PAUL J. BISSETT
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19-0100

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July 31, 2019

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA

International Paper's Global Cellulose Fibers business operates a new product development and innovation center in Federal Way, WA, IP Global Cellulose Fibers Innovation Center. At this location we conduct product and process research and for some technologies and process development work require a commonly used pulp bleaching chemistry, chlorine dioxide (CAS 10049-04-4). Prior to the divestiture of our Longview, WA pulp and paper mill to Nippon Dynawave, when a portion of our pulp business was still part of Weyerhaeuser Company, we would collect liquid chlorine dioxide (concentration = 9 g/L), in appropriate chemically compatible Nalgene gallon plastic jugs, freeze to a solid, and then transport no more than 4 gallons of the frozen hydrate at a time to our Federal Way, WA location. The frozen gallon bottles were packaged in a HAZMAT 4G rated corrugated box per DOT shipping regulations (referenced in the procedure - <https://www.berlinpackaging.com/1434h01-12-2-x-12-2-x-13-6-un4g-hazmat-shipping-boxes-for-steel-pail/>) and placed with dry ice inside a cold storage transport cooler. The storage cooler was then secured to the bed of the transport truck (see full transport procedure enclosed – substitute International Paper Global Cellulose Fibers Innovation Center for references to the Weyerhaeuser Technology Center (WTC)). The standard procedures we developed for safe transport were carefully prepared to comply with, and exceed, applicable DOT regulations that were outlined under the Materials of Trade (MOT) provisions.

According to International Paper's understanding and interpretation of MOT provision, the U.S. DOT allows certain hazardous materials to be transported in small quantities as part of a business function and are subject to less regulation. Frozen chlorine dioxide hydrate is classified by the U.S. DOT under Hazardous Material Regulations (HMR) as a Hazard Class 5.1 (oxidizer) with subsidiary hazard class 6.1 (toxic) and Packing Group II (medium hazard). Accordingly, under the Materials of Trade (MOT) classification for this Hazard Class and Packing Group it is permissible to transport, with appropriate adherence to MOT regulations, 66 lbs. (30 kg) of a solid or 8 gallons (30 L) of a liquid (we take the additional precaution of making the liquid chlorine dioxide a solid by freezing).

We would like to transport chlorine dioxide frozen hydrate (9g/L concentration) from Longview, WA to Federal Way, WA using the same procedures as we had previously used, but have been asked by Nippon Dynawave to provide a letter confirming that the proposed transport procedures are in compliance with DOT Hazardous Material transport regulations.

Even if we were to set-aside the appropriateness of the MOT provisions as the guidelines for transport, according to the DOT regulation the < 4 gallons is under the quantity where vehicle placarding is required, so IP's understanding is that DOT regulations would not require a commercial driver's license - CDL and our SOP for safe transport procedures already meet and exceed the packaging requirements. In addition, in our standard transport procedure the individuals that would be responsible for transporting the chlorine dioxide frozen hydrate would always be a DOT HAZMAT trained and certified shipper and in addition would also be hazardous waste operations (HAZWOPER) certified. The remaining requirements to fulfill the DOT hazardous materials shipping regulations for the <4 gallon quantity of ClO₂ frozen hydrate would be to prepare the necessary shipping papers (standard bill of lading) and to carry a DOT emergency response guide, which is included in our standard procedure.

Please revert with formal letter of interpretation of the DOT provisions and applicability of MOT and or standard DOT hazardous materials transport regulations to the transport of less than 4 gallons of chlorine dioxide frozen hydrate using our standard operating procedure for transport, as detailed in the attached enclosure.

Sincerely,



Paul Bissett

Chlorine Dioxide Safety Procedures

Purpose:

This checklist was developed to support the safe ordering, packaging, transportation and storage of Chlorine Dioxide hydrate (ClO₂) from the Longview paper mill to the Weyerhaeuser Technology Center (WTC). Each step must be completed as written in order to comply with all regulations and safe practices. Failure to follow these procedures may result in disciplinary action.

Technology staff requiring ClO₂ should contact Brian Mulderig, Carole Herriott or their delegates with at least one (1) week's notice to provide adequate time to use any current supply of ClO₂, arrange collection and freezing time (at least 2 days), and transportation personnel and vehicle.

Persons transporting the ClO₂ must have current (within 3 years) online DOT training and Materials of Trade training from the Safety Office and be cleared to use the company truck. ClO₂ may NOT be transported in personal vehicles.

Ordering:

___ Verify storage space is available and that old ClO₂ has been completely consumed. If residual ClO₂ is present schedule a brown stock bleach with the bleach technicians to consume remaining stock prior to ordering any additional ClO₂.

___ Determine the amount of ClO₂ required to complete assigned task. Containers are ~1 gallon in volume with 4 containers/box and a limit of 2 boxes/cooler and a limit of 1 coolers in the truck. The total volume of ClO₂/trip is no more than 8 gallons due to Longview only being able to freeze 8 containers at a time.

Name of requester: _____

Volume of ClO₂ needed: _____

Project number for time and transportation charges: _____

___ Submit a chemical approval request. Each order of ClO₂ must be PRECEDED by an APPROVED chemical request. Requests can be made from the WTC Technology Safety Office SharePoint site. Link: <http://wss.weyer.com/sites/rdsafety/Lists/approvals/Everything.aspx> ClO₂ meets the requirements for mandatory chemical approval each time it is ordered because of a health hazard rating of 4, large volume (over 5 gallons), and it's on the WTC restricted chemical list.

___ Obtain Safety office approval verifying all above steps have been completed.

___ Contact Brian Mulderig (or his delegate) to make collection and transportation arrangements, provide him with this document completed and signed below.

My signature below indicates I have done all the above steps

Requester signature: _____ Date: _____

Safety Office approval: _____ Date: _____

Contact Longview:

___ Call Jeff Whitman (360) 414-3979 (Jeff.Whitman@lvnpn.com) to arrange a convenient time for him to collect the desired amount of ClO₂ and place into the freezer onsite. (Jeff is not responsible to pack the frozen jugs of ClO₂ into the boxes; this should be handled by the person picking up the load) PLEASE ALLOW TWO DAYS FOR BOTTLES TO FREEZE COMPLETELY

Packaging:

Packaging must meet UN Packing Group (PG) I standards

___ Load the truck with the amount of packaging you will need for entire amount of ClO₂ requested. Extra jugs can be provided to Jeff for future shipments.

___ One gallon jugs – 135 oz White Kautex UN approved square leak proof plastic HDPE bottles (FREUND product # 3211B37) with proper HMIS labels, fill line labels and service date labels affixed. – labels available from the Safety Office

___ Cardboard UN rated boxes - Hazmat 5 gallon shipping boxes (FREUND product # 1434H01) – with proper shipping and hazard labels affixed – labels available from the Safety Office.

___ Packing tape specifically required by closing instructions (3M 355) – available from Safety Office

___ Plastic poly bags with zip ties to fit jugs

___ Absorbent pads – 18 gal/100 pad Enpac Sorbent pads (FREUND product # 1337T28)

___ 2 blocks of dry ice per cooler – Star Ice & Fuel 8220 Pacific Hwy E. Fife, WA 98422 Phone: (253) 922-2777 or 1-800-310-4423 or Longview Walmart 540 7th Ave. Longview, WA 98632 Phone: (360) 414-9656

___ 1 storage cooler

___ Straps to secure cooler

Transportation:

___ Check road and weather conditions and forecasts. If it is likely that road conditions will deteriorate past where it is safe to travel, cancel the pickup.

___ Drive to Longview and enter guard gate at the mill, you'll need to drive around the facility to get to the bleach plant. Follow all traffic signs and speed limits.

___ Verify the ClO₂ has frozen completely and is not slushy or liquid.

___ Verify the jugs have not cracked or split due to overuse or over filling. DO NOT TRANSPORT DAMAGED CONTAINERS

___ Place each jug into plastic bag and secure bag with zip tie.

___ Open and tape cardboard box if needed. Use proper tape and given in the closing instructions.

___ Place up to 4 jugs into cardboard box with absorbent pads and close box according to instructions.

___ Place box(es) into coolers with dry ice.

___ Verify the coolers are secured to the truck to prevent them from sliding around.

___ Contact the WTC Safety Office (253) 924-5401 and Rick Bogar (253) 924-6527 to let them know you are transporting ClO₂ and the total volume.

___ Drive back to WTC. When you arrive let the Safety Office know ASAP.

Emergencies:

Do not transport ClO₂ if road conditions become unsafe. Contact the WTC Safety Office in the event of an emergency. The dry ice will keep the ClO₂ frozen for at least 12 hours if the cooler is kept closed. Stay with the truck unless you need to seek medical attention or it is unsafe to stay with the truck.

If a roadside emergency happens the Safety Office will coordinate a response and another truck may be sent to pick up the load and a tow truck sent to transport the broken vehicle to a repair shop.