
Central Valley Regional Water Quality Control Board

18 May 2017

Randy McLaughlin
Old Durham Wood, Inc.
8616 Durnel Drive
Durham, California 95938

NOTICE OF APPLICABILITY

**WATER QUALITY ORDER 2015-0121-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS
OLD DURHAM WOOD, INC.
OLD DURHAM WOOD, INC. COMPOSTING FACILITY
BUTTE COUNTY**

On 3 October 2016, Old Durham Wood, Inc. (Discharger) submitted a Report of Waste Discharge (ROWD) for the Old Durham Wood, Inc. Composting Facility (Facility). The ROWD includes a Technical Report and Report of Composting Site Information (Technical Report), Notice of Intent (NOI), and a filing fee, to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order) for composting operations at the above-referenced site. The complete General Order can be accessed at

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2015/wqo2015_0121_dwq.pdf

This Notice of Applicability (NOA) was developed after the review of your NOI and Technical Report as described in the attached Staff Memorandum which is a part of this NOA. Based on staff's review, the Facility meets the conditions of the General Order, and is hereby covered under General Order **2015-0121-DWQ-R5R007** as a **Tier II** composting operation. The Discharger must comply with all Tier II requirements of the General Order.

The filing fee for the Old Durham Wood, Inc. Composting Facility is based on a Threat to Water Quality and Complexity rating of 3B. The submitted \$4,699 filing fee covers the first year permitted by this NOA. The Discharger shall submit the required annual fee (as specified in the annual billing issued by the State Water Resources Control Board) until the NOA is officially terminated.

To fully comply with this NOA, please familiarize yourself with the contents of this NOA, the enclosed Staff Memorandum and all of the requirements of the General Order. The Discharger is responsible for implementing all operations in a manner that complies with the General Order. Any noncompliance with the General Order constitutes a violation of the Water Code, and is grounds for enforcement action, and/or termination of enrollment under the General Order.

Please note that some storm water features proposed in the Technical Report¹ do not comply with the General Order. Compost operations should not allow discharge of wastes to surface waters, except as regulated under a National Pollutant Discharge Elimination System permit. Discharge of wastes including overflow, wastewater, or bypass from transport, treatment, storage, or disposal systems to adjacent drainages or adjacent properties is prohibited under the General Order. These practices could result in enforcement action by the Central Valley Water.

Conditions of the Composting General Order include but are not limited to:

- By **31 July 2017**, the Discharger must provide a status update on the site improvements proposed in the General Order that have been completed to date.
- By **31 August 2019**, the installation of the storm water detention ponds and associated site improvements must be completed.
- The Facility must be brought into full compliance with the General Order no later than **3 October 2022**, which is six years from submittal of the NOI.
- Technical reports must be submitted at least 90 days prior to each construction activity, while post-construction reports must be submitted within 60 days after the completion of each construction activity.
- A revised NOI is required at least 90 days prior to: adding a new feedstock; changing the additive or amendment; changing material or construction specifications; changing a monitoring program; or changing an operation or activity not described in the approved NOI and Technical Report.

Attachment B of the General Order includes specific monitoring and reporting requirements that you must comply with, including routine monitoring with reporting to the Central Valley Water Board. The first year Annual Monitoring and Maintenance Report as identified in the General Order must be submitted to the Central Valley Water Board no later than **1 April 2018**.

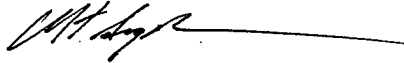
All monitoring and technical reports submitted to this office must be in a searchable, electronic format [i.e., Portable Document Format (PDF)] and Electronic Deliverable Format (EDF) via the State Water Resources Control Board's Internet GeoTracker system at <http://geotracker.waterboards.ca.gov/> as require by the General Order.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included on any documentation submitted to the mailing address for this office:

Central Valley Water Board
Attention: Melissa Buciak
364 Knollcrest Drive, Suite 205
Redding, CA 96002

¹ Proposed outlet pipe that would drain via the roadside ditch to Hanlon Slough and the proposed drain in the southern corner of the property which would drain to the roadside ditch.

If you have any questions regarding this letter or the attached Staff Memorandum, please contact Melissa Buciak at (530) 224-4854 or by email at Melissa.Buciak@waterboards.ca.gov or Kate Burger at (530) 223-2081 or by email at Kate.Burger@waterboards.ca.gov.



(for) Pamela C. Creedon
Executive Officer

MAB: ab

Enclosure: Staff Memorandum

cc by email
w/encl:

Kim Haas, Butte County Division of Environmental Health, Oroville
Eric Kiruja, CalRecycle, Permitting and Assistance Branch, Sacramento
Wes Gilbert, W. Gilbert Engineering, Chico

Central Valley Regional Water Quality Control Board

TO: Kate Burger, P.G., Ph.D.
Senior Engineering Geologist
Chief, Groundwater Unit

FROM: Melissa Buciak, P.G.
Engineering Geologist
Groundwater Unit

Katie Gilman
Student Engineering Aide

DATE: 18 May 2017

SIGNATURE:



SUBJECT: APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2015-0121-DWQ, OLD DURHAM WOOD, INC., 1156 OROVILLE CHICO HIGHWAY, DURHAM, BUTTE COUNTY

REPORT OF WASTE DISCHARGE

On 3 October 2016, Old Durham Wood, Inc. (Discharger) submitted a Report of Waste Discharge (ROWD) for the Old Durham Wood, Inc. Composting Facility (Facility). The ROWD includes a Technical Report, Notice of Intent (NOI), and a filing fee, to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order), for composting operations at the above-referenced site. Public documents for the case can also be viewed on GeoTracker using the following public website:

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000010294

SITE DESCRIPTION

The Facility is approximately 60 acres located in Section 22, Township 21 North and Range 2 East from the Mount Diablo Base and Meridian Line. The Assessor Parcel Number is 040-120-033. The Facility began operations in the 1990s by receiving wood and trimmings from local orchards to process and cure for the sale of firewood.

The Facility was initially permitted by the Local Enforcement Agency [Butte County Division of Environmental Health (BCDEH)] under the Solid Waste Facility Permit (SWFP) 04-AA-0030 on 12 January 2015. The SWFP permits the composting of greenwaste on 30 acres with a design capacity of 30,000 cubic yards and a maximum daily tonnage of 500 tons. The Discharger expanded the Facility operations to include an additional 30 acres; therefore BCDEH issued Enforcement Agency (EA) Notification 04-AA-0031 on 17 October 2016 to include this expansion. Currently, the Facility has an operational capacity of 120,000 cubic yards on approximately 60 acres with an average weekly throughput of 5,800 cubic yards and a maximum daily tonnage of 500 tons. Site features, including locations and sizes of the composting areas, ponds, and berms are shown in Attachment A.

The land use within a mile of the Facility consists of agricultural properties with 20 and 40-acre minimums. There is a multi-zone overlay on the northeastern parcel across State Highway 99.

The entire Facility, including the composting operations and permanent residence (caretaker unit), is supplied by an onsite well drilled to 96 feet below ground surface (bgs) with a pumping capacity of 600 gallons per minute. The onsite well is located in center of the Facility and is approximately 150 feet from the closest composting area. Per the General Order, composting operations shall be setback at least 100 feet from the nearest water supply well.

According to the Technical Report, the underlying geology of the Facility is primarily lahars, volcanic sediments and tuff. According to the California Division of Mines & Geology's *Geologic Map of the Chico Quadrangle* dated 1992, the Facility lies within an area consisting of the Pleistocene Modesto Formation with Pliocene Tuscan Formation. The Modesto Formation consists of poorly indurated gravel and cobbles with sand, silt, and clay derived from reworking and deposition of the Tuscan Formation, Laguna Formation, and the Riverbank Formation. The Tuscan Formation is composed of a series of volcanic mudflows, tuff breccia, tuffaceous sandstone and volcanic ash layers. In September 2012, Butte County Department of Public Health and a licensed contractor excavated two test holes for a septic system. Per the Technical Report, it was determined that a solid layer of "lava cap and/or cemented sand" exists up to 16 feet bgs in one test hole and 10 feet bgs in the other test hole. A "loamy sand/gravel and cemented sand" was encountered beneath the lava cap at 16 feet bgs.

The annual precipitation was calculated using the Western Regional Climate Center (WRCC) for years 1906 to 2016, at the National Oceanic and Atmospheric Administration (NOAA) station Chico University Farm (ID#041715), located approximately 4.6 miles from the Facility. The maximum, minimum and average annual precipitations for this location are 45.54, 10.40, and 25.66 inches, respectively. The mean evaporation was calculated using data from the WRCC from years 1906 through 2005 and was calculated as 67.63 inches per year. Based on information from the NOAA and WRCC, a 25-year, 24-hour event would generate 4.10 inches of rainfall.

The Facility did not provide hydraulic conductivity information because the working surface is lava cap. According to the California Department of Water Resources (DWR), groundwater flow is generally northwest. There are three groundwater monitoring wells located within one mile of the Facility ranging in depths of 94 to 140 feet. According to the Butte County Domestic Well Depth Summary from DWR, wells located in the same section (Section 22) as the Facility have a maximum depth of 225 feet and an average depth of 146 feet.

The nearest surface water (Hanlon Slough) is located adjacent to the Facility to the south, approximately 250 feet from the property line. The Facility has a high point along the middle of the northeasterly property line, located adjacent to Highway 99. From this area, the site naturally drains in a southwesterly and southerly direction. A natural, existing seasonal drainage swale is located along the western property line and drains to the southwest where it crosses the Oroville-Chico Highway. No year round surface water bodies are located in the vicinity. Per the General Order, composting operations shall be setback at least 100 feet from the nearest surface water body.

According to the Federal Emergency Management Agency, the facility is not located with a 100-year flood plain area. It is located in zone X, or an area determined to be outside the 0.2% annual chance floodplain.

COMPOSTING OPERATIONS

According to the Technical Report, the Facility processes feedstock material from three sources: local orchards, local greenwaste [including construction and demolition (C&D) materials], and material from Sacramento's North Area Recovery Station (NARS). The Facility processes approximately 300,000 cubic yards of feedstock each year, approximately 240,000 cubic yards from NARS and remaining from local businesses and the public. It is estimated that no more than 120,000 cubic yards of feedstock materials are on site at any one time.

Flow charts showing the composting processes for the three sources are included in Attachment B. The first source of materials for the Facility is firewood. The firewood is cut to length prior to delivery where it is dumped in rows. The wood cures for 8 to 12 months to optimal moisture content (10-20% moisture) for burning. Once the wood is cured, it is split using gas powered portable splitters and wrapped into 0.8 to 0.9 cubic foot bundles. Bundles are stacked 40 to a pallet and wrapped in shrink wrap. The pallets are stacked two high for shipping to the customer or for transport to the on-site storage building. Wood stored on-site is stacked four pallets high. Trucks come into the yard to haul away full truckloads to customers. Approximately 150 to 200 truckloads leave the facility annually. Though this information was included in the Technical Report as a feedstock, this activity is not considered composting.

The second source of feedstock material comes from local urban greenwaste, including C & D material such as pallets and dimensional wood. Central Valley Water Board staff understands that if treated wood is received, this material is separated and disposed of properly. Greenwaste consists of brush, leaves, grass, and similar material from the general public, Northern Recycling & Waste Services, and other tree trimming companies. Greenwaste is screened to remove fines prior to being shipped to co-generation power plants. The fines are then used to make compost. All of the C & D materials are ground up and shipped to the same power plants.

Lastly, the third supplier of feedstock comes as urban greenwaste from NARS. The material is delivered as raw green material to be processed into biomass fuel. There are approximately 10 to 15 truckloads, or 210 to 315 green tons of material delivered daily. After delivery, the material is picked through to remove trash. The fines, about 12 to 16%, or 26 to 51 green tons of the total delivered material, are used to make compost.

Fly ash is sometimes used as an additive to the finished compost. The fly ash is supplied by Sierra Pacific Industries. It is a residual from burning agricultural and forestry material at its biomass power facility. Fly ash is added at a rate of 1 to 10% by volume. An amendment is sometimes used during the composting of the greenwaste. The fines are pushed into large static piles and treated with a compost tea amendment that is comprised of safe, probiotic friendly microorganisms. The compost tea helps reduce odor, inhibits pathogen growth, and promotes the composting process overall. Compost tea is either brewed onsite or received from Vermicrop Organics.

Composting is conducted via windrow and static methods. All local and NARS greenwaste is delivered and Powerscreen® screeners are utilized to remove fines after the grinding process. Fines are collected into large static piles or placed directly into windrows. Water is added to the windrows which are left to cure for another 3 months. The composting windrows are monitored for appropriate temperatures and water is added as necessary to maintain 50 to 60% moisture content. Local and NARS greenwaste that remains after screening out fines is pushed into windrows until needed by biomass plants.

According to the Technical Report, storm water detention ponds have been designed, approved by Butte County, and are under construction. A series of large berms will be used for controlling runoff and runoff from the working surface. Water generated during rainfall will drain into one of four detention ponds onsite. Sediments will be allowed to filter out into the ponds since the outfall culvert inverts are placed above the bottom. Water remaining in the detention ponds after a storm will be siphoned up using onsite water truck and/or trailers. This water will be reused in the composting process as needed. Site features, including locations and sizes of the composting areas, ponds, and berms are shown in Attachment A.

Storm water detention pond design drawings were included in the Technical Report. Central Valley Water Board staff understands that Phase 1 grading has been completed. This consisted of scraping and removal of existing soil material down to the lava cap. The removed soil was then used to construct the adjacent berms. However, it is unclear if the remaining site improvements, activities such as berm construction, installation of culverts and the concrete spillway on top of the berm, have been completed. The Discharger also proposes installing an outlet pipe to drain into the roadside ditch. The roadside ditch is to be widened and cleaned as necessary to allow flows to drain to Hanlon Slough without flooding Oroville-Chico Highway. Similarly, the Discharger proposes installing another drain in the southern corner of the property to drain along the inside of the berm and flow into the roadside ditch. **Note that per the General Order, the discharge of wastes to surface waters is prohibited, except by a National Pollutant Discharge Elimination System permit. Discharge of wastes including overflow, wastewater, or bypass from transport, treatment, storage, or disposal systems to adjacent drainages or adjacent properties is prohibited.**

TIMELINE FOR COMPLIANCE

Full compliance with Order 2015-0121-DWQ must be completed by **3 October 2022**, which is six years from submittal of the NOI. The table below shows the proposed improvement plan schedule. The proposed improvement plan includes a project status update, the first annual monitoring and maintenance report and completion of the storm water management system. The Discharger must comply with the proposed timeline.

Improvement	Completion Date
Status Update on Storm Water Detention Pond Construction and Associated Site Improvements	31 July 2017
First Annual Monitoring and Maintenance Report	1 April 2018
Completion of Storm Water Detention Ponds and Associated Site Improvements	31 August 2019

MONITORING AND REPORTING

The Discharger will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to the submitted Technical Report and the Attachment B of General Order Monitoring and Reporting requirements. The frequency of inspections will be sufficient to prevent discharges of feedstocks, additives, amendments, compost (active, curing, or final product), or wastewater from creating, threatening to create, or contributing to conditions of contamination, pollution, or nuisance.

The Discharger will conduct a monitoring program as prescribed in the Attachment B of General Order Monitoring and Reporting requirements. Sections that apply are A.1., A.2., B and C. Results of monitoring will be reported annually in the Annual Monitoring and Maintenance Report which will be submitted by **1 April** of each year as long as the Notice of Applicability is in effect.

SITE CLOSURE

At least 90 days prior to ceasing composting operations, the Facility shall submit a Site Closure Plan to the Central Valley Water Board for approval. The site restoration shall include work necessary to protect public health, safety, and the environment.

DISCUSSION

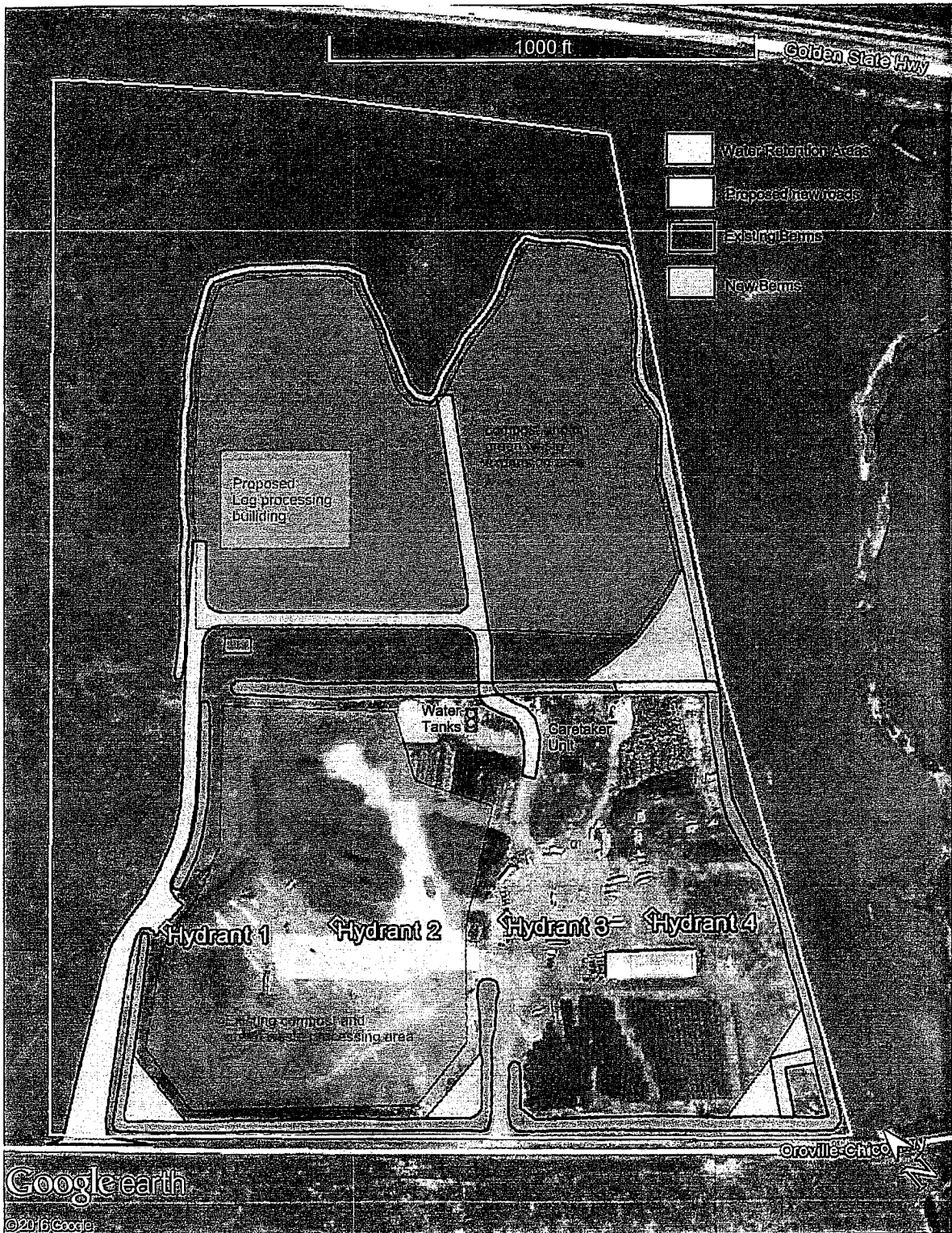
The Facility is a **Tier II** composting operation because it receives, processes and stores 25,000 cubic yards or more of a combination of allowable Tier I or Tier II feedstocks, compost, additives and amendments on site at any given time. The Technical Report reveals that composting operations are conducted on lava cap and as such is in compliance with the working surface requirements of the General Order. Water to the Facility is supplied by an onsite well. Per the General Order, composting operations shall be setback at least 100 feet from the nearest water supply well. Although composting operations are conducted within 150 feet of the onsite well, provided that the well has an adequate sanitary seal, it is unlikely that the well is impacted by composting operations due to the impermeability of the working surface. The nearest surface water (Hanlon Slough) is located adjacent to the Facility to the south, approximately 250 feet from the property line and as such is in compliance with the General Order.

Four detention ponds/areas are proposed for controlling runoff and runoff from the working surface. Water during rainfall will drain into one of four onsite detention ponds. Water remaining in the detention ponds after a storm will be siphoned up using onsite water trucks and/or trailers. This water will be reused in the composting process as needed. The Discharger also proposes discharging storm water runoff and wastewater into the roadside ditch which would drain to Hanlon Slough. **This is prohibited under the General Order and these practices could result in enforcement action by the Central Valley Water Board.**

RECOMMENDATION

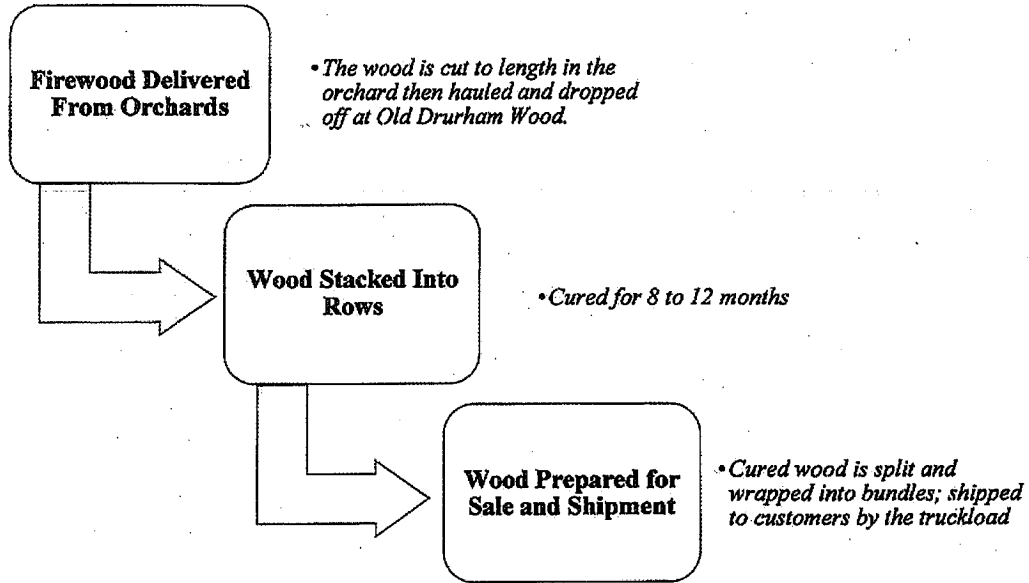
Based on staff review of the Technical Report and supporting documents, the Facility meets the minimum requirements of the General Order. The Notice of Applicability can be issued and stay in effect as long as the Discharger implements all operations in a manner that complies with the requirements of the General Order, and the Discharger demonstrates that site conditions adequately protect water quality.

Attachment A

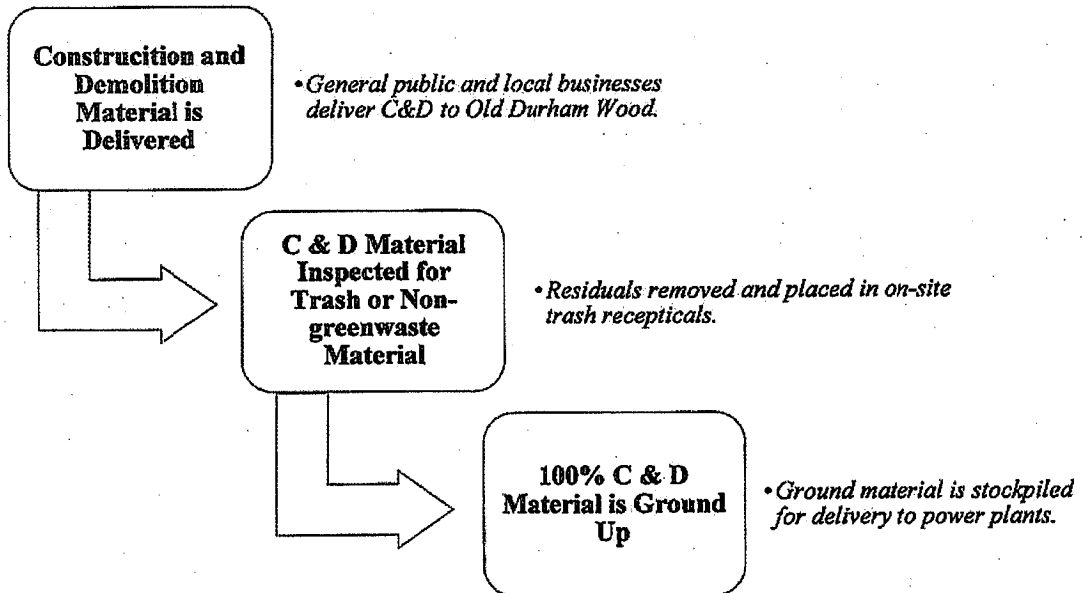


ATTACHMENT B

Local Orchard/Firewood Material Process



Local C & D Material



ATTACHMENT B

NARS and Local Greenwaste Materials Process

