Solid Waste Facility License Application

Metro
600 NE Grand Ave.
Portland, OR 97232
503-797-1835

INSTRUCTIONS

For Metro Use Only	
Date received:	
Date deemed complete by Metro	

1. Complete all applicable parts of application.
2. Review confidentiality section and sign last page of application.
3. Attach required documents. *(If submitting printed copies, please print double-sided.)*
4. Submit application, attachments and application fee using one of the following methods:
   a. **Online**:
      - Email the completed application to SWICC@oregonmetro.gov. Contact Joanna Dyer for assistance with large files (contact information below).
      - Call Metro's Accounts Receivable at 503-797-1620 to pay the application fee by credit card.
   b. **By Mail**: Mail the completed application and a check for the application fee to:

      Metro
      Waste Prevention and Environmental Services
      Attn: Joanna Dyer
      600 NE Grand Avenue
      Portland, OR 97232-2736

Questions? Contact Joanna Dyer, Metro's Solid Waste Authorization Coordinator, at 971-401-0976 or joanna.dyer@oregonmetro.gov.

PART 1 – Standard License Application Information

1. Applicant (Licensee)	
Facility Name:	McFarlane's Bark, Inc.
Company Name:	McFarlane's Bark, Inc.
Facility Street Address, City, State, Zip:	13345 SE Johnson Rd. Milwaukie, OR 97222
Facility Mailing Address, City, State, Zip:	13345 SE Johnson Rd. Milwaukie, OR 97222
Contact Person & Title:	Maureen Draves Corporate Secretary
Phone Number:	503-654-1237
E-mail Address:	mdraves@mcfarlanesbark.com

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2. Type of Application (please check one)		
☐	New license *Date of Pre-Application Conference:* _____	
☒	Renewal of an existing license	*Current Metro Solid Waste Facility License Number:* L-026-13A
☐	Change of authorization to an existing license (other than a renewal) *Please describe the proposed change below in Section 4.*	
☐	Transfer of ownership or control of an existing license	

3. Type of facility (please check one)	
☐	Non-putrescible (dry) waste material recovery facility
☐	Source-separated recyclable material recovery facility
☐	Source-separated food waste reload facility
☐	Yard debris reload facility
☒	Yard debris composting facility
☐	Other solid waste reload or processing facility

4. If seeking a change of authorization to an existing license, please explain the proposed change below (attach additional pages if necessary). Complete all remaining sections of this form as they pertain to the request.

5. Applicant's Owner or Parent Company (Provide information for all owners and corporate structure if applicable)	
Company Name:	McFarlane's Bark, Inc.
Mailing Address, City, State, Zip:	13345 SE Johnson Rd. Milwaukie, OR 97222
Contact Person & Title:	Maureen Draves, Corporate Secretary
Phone Number:	503-654-1237
E-mail Address:	mdraves@mcfarlanesbark.com

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6. Site Operator (if different from Applicant)	
Company Name:	**McFarlane's Bark, Inc.**
Mailing Address, City, State, Zip:	**13345 SE Johnson Rd., Milwaukie, OR 97222**
Contact Person & Title:	**Dan McFarlane General Manager/Owner**
Phone Number:	**503-659-4240**
E-mail Address:	**dmcfarlane@mcfarlanesbark.com**

7. Site Description			
Tax Lot(s): 202, 400, 402, 890 & 891	Section:22EO5A7	Township: 25	Range: 2E

8. Land Use		
Present Land Use Zone:	**Light Industrial**	
Is proposed use permitted outright?	☒ Yes If yes, attach a copy of the *Land Use Compatibility Statement* (See Attachment D).	☐ No
Is a conditional use permit necessary for the facility?	☐ Yes If yes, attach a copy of the *Conditional Use Permit* (See Attachment F)	☒ No
Are there any land use issues presently pending with the site?	☐ Yes If yes, please explain the land use issues below.	☒ No
Description of the pending land use issues identified above:		
Are any permits required from the Oregon Department of Environmental Quality (DEQ)?	☒ Yes If yes, please list all DEQ permits below and attach copies with this application (see Attachment F).	☐ No
Listing of all required DEQ permits:	Stormwater Discharge Permit Solid Waste Disposal Site Permit	
Are any other local permits or building codes required?	☐ Yes If yes, please list all other required permits below and attach copies with this application (see Attachment F).	☒ No

Listing of other required permits:	

9. Land Owner		
Is the applicant the sole owner of the property on which the facility is located?	☐ Yes	☒ No If no, please complete this section with additional pages if necessary and attach a completed *Property Use Consent Form* (see Attachment E).
Property Owners:	Marjorie McFarlane	Dan & Laurie McFarlane
Mailing Address, City, State, Zip:	13345 SE Johnson Rd. Milwaukie, OR 97222	1515 Windsor Dr Gladstone, OR 97027
Phone Number:	971-409-0081	503-522-8009
E-mail Address:	mdraves@mcfarlanesbark.com	dmcfarlane@mcfarlanesbark.com

10. Public/Commercial Operations		
Will the facility be open to the public (e.g., non-commercial self-haul customers)?	☒ Yes	☐ No
Will the facility be open to non-affiliated commercial solid waste collectors?	☒ Yes	☐ No
Will the facility accept waste from outside the boundary of Metro?	☒ Yes	☐ No

11. Operating Hours and Traffic Volume	Public (non-commercial self-haul)	Commercial Affiliated	Commercial Non-Affiliated
Operating Hours	24 hrs/day 7 days/week	24 hrs/day 7 days/week	24 hrs/day 7 days/week
Customer Hours (if different)	See Attachment A	See Attachment A	See Attachment A
Estimated Vehicles Per Day	72	5	71

12. Inbound Waste/Feedstock by Type

Identify the types of waste/feedstock and annual tonnage amounts that the applicant expects to receive at the facility. Also, identify how the applicant will manage each waste stream, the expected tip fees that the applicant will post at the facility, and the length of time required to process each waste stream (attach additional pages if necessary).

Waste/Feedstock Type	Accepted at Facility	Expected Annual Tonnage Amount	Type of Activity to be Performed on Waste	Expected Tip Fee (per Ton)	Estimate the maximum and typical lengths of time required to process each day's receipt of each waste/feedstock type
Source-Separated Wood:	☒ Yes ☐ No	2,7 26	Ground Fir Bio Fuel	$60	1 week
Source-Separated Yard Debris:	☒ Yes ☐ No	33,661	Ground and Composted	$60	2 to 3 months
Source-Separated Yard Debris Combined with Residential Food Waste:	☐ Yes ☒ No				
Source-Separated Commercial and Other Food Waste:	☐ Yes ☒ No				
Inerts (e.g., rock, concrete, etc.):	☒ Yes ☐ No	596		$20	2 to 3 weeks
Non-Putrescible (dry) Waste:	☐ Yes ☒ No				
Source-Separated Recyclables:	☒ Yes ☐ No	35	Metals	0	Transferrred to RS Davis Co, 2 to 3 months
Special Wastes (please specify):	☐ Yes ☒ No				
Petroleum Contaminated Soil:	☐ Yes ☒ No				
Putrescible (wet) waste:	☐ Yes ☒ No				
Other Waste/Feedstocks (please specify):	☒ Yes ☐ No	3,740	Growers (Farms) Vegetation	$60	2 to 3 months
Other Waste/Feedstocks (please specify):	☐ Yes ☒ No				

40,758

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13. Inbound Waste/Feedstock by Generator

Identify the generator type and the expected annual tonnage of waste/feedstock that the facility will receive and recover from each type. Add additional rows if necessary.

Generator Type*	Tons Received**	Tons Recovered**	Tons Residual**
Agricultural:	3,740	3,740	0
Commercial:	20,360	20,120	240
Industrial:	n/a	n/a	n/a
Residential	16,658	16,458	200
TOTAL TONS:	40,758	40,318	440

** Example: commercial, residential, self-haul, etc.*

*** Tons received = tons recovered + tons residual*

14. Outbound Waste and Materials

List the expected destination and amount of each type of outbound solid waste and materials that the applicant expects to transport from the facility (attach additional pages if necessary).

Destination Site (Name and address)	Waste/ Material Type	Expected Annual Tonnage	Purpose Of Delivery*
McFarlane's Bark, Inc. 8806 NE 117th Ave, Vancouver, WA	Compo-stiff	3,508	Beneficial
McFarlane's Bark, Inc. 13345 SE Johnson Rd., Milwaukie, OR 97222	Compo-stuff	16,180	Beneficial
Washington Mills for Energy Recovery	Wood Waste Hog Fibre	4,943 Green Ton	Energy Recovery
Oregon Mills for Energy Recovery	Wood Waste Hog Fibre	1,264 Green Ton	Energy Recovery

**Example: disposal, recovery, land reclamation, beneficial use, etc.*

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15. Subcontractors Provide the name, address and function of all subcontractors involved in the facility operations, if applicable (this does not include janitorial staff):		
Name	**Address**	**Function**

PART 2 – Standard Attachments to License Application

New License, License Renewal and Change of Authorization

- The applicant must provide a current version of all of the following attachments with each application unless otherwise directed by Metro.
- The applicant must clearly label each attachment submitted as part of the application. A description of each attachment is provided in Appendix A.

Check if included	Attachment
☐	Attachment A: Site Plan Sent by Email to Will Ennis
☐	Attachment B: Operating Plan Sent by Email to Will Ennis
☒	Attachment C: Proof of Insurance To be e-mailed Direct to Will Ennis from Premier Insurance
☒	Attachment D: Land Use Compatibility Statement (LUCS)
☒	Attachment E: Property Use Consent Form (This form is not necessary if the property is solely owed by the applicant)
☐	Attachment F: Required Permits
☐	Attachment G: Facility Design Plan (NEW CONSTRUCTION ONLY)

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PUBLIC NOTICE AND CONFIDENTIAL INFORMATION

- This application and all of the supporting documentation that the applicant provides is subject to Metro's public notice procedures. Metro will notify and provide the public with an opportunity to review and comment on the proposed application. The public notice may include, but is not limited to, posting the complete application on Metro's website.
- The applicant may identify as confidential any reports, books, records, maps, plans, income tax returns, financial statements, contracts and other similar written materials of the applicant that are directly related to the proposed application and that are submitted to or reviewed by Metro. The applicant must prominently mark any information that it claims confidential with the mark "CONFIDENTIAL" before submitting the information to Metro. Subject to the limitations and requirements of ORS Chapter 192 (public records law) and other applicable laws, Metro will treat as confidential any information so marked and will make a good faith effort to not disclose that information unless Metro's refusal to disclose the information would be contrary to applicable Oregon law.
- These conditions do not limit the use of any information submitted to or reviewed by Metro for regulatory purposes or in any enforcement proceeding. In addition, Metro may share any confidential information with representatives of other governmental agencies provided that, consistent with Oregon law, those representatives agree to continue to treat the information as confidential and make good faith efforts to not disclose the information.

APPLICANT CERTIFICATION

An authorized agent of the applicant must sign this application. Metro will not accept an application without a signature.

I certify that the information contained in this application is true and correct to the best of my knowledge. I agree to notify Metro within 10 days of any change in the information submitted as a part of this application.

Signature of authorized agent Maureen Draves Date 3/11/2022

Print name Maureen Draves

Title Corporate Secretary

Email mdraves@mcfarlanesbark.com Phone 503-654-1237

Attachment A

McFarlane's Bark, Inc.

13345 SE Johnson Road, Milwaukie, OR 97222
503-659-4240 www.mcfarlanesbark.com

Milwaukie Store Hours	
Summer Hours	
April through September	
Monday - Saturday 7 am - 6 pm	Sunday 8 am - 5 pm
Winter Hours	
October, November & March	
Monday - Saturday 8 am - 5 pm	Sunday 9 am - 4 pm
December through February	
Monday - Saturday 8 am - 5 pm	Sunday CLOSED

8806 NE 117th Avenue, Vancouver, WA 98662
360-892-6125

Vancouver Store Hours	
Summer Hours	
April through September	
Monday - Saturday 8 am - 6 pm	Sunday 8 am - 5 pm
Winter Hours	
October, November & March	
Monday - Saturday 8 am - 5 pm	Sunday 9 am - 4 pm
December through February	
Monday - Saturday 8 am - 5 pm	Sunday CLOSED

HOLIDAY HOURS: Closed Easter Sunday, Open 8 to Noon on July 4th, Open 8 to One on Thanksgiving Day. Open 8 to Noon on Christmas Eve Day, Closed on Christmas Day and Closed on New Year's Day

R Accepting:

E Brush, Grass (non odiferous-less than one week old), Sod - cut with sod cutter/without plastic mesh),

Y Trees, Leaves, Stumps, Sawdust, Chips; Vegetation.

C Pallets, Clean Sawmill Cut Wood (nails and staples ok ~ no: paint, treatments, varnishes or stain, no brackets or other hardware)

L Concrete, Rock, Sand, Brick, Asphalt and Granite (no dirt, no wood, no paper)

I Loads must be presorted as there is not space for sorting a mixed load on site.

N We appreciate your patronage as we do depend upon it.

G There are places that accept grassy odiferous loads and other materials call: Metro 503-234-3000

Date of Last Revision: 11/11/15Add holiday hours KMcF, Inception 11/10/15 KMcF

Attachment A to Pg. 5

ZINF00070-22

Land Use Compatibility Statement (LUCS)

Solid waste application supplemental form

Metro
600 NE Grand Ave.
Portland, OR 97232
503-797-1835

SUBMIT THIS FORM TO:
Metro
Solid Waste Compliance and Cleanup
600 NE Grand Avenue
Portland, OR 97232-2736
Tel: (503) 797-1835
Fax: (503) 813-7544
SWCC@oregonmetro.gov

Metro use only
DATE RECEIVED:
DATE DEEMED COMPLETE BY METRO:

METRO Land Use Compatibility Statement (LUCS)

WHAT IS A LUCS? A Land Use Compatibility Statement is the document that Metro relies on to determine that an application to Metro for a solid waste facility license or franchise is compatible with the applicant's local land use approval.

WHEN IS A LUCS REQUIRED? A completed LUCS should accompany each application for a new Metro solid waste facility license, or franchise and any application for a change of authorization to add new activities to an existing license or franchise.

HOW TO COMPLETE A LUCS: The applicant must fill out Section 1 of the form and then submit the form to the local city or county planning office where Section 2 is completed. The local planning office will determine if the facility meets local land use requirements concerning planning and zoning. The applicant then submits the LUCS to Metro as part of its license or franchise application.

WHERE TO GET HELP: Questions on the Metro LUCS can be directed to Metro Solid Waste Compliance and Cleanup Division staff responsible for processing the Metro license or franchise application at (503) 797-1835.

SECTION 1: To be completed by the applicant:

1. Applicant Information		
Facility Name:	McFarlane's Bark, Inc.	
Company Name:	McFarlane's Bark, Inc.	
Location Address: **13345 SE Johnson Rd** **Milwaukie OR 97222**		**Mailing Address:** **13345 SE Johnson Rd** **Milwaukie OR 97222**
Contact Person:	Maureen Draves	
Phone Number: 503-654-1237	**Fax Number: 503-654-0519**	**E-mail: mdraves@mcfarlanesbark.com**

Land Use Compatibility Statement (LUCS)

Solid waste application supplemental form

Metro
600 NE Grand Ave.
Portland, OR 97232
503-797-1835

2. Site Description			
Tax Lot(s):	**Section:**	**Township:**	**Range:**
00202-00400-00402-00802-00803	**05**	**25**	**2E, W.M.**

3. Description of the type of facility, the solid wastes to be accepted and the activities to be undertaken

A. Check all the proposed solid wastes to be accepted in the left column "Proposed waste streams". In the "Activity code" column to the right, insert the letter(s) of all the proposed activities from the list of codes (a-g) corresponding to each waste stream:

Proposed waste streams	Activity code(s)	Proposed activities and codes:
____ Putrescible mixed solid waste (i.e. residential garbage)	_____	a) Material recovery (source separated)
____ Food waste (source separated vegetative or non-vegetative)	_____	b) Material recovery (mixed dry waste)
_x___ Yard debris	_____	c) Composting
x__ Wood waste (clean wood waste)	_____	d) Reload / transfer
____ Wood waste (painted or treated)	_____	e) Chipping & grinding
____ Non-putrescible mixed solid waste (dry mixed waste)	_____	f) Other (explain in detail)
_x__ Other (explain in detail) Rocks, cement, clean dirt, metal	_____	g) NA (not applicable)

B. Description of proposed solid wastes to be accepted and proposed waste-related activities. Please describe in detail the activity you plan to perform on each waste you accept. Add additional pages if necessary. Yard Debris is composted and sold as compo-stuff. Wood waste is processed and sold as Bio-fuel. Rocks and cement are either used for mud control . Clean dirt would be to either sell or mix in soil compost blend.

4. This land use approval is being sought in conjunction with application to Metro for (check all that apply)			
New ☐	Amended ☐	License ☒	Franchise ☐

SECTION 2: To be completed by a city or county planning official:

1. Name of city or county that has land use jurisdiction
Clackamas County

2. The proposed facility is located (check all that apply)			
	Inside city limits	**x**	**Inside UGB**
x	**Outside city limits**		**Outside UGB**

Land Use Compatibility Statement (LUCS)

Solid waste application supplemental form

Metro
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3. Consistency with local comprehensive plan and zoning ordinance			
☐	This facility is not regulated by the local comprehensive plan and zoning ordinance.		
☒	This facility has been reviewed and is consistent with the local comprehensive plan and zoning ordinance.		
☐	This facility has been reviewed and is **not** consistent with the local comprehensive plan and zoning ordinance.		
☐	Consistency of this facility with the local comprehensive plan and zoning ordinance cannot be determined until the following local approval(s) are obtained:		
	☐ Conditional Use Approval	☐ Development Permit	
	☐ Plan Amendment	☐ Zone Change	
	☐ Other _____		
An application has been made for the local approvals checked above:		**Yes** ☐	**No** ☒

Local Government Planning Official - Reviewer Information:

Signature: _____

Print Name: ANDREW YADEN

Title: PLANNER I

Date: 3/9/2022

Telephone Number: 503 742-4500

E-Mail: ayaden@clackamas.us

Property Use Consent

Solid waste application supplemental form

Metro
600 NE Grand Ave.
Portland, OR 97232
503-797-1835

SUBMIT THIS FORM TO:
Metro
Solid Waste Compliance and Cleanup
600 NE Grand Avenue
Portland, OR 97232-2736
Tel: (503) 797-1835
Fax: (503)813-7544
SWCC@oregonmetro.gov

Metro use only
DATE RECEIVED:
DATE DEEMED COMPLETE BY METRO:

Property Use Consent

1. Property Owner.	
Name:	Dan and Laurie McFarlane, Marjorie McFarlane
Mailing Address:	13345 SE Johnson Rd
City/State/Zip:	Milwaukie, OR 97222
Phone Number:	503-659-4240

2. Site Description.			
Tax Lot(s): 00202-00400-00802-00803	Section: 05	Township: 25	Range: 2E, W.M.
Address: 13345 SE Johnson Rd, Milwaukie, OR 97222			

3. Describe the applicant's proposed use of this property.
Yard Debris and Wood Recycling and sale of finished products compost and other products containing compost. Wood Fiber Hog for Bio-Fuel Usage. Property also used to sell Bark, Rock Products, Tools and non-regulated fertilizers.

4. Describe the property interest held by the prospective Licensee or Franchisee (Applicant).
Dan and Laurie McFarlane and MarjorieMcFarlane each own ½ of the Milwaukie Land and Building.

5. Describe the duration of the interest.
Duration is until transferred to heirs or sold which is not scheduled at this time.

Property Use Consent

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APPLICANT CERTIFICATION:
An authorized agent of the applicant must sign this form. Metro will not accept a form without a signature.

I certify that the information contained in this form is true and correct to the best of my knowledge. I agree to notify Metro within 10 days of any change in the information submitted as a part of this application.

SIGNATURE OF AUTHORIZED AGENT Maureen Draves

TITLE Corporate Secretary

PRINT NAME Maureen Draves

DATE March 7, 2022 PHONE 503-~~701-3676 mobile~~ 654-1237 work

PROPERTY OWNER(S): This form cannot be processed without a signature.

"I consent to the applicant's proposed use of this property as described on this form. I have also read and agree to be bound by the provisions of Section 5.01 of the Metro Code if the applicant is granted a franchise or license and that franchise or license is subsequently revoked or if renewal of that franchise or license is refused." Metro Code Section 5.01 states: "Upon revocation or refusal to renew the Franchise or License, all rights of the Franchisee or Licensee in the Franchise or License shall immediately be divested."

I certify that the information contained in this form is true and correct to the best of my knowledge. I agree to notify Metro within 10 days of any change in the information submitted as a part of this application.

SIGNATURE Dan McFarlane Laurie McFarlane

PRINT NAME Daniel McFarlane Laurie McFarlane

DATE March 7, 2022 PHONE 503-659-4240

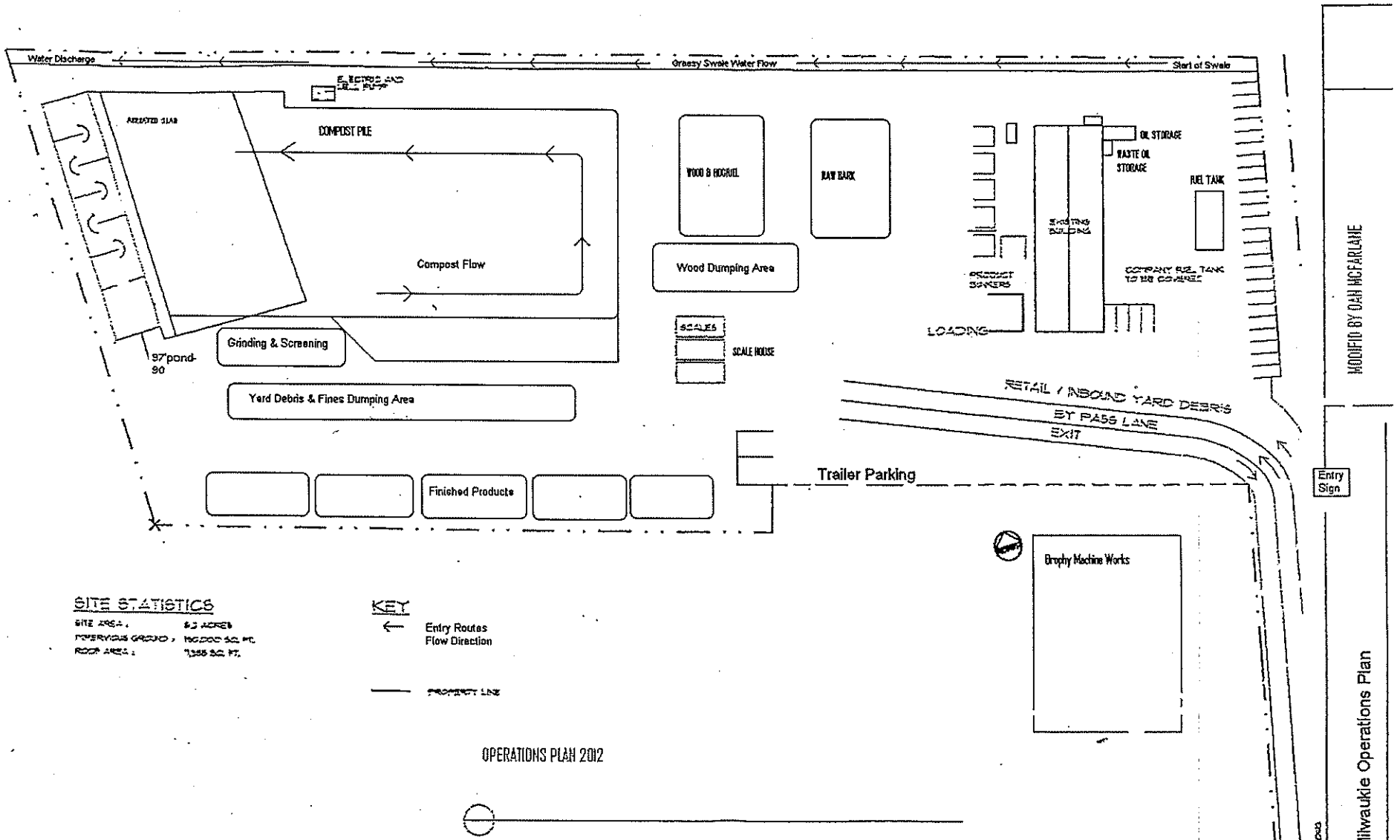
SIGNATURE Marjorie McFarlane

PRINT NAME Marjorie McFarlane

DATE March 7, 2022 PHONE 503-522-8012 (Daughter/Caregiver)

Appendix A

SITE LOCATION MAP


Water Discharge
Greasy Swale Water Flow
Start of Swale
COMPOST PILE
Compost Flow
Grinding & Screening
97'pond-90
Yard Debris & Fines Dumping Area
WOOD & HOGFUEL
RAW BARK
Wood Dumping Area
SCALES
SCALE HOUSE
OIL STORAGE
WASTE OIL STORAGE
FUEL TANK
LOADING
RETAIL / INBOUND YARD DEBRIS
BY PASS LANE
EXIT
Trailer Parking
Finished Products
Brophy Machine Works
MODIFIED BY DAN MCFARLANE
Entry Sign
Milwaukie Operations Plan
SITE STATISTICS
KEY
Entry Routes
Flow Direction
PROPERTY LINE
OPERATIONS PLAN 2012

EMERGENCY EVACUATION ROUTES

OPERATING PLAN

McFarlane's Bark, Inc.

Solid Waste Disposal Permit # 1442

www.mcfarlanesbark.com

Site Location Address:

13345 SE Johnson Road

Milwaukie, Oregon 97222

503-659-4240

Revisions

(most recent on top M > A)

m. December 2019	8. v. and vi. Page 4	At Facility Information - Light change at Compo pile and install at north road electrical building.
l. November 1, 2019	2. A. Page 7 2. C. Page 8	At General Procedures – added The composting pile height is maintained at 25 feet or lower. "clean unpainted or untreated wood".
k. Spring 2019	7. g. 6. Page 13	Southern Swale – Swale grass vegetation was established
j. January 15, 2019	8. iv. Page 4	At Facility Information - Install 30' light pole; SW corner of property
i. September 17th, 2016	5. c. Page 10	Reentering of packer trucks on October 10th
h. June 2016	7.c. page 10	Dungenous Environmental Company Chitovan Shell Treatment installed.
g.November and December 2014	2.B.6. Page 8	Asphalt 8,700 square feet- compost production
f.November 20, 2014	7.g.7 and 8 Page 13	ADD Modifications to CEC Screen It
e.August 2014	7.g.5 and 6 Page 12 and 13	ADD Morbark mister-bio filter swale planting
d.June 1, 2014 Appendix M	5.c.5.b.	ADD - McFarlane's rerouted all Milwaukie yard packer truck Clients. See Odor Control
c.March 2014	7.e.	EDITED – REMOVED – "The Morbark grinding A cannon type water hose is placed up about 10 to 12 feet high and is positioned to spray directly into the infeed of the Morbark grinder, thus controlling the ground wood waste debris that is later hauled to the mill and used as bio, fuel. The water spray heads were, etc. CHANGE TO - Grinding Chamber Dust Suppression Unit and overhead misters on The MORBARK Grinders, etc.
b.November 27th, 2013	5.c.5.a.	ADD - Waste Connections of Vancouver, Washington made a choice to discontinue hauling curbside collection packer truck loads to McFarlane's Bark Vancouver yard.
a.August 19th - September 1st, 2013	7.g.1.2.3.4	ADD - Evergreen trees were planted on the perimeter of the West and North property lines. Sprinkler system installation.

Table of Contents

Appendices

BACK GROUND:

McFarlane's Bark, Inc. is a yard debris recycling, wood bi-products, and landscape material wholesale and retail business. Since moving to the current site in 1972, McFarlane's has produced and sold compost, soil, mixes, bark and wood bi-products. Other landscape products have been added as market incentives increased. Throughout our years in business, significant efforts have been initiated to mitigate impacts resulting from activities on site.

As a Commercial Composter in the Portland Metropolitan area since 1965 it is the desire of McFarlane's Bark, Inc. to persevere in our obligation to produce safe, uniform and superior products. We are proud of our products in that they perpetuate an ever increasing value to our customer.

FACILITY INFORMATION

1. Site Legal Description: Tax Lot numbers: 00202-00400-00402-00802-00803. Section 05 Township 25 Range 2E.
2. Site Description: Approximately 6 acres. The parcel is rectangular, with a rectangular section in size of 50 feet by 200 feet that is cut out on the SE corner; this area is an easement road.
3. Site Statistics
    - Total Site Area = 272,250 square feet
    - Paved Area = 168,896 square feet
    - Roof Area = 8,288 square feet
        - Main Building
        - Scalehouse
        - West Electrical Shack
        - East Electrical Shack
        - Oil Shack

4. Location: North side of Highway 224 aka The Milwaukie Expressway. At the dead end and furthermost north end of SE Johnson Road off of Highway 224, 13345 SE Johnson Road, Milwaukie, Oregon 97222, USA

5. Zoning: I-2 Light Industrial

6. Licenses and Permits:
    - Clackamas County Alarm Permit
    - State of Oregon Construction Contractors License
    - DEQ Solid Waste Disposal Site Permit: Yard Debris Composting Facility
    - Regional Metro Service District Government issued Solid Waste Facility License for Yard Debris Composting
    - Oregon Bureau of Labor and Industries Operation of Power Driven Machinery / Equipment
    - Oregon Department of Agriculture E-Scales License
    - City of Portland Business License
    - City of Vancouver Business License
    - State of Washington Master License for Foreign Profit Corporation

7. Hours:
    a. April – September
        i. Monday – Saturday: 7:00 a.m. – 6:00 p.m.
        ii. Sunday: 8:00 a.m. – 5:00 p.m.
    b. October, November and March
        i. Monday – Saturday: 8:00 a.m. – 5:00 p.m.
        ii. Sunday: 9:00 a.m. – 4:00 p.m.
    c. December, January and February
        i. Closed Sundays
    d. December, January and February
        i. Monday – Saturday: 8:00 a.m. – 5:00 p.m.

8. Outdoor Lighting:
        i. City street halogen pole lamp at N.E. side of property at employee parking area.
        ii. Entry light above south entry doors of building.
        iii. Halogen pole lamp at NE side of building above the shop bay doorway of building.
        iv. 30’ LED sensor activated light pole at SW corner of property
        v. LED Lights on pole on south side of Fine Compo-Stuff pile
        vi. Outside light at northern electrical shack

9. Sewer and Water:
    a. City Fire Hydrant at east side of property in the employee parking lot.
    b. Private fire hydrants are located approximately every 200 feet along the North, West and South perimeters of the property in the 4 foot wide cement planters.
    - Scale house
    - Loading Area 1 on the SW corner of the building
    - North road at mid point near Plant Number One

- North road at the North electrical building
- North road adjacent to composting aerated slab
- At pond western electrical building
- Southwest corner near the dirt and rock bins

c. Three hot and cold faucets and sinks inside office building.
d. Three toilets and one outdoor facility

10. Products and Services:
    - Yard Debris and Wood Recycling
    - Bark Products
    - Compo-Stuff Products
    - Planting Mixes
    - Rock Products
    - Cedar Chips
    - Fresh Sawdust
    - Garden Center
        i. Bagged mixes amendments
        ii. Tools
        iii. Other garden center related products

11. Traffic Flow: Best attempts are made to keep traffic flow of McFarlane vehicles, vendor vehicles and Customer vehicles; at 5 mph or less. Traffic flow signage is prominently displayed indicating direction to loading and recycling queuing lanes on the property. Yard debris vehicles and regular customer yard debris and product pickup at Loading Area 1. Loading Area 2 sign is for line up of area 2 products and for commercial client flat rate recycling. During surge and peak times, we supply additional yard staffing for directional assistance, traffic control and will perform flat rate dumping to speed up the process of recycling. We also utilize the additional staffing to inspect incoming yard debris and wood waste for contamination control. Due to scale inspections, repair, maintenance and closure, McFarlane's will exorcise, an "at will" option to flat rate or charge by the ton to all customers at any given time.

12. Customer Base:
    a. Retail, Commercial Discount and Wholesale Pricing
    b. General Public
    c. Solid Waste Collection Companies
    d. Landscape Design and Maintenance
    e. Nursery Growers
    f. Commercial Businesses
    g. Public Works
    h. Public Schools
    i. Contribution Accounts
        i. Churches
        ii. Environmental Associations
        iii. Private and Public Schools
        iv. Girl and Boy Scouts

1.PRODUCTION

a. Compo-Stuff, Planting Mixes and Bark dust Product are produced on site with the use of screening plants, grinders and heavy equipment. Material Handling Activities of these finished compost and bark products are loaded and unloaded off of semi and delivery dump trucks. Use of raw material and finished product and the conveyance of material on site to customer locations throughout the Pacific Northwest is performed daily.

b. Off Road Diesel Fuel is delivered to the Company fuel tank from a commercial fuel delivery vehicle using approved procedures. Fueling of company vehicles occurs at the fueling station when practical, by our on site above ground off road diesel fuel tank. Used oil is removed during vehicle maintenance and is transferred to a recycling holding tank and disposed of using approved methods.
NOTE: The Stormwater Management and Spill Containment Program Procedures are attached.

c. Litter Control: The entry, landscape areas and yard operation areas are cleaned and picked up of garbage by yard personnel daily. Garbage recycling bins are picked up by Clackamas Refuse Company local waste hauling company, twice weekly. Street sweeper, Scoop Operator and yard loader will maintain the SE Johnson Road up to the Highway 224 traffic light a couple of times weekly.

d. Fire Prevention: There is an 8" loop system that has 8 private hydrants attached.

- Periodic recirculation of water on the brush piles is also helpful in fire protection
- Inside the processing plant, machinery is washed as needed, to prevent any dust fires
- Machinery that is being repaired is wet down as needed.
- A hot spot in the pile will appear to be smoky.
- Add water if necessary

Steam can be misinterpreted as a "hot spot", although, it is policy that Employees are to inform a Manager or Lead if they notice a "hot spot". If a hot spot is noted in any pile it is completely eradicated by:

1. Digging it out
2. Driving over it
3. Grinding the product
4. Refinishing the product

NOTE: The Company Fire Safety Plan is attached.

e. Noise levels are kept within acceptable range for light industrial zoning; 90db. Noise range levels have been tested by our Loss Prevention Specialist Don Binzer, of SAIF. In addition, OSHA Required - Annual Hearing Screening is performed by a contracted health facility and coordinated by our Human Resources Manager.

2. COMPOSTING OPERATIONS

A. General Procedures - The composting pile height is maintained at a 25 foot or lower size.

1. When customers phone for rates our Sales staff encourages the client to cover their load to better secure it from blowing out on the way to our facilities.
2. Incoming vehicles are viewed by Sales staff and charged by the cubic yard or weighed in on the scale. If weighed the price per ton is calibrated and calculated at the time of exit.

3. Each incoming load is checked for possible non organics or unacceptable materials, i.e. hazardous waste, glass, plastics and metals. Customer is asked to take away unacceptable materials to the nearest recycling facility.
4. Payment forms accepted are Cash, Check, Visa, Discover or Mastercard. Commercial account customers may choose to be charged by the yard or the ton when the scales are open.
5. Customer is directed to unload in specific areas. The Wood or Yard Debris unloading locations are on specified areas on the concrete and may change with weather conditions or shape of the feed stock piles.
6. The fine yard debris is processed via a first grind within 24 to 48 hours. Every effort is made to get to the fine debris with a coverage of overs so as to minimize odiferous conditions in the case that a load was dumped after the unit loader operators have gone home for the day.
7. The Parker, will observe customers as they unload their vehicles, so as to not accept any non organics. Customer is instructed to take non organics with them upon exiting.
8. Additional fees are charged for all unacceptable materials if the customer has left non acceptable items on site.
9. CAUTION is expressed to Customers and they are advised; no smoking, children and pets must remain in the vehicle.

B. Processing

1. Processing and curing yard debris feed stocks with the static pile method is somewhere between 14 and 17 weeks which is consistent with the "On Farm Composting" manual produced by the Northeast Regional Agricultural Engineering Services. This is operating in the anaerobic or anoxic biological environment. The outer layers of the pile will have penetration of oxygen to form a narrow aerobic zone and a thicker anoxic zone. Moisture levels of the compost piles are moist but not wet. Water can be added by soaker hoses and sprinklers as required.
2. Bulldozers, unit loaders and track hoes are used to aerate, turn and stack piles. Loaders are also used to feed grinders and screens.
3. Product is then screened with coarse oversized materials and mixed back into green incoming yard debris. Screened sizes will be moved into finished piles.
4. A compost temperature wand was purchased on September 16th, 2013. The implementation into operations began February 17th, 2014. The wand is used during daily operations when rotating the static pile. The rotation of the pile occurs 5 days of the work week. The use of the temperature wand is to insure the thermophilic (hot) conditions of 135 to 165 degrees Fahrenheit, biochemical processes accelerate and beneficial microbes quickly deplete the compost of needed oxygen. This will insure the reduction of pathogen. For this reason, air must be supplied to an active compost pile by either forcing it in or by periodic turning of a static pile to maintain air spaces sufficiently large to allow passive ventilation.
5. As of March 1st, 2014 The Compost Aerated Slab had repairs to the fans and manifold in addition to the cleaning of the aerated holes in the concrete slab. The Compost Aerated Slab is slated to be in full operation by March 15th, 2014.
6. In November and December 2014 there was 8,700 square feet of paving installed at the eastern side of the Fines and Brush dumping area of the yard. This opened up more area for customers to park and allows McFarlane's to move and stockpile the incoming yard debris more efficiently by eliminating traffic congestion; gives more area to hold unground material and allows additional time for composting prior to rotation.

C. Wood Waste Recycling
The commercially generated clean, un painted, or untreated wood waste, large yard debris and stumps are ground and delivered by semi to local mills with industrial boilers for use as hogged fuel; to thus generate energy for that facility.

3. SURFACE WATER PROTECTION

The Company practices Best Management practices for our facility stormwater discharge in compliance with the Stormwater Discharge Permit, General Permit 1200-Z.

Any spillage is removed and disposed of appropriately before contact with surface water as per the company Hazard Communication and Emergency Action Plan. Vehicle maintenance is performed indoors and outdoors. Materials such as oil and grease are disposed of off site through appropriate best management practices.

See:

- Stormwater Pollution Control Plan Appendix D
- Spill Prevention, Control and Countermeasure Plan Appendix B.
- Emergency Action and Hazard Communication Plan Appendix C

4. GROUND WATER PROTECTION

Possible pollutants in site runoff are metals, plastic, organic matter, oils, grease and sediment. Sources include yard debris, customer vehicles and landscape materials. Processing of compost and bark products is performed with environmentally safe composting processes; whereby using the static pile composting method, which produces heat sufficient to extirpate most herbicides, pesticides and unhealthy pathogens. Particulates from bark dust, unpaved roadways, and windblown deposition are present. No metal processing is done on site. The only source of metal is bi-products. Little if any pollutant particles may reach the storm discharge and monitoring station. Compost and wood chips are used as a filtration material in many storm discharge systems.

See the Environmental Monitoring Plan Appendix E

5. ODOR CONTROL

a. With the static pile composting system, an odor control technique is to minimize disturbance of the material which contains the anaerobic byproducts in the pile until sufficient time has passed that the anaerobic composting process proceeds to the point that the byproducts are stabilized. There will still be some release of odiferous by products but the release will be minimized. Aerobic conditions are the result in the degradation of organic matter to carbon dioxide, water and residual complex organics. As the loads come in, Compost Overs from the CEC Screen It or the higher carbon sources of first grind feed stocks from the eastern side of the compost pile can be used to minimize an anerobic situation.
b. Some intermediate degradation products are released in aerobic composting but they are generally, less odorous than the by-products of anaerobic composting. Odiferous by-products of anaerobic composting include sulfides, mercaptans and organic acids. Provided that the aerated material is maintained in a moist and controlled temperature atmosphere; odorous compounds such

as these will be minimized. Temperature is taken with the wand in the morning, four places on the static pile in the four corner quandrants of the pile (SE, NE, NW and SW). The pile is in constant rotation and so the pile is constantly releasing moisture when not raining. On the pile there is a crust that creates a 3 foot depth of wetness and every time the pile is opened up it is able to absorb the new moisture if raining. Regulating the moisture is controlled by moving the pile. The constant rotation of the pile assists with the evaporation that may be needed in the rainy season. In the summer when needed, sprinklers can be placed upon the pile for additional moisture.
In some low level compost piles there have been issues with the pile becoming too cool or two hot; rotation is always the key to control from the pile going anerobic. And the very few occurrences that there was a cool area on the compost pile, the Bull Dozer Operator would take warm feed stock material to warm up a cool composting area. Due to our abundance of feed stock, the "too cool or too hot" situations have never been an issue for the Compost pile at McFarlane's.
Bulldozers and Track Hoes are used to rotate the pile; because the pile does not go anerobic very quickly, the equipment Operator has time to manipulate the pile by opening up and burying. Each section to be worked on is approximately, on an average, of about 20 feet by 20 feet. The Bulldozer is digging between 20 and 35 feet deep, at times, as he is pushing the composting material toward the low areas of the pile, toward the section that was moved forward the previous day (SE corner is moved into the NE and then from the NE to the NW corner). Our pile has areas that are always warm and so we have never experienced a problem of the pile coolness being an issue.

c. These approaches have been successful in reducing odors:

1.Time of Day - Piles are rotated between 6:00 am and 6:00 pm. The impact of turning and final pile breakdown of odorous material may, however, be reduced by limiting operations involving such materials to times of the day and weather conditions that are least contributory to movement of odors to neighboring properties without significant dilution by atmospheric conditions. Hence, where an anaerobic condition is suspected, it is policy to rotate the pile in the mid afternoon, when the possibility of impacts on surrounding uses are less. The piles will be rotated during shorter periods of time, reducing the periods when odors might be inadvertently generated. Pile will not be rotated in inclement weather conditions.

2. Wind Direction - When wind is at any velocity, there could be odor impacts upon our neighboring businesses and residences. In high winds there is an almost immediate dispersion of smells. However, if there is an odor concern we discontinue dozing the pile if the odor is not aligned with the receipt of a packer truck load.

3. Percent Moisture - The piles are kept damp by the recirculating water or hydrant water, if needed. This reduces the possibility of odors. The pile is constantly in rotation toward the northwest corner onto the last stage of the compost aerated slab. The hand "squeeze test" is performed at the finishing stage. The moisture can be seen in the hand squeeze test and if the product is too moist, then the coarser Overs material can be added. Another indicator of the compost being too moist is that the tracks on the dozer show very sticky compost and the compost clogs the tracks. If this occurs, then the material is rotated to move the moister material around and over into dryer material. In the times that the materials are too wet, we access the Overs to balance out the moisture. Fans on the compost aerated slab can also assist in drying wetter material.

4.Scalehouse and Parker staff are checking loads. The loads of fines are covered with cured compost throughout the work day by the unit loader operator. This reduces the opportunity for odors to escape from the processing pile. Dilution with this more stable material absorbs odors and reduces the odiferous impacts.

5. Diversion - Problem loads are not accepted and may be diverted from site. This would be in the case of loads that the Scale house Operator or Load Measurer may consider to be highly unstable anaerobic grass or other vegetative odiferous loads which they will redirect to the Metro South recycling facility in Oregon City.

a. As of November 27th, 2013 Waste Connections of Vancouver, Washington made a choice to discontinue hauling curbside collection packer truck loads to McFarlane's Bark Vancouver yard. This feed stock was previously transferred to the McFarlane Milwaukie compost processing site and was 57,4440 cubic yards for the December 2012 through November 2013 period. They had been hauling to our Vancouver location for about 5 years.
b. As of June 1, 2014 McFarlane's rerouted all Milwaukie yard packer truck Clients. These Clients were informed that for the months of June through October McFarlane's would no longer be accepting these loads due to their generally odiferous condition 5 months of the year. Correspondence was generated to the packer truck clients via US Mail from February 28th and forward to give ample notice for these businesses to make other arrangements five months of the year. See Appendix M.
c. On September 17th, 2016 Kathleen McFarlane approved the reacceptance of packer trucks to return on October 10th rather than November 1st, as the compost pile is not maintaining the quantity of moisture needed for the static pile composting process. The needed feed stocks are grass and other such feed stocks that contain higher quantities of nitrogen. The odor issues will be handled by immediate covering of the incoming feed stocks by the unit Loader Operator with a drier non odiferous feed stock.

6.Leachate and water run off of the piles are covered with coarse overs and added back into the compost pile with the unit loader.

7.
a. The Concrete Aerated Retention Pond - An Odor Control Plan may be referenced it is located in Appendix K. Thus, the odiferous conditions of the pond are remedied.

b. Note: The aeration pump that was recommended by Terracon was installed and began operation on September 10, 2013. It is a Kasco Model 3400. This aerator is 1 ½ times larger than the aerator that is needed for our maximum pond volume. This allows us the flexibility of running the aeration pump far less than what might be required by the next size down.

c. In June 2016 the Chitovan pond treatment was initiated. The product vendor is Dungenous Environmental. Chitovan is an organic product and the shell treatment is a powerful, safe and natural water treatment biopolymer that removes suspended sediment and other contaminants from water. The result is for the separated solids to be pumped out and to the NE end of the northern swale where they will be treated and held within a filter bag of that system.

8. Water spray heads were installed on our equipment Morbark grinder #621 on October 29,

2013. The Morbark grinder #622 has not ground hog fuel in the last 8 months but these spray heads will be added when it returns from our Molalla property in early summer of 2014.

6. Pathogen Reduction

Processing of compost is performed with environmentally safe and Best Management composting processes; whereby using the static pile composting method, which produces heat sufficient to extricate most herbicides, pesticides unhealthy or harmful pathogens to an inert state.

Monthly testing is performed. The pathogens fecal coliform and salmonella are tested for. At the time of obtaining a pull sample for sending to the Soil Control Lab, Watsonville, California; particular communication must be made with the Production Department Assistant Managers to be sure that sampling is obtained from the cured area of the pile. If samples of Compo-Stuff are taken from a non cured area of the Compo-Stuff pile there could be a situation that a positive pathogen could result.

In the event that a test result shows positive results for pathogens and discovery is made that the pull was taken from the cured area, then the cured area will be cleared of a 5 unit swath from it's eastern end and rotated to the back of the pile for further curing.

Soil Control Lab
42 Hangar Way
Watsonville, CA 95076
Phone 831-724-5422
Fax 831-724-3188

If the fecal coliform or salmonella pathogens are showing a test result of a non passing result, an immediate sample is pulled and sent to The Soil Test Lab for another test.

A free distribution of the complete lab report and the condensed version are available to all customers. Distribution is made by e-mail, fax and US Mail, or the results may be picked up at our sales counters.

See the Soil Test Lab Report Appendix F
See the Condensed Compo-Stuff Analyses Appendix G

7._ Dust Prevention

a. On non rainy days the incoming southern road, product yard and yard debris recycling areas are watered down by Production Department workman with fire hose. This process takes about 1 hour and is performed about 3 times per work day or as needed. Keeping areas damp reduces dust almost completely.
b. Quarterly washing of the gravel entry.
c. Regular sweeping of the concrete slab and the Johnson Road entry, using a sweeper attachment on our unit loader.
d. Squeegee clean up on product and yard debris area concrete. The squeegee is attached to the one yard scoop and the wet and dry materials are pushed into the fines area of the yard debris.
e. Daily use of sprinkler stands on the West road when not raining

f. Best attempts are made to keep traffic flow of McFarlane vehicles, vendor vehicles and Customer vehicles at 5 mph or less.

g. Beginning August 19th and completed September 1st, 2013; Evergreen trees were planted on the perimeter of the West and North property lines. The trees create a screen that assists with dust control. The trees have a lifetime guarantee by LBD Landscaping Company. See appendix L.

1. There are 17, 10 to 12 foot Leland Cypress trees along the Western property line. These trees will grow up to 30 feet tall and will create a complete screening. All of these trees have been double staked.
2. There are 75 Castlewellan trees along the Northern property line. These trees will grow up to 30 feet tall and will create a complete screening.
3. Trees are planted 12 feet on center. The root ball plantings were planted in at 30 inches deep in a screened clay soil top soil. The top dressing was with compost. Annual pruning will be maintained after the 2015 year.
4. Installation of a sprinkler system occurred on September 3, 2013. An automated sprinkler system timely waters the trees. These are the Rain Bird 1806 Pop Ups with Spray Heads. The West Road has MP Rotators. These rotators mist the road, keeping the road misted and dust free a minimum of three times per day when there is no rain to keep the dust free. The North road has 3500 Rain Bird Rotors for keeping the road damp. All are maintained via the ESP Rain Bird Control Timer System.
5. The MORBARK 6600 – McFarlane Equipment ID #621 - Install in March of 2014 and The MORBARK 6600 McFarlane Equipment ID #622 – Install in May of 2014 of the overhead misters and the "Grinding Chamber Dust Suppression Unit" respectively.

The horizontal MORBARK grinders had installation of the discharge belt overhead misters. The misters have two spray heads that have four streams. The misters are permanently mounted in order to provide 360 degree coverage; with a 40 foot radius. These misters are used whenever the grinder is used for grinding wood waste hog fuel and yard debris feed stocks. To initiate operation of the misters, the machine Operator affixes the fire hose adaptor to an onsite 3" fire hose.

NOTE: In addition, these machines were purchased with an additional apparatus; the "Grinding Chamber Dust Suppression Unit". During operation, water is injected into the grinding chamber to completely cover all the feedstock material and this limits any dust from escaping with the ground finished product.

6. Bio Filter Swales

Northern Swale - LBD Landscaping – July 2nd, 2014 A total of 270 Rush Grass plants were planted all along the Northern property line; East to West within the bio filter swale where vegetation had dissipated. Some areas needed more plantings than others. Rush grass multiplies naturally and the poison hemlock plants will not be a problem as they have been sprayed with the appropriate herbicide. LBD Landscaping is on contract to a bi-monthly agreement for monitoring, maintaining beneficial plant matter and management of the swale's progress to continue to eradicate the unwanted

vegetation, such as poison hemlock, black berry, invasive species, etc. Clean up of garbage and debris, addition of 10 cubic yards of soil throughout the entire length as only a few areas were low due to winter rains. This added soil will maintain the slope of the swale.

Southern Swale – Short swale consisting 100 feet long. There are small Boulders and silt socks on the eastern end and the northern side of this swale and vegetation was established in Spring 2019

7. Screen modifications to the CEC Screen It were installed on 11/20/14. The installation of dust skirting up to the end of the fines conveyor belt and included the overburden conveyor belt.

8. Other precautions for dust caused by operation of the CEC Screen It are that if there are windy conditions that show the dust particles blowing away from the CEC area; that the Production Department Operators will shut the equipment down immediately.

8. SITE CLOSURE PLAN

The purpose is to clear the site to make it a saleable property.

a. In the event of a short-term cessation of operations (7 days to 30 days), management will contact all customers and advise them of the approximate time the closure will be in effect. The scale house will be closed for incoming yard debris and wood waste. A sign will be posted at the SE corner entry on SE Johnson Road advising of the Temporary Closure. All finished outbound material will be transported as soon as is feasible. DEQ and METRO will be advised of the nature of the problem, the proposed resolution and the approximate time of re- opening.
b. Cease hauling in saleable products
c. In the event of a long-term or permanent cessation of operations, management will immediately contact and meet with Metro as early as it is known that there is a significant market change which necessitates either a major shift in operations or closure of a product line or lines. As the result of meetings with Metro the best course of action possible will be decided which serves our company, Metro, and the customer base. If at all possible, efforts will be made to secure alternative markets for the customers in order to not cause any significant disruption of their business.
d. Once a decision is made to cease operations, as much as practicable, receipt of materials from non-critical customers will stop immediately. All remaining product will be shipped on an expedited basis. Any non-merchantable product remaining at the end will be shipped to an appropriate facility for disposal. The site will be left clean and all bills will be paid in full.

Liquidation of Sellable Products:

- Advertise the liquidation
- Trucking saleable products to other company site or other business locations
- Sell products at reduced rates
- Sell equipment – *Craigs List*, Auction, Equipment Trade Associations

9.Record Keeping and Internal Reporting Procedures

a. Use of our point of sale system, trackd the incoming feedstocks and outgoing product yardage. The reports are produced, maintained and summarized by the Administration department personnel. Incoming quantities, inventory totals and product quantity sales are reported to the necessary government entities.

b.The Environmental Services Concern Journal (ESCJ) is managed by the Sales office lead personnel. The ESCJ is used to journalize any neighborhood concern regarding dust, noise or odiferous conditions. The Weather Wizard is used twice daily to record the outside temperature, wind velocity and direction. Daily monitoring of the weather is performed in the morning and in the afternoon by the Cashier Lead personnel.

See the Environmental Services Procedure Appendix H

c.Records of inspections, maintenance, repair, education activities, sampling and flow data shall be kept in the appropriate department's files. The Environmental Services Journal will contain records of incidents that had the potential to impact or affect, storm water or surface water. Entries involving spills are to include the date and time of spill, the substance spilled, the activity relating to the event, detailed explanations of the clean up disposal procedures and recommendations for future avoidance of similar circumstances in the form of an Action Plan. All other entries are to include the data and time, type of activity, repair, education and person directly responsible for the activity. The Safety Officer is to personally review and initial each entry as well as consider modifications to current practices and control procedures.

See the Environmental Services Journal Appendix I
See the Emergency Action Plan Training Check List Appendix J

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MCFAR-2 OP ID: JC

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 02/25/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Premier NW Insurance 421 High St #200 Oregon City, OR 97045 Logan Moll - Managed Accounts	CONTACT NAME: Julie Carmicle PHONE (A/C, No, Ext): 503-742-0238 FAX (A/C, No): 503-655-2035 E-MAIL ADDRESS: jcarmicle@premiernw.net
INSURED McFarlane's Bark, Inc. 15840 Pope Ln Oregon City, OR 97045	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A : Firemen's Ins of Washington DC 21784 INSURER B : SAIF Corp 36196 INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC	X		CPA 6020138	03/25/2022	03/25/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ excluded $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [ ] HIRED AUTOS [ ] NON-OWNED AUTOS			CPA 6020138	03/25/2022	03/25/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (PER ACCIDENT)	$ 1,000,000 $ $ $
A	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			CPA 6020139	03/25/2022	03/25/2023	EACH OCCURRENCE AGGREGATE	$ 4,000,000 $ 4,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		517790	04/01/2022	04/01/2023	[X] WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 500,000 $ 500,000 $ 500,000
A	Inland Marine			CPA 6020138	03/25/2022	03/25/2023	Ded	5,000
A	Leased/Rented			CPA 6020138	03/25/2022	03/25/2023	Ded	5,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Metro Solid Waste Facility License No. L-026-16
Certificate holder is additional insured as their interest may appear in the Named Insured's operations per CLCG0492 10/18. All operations of the Named Insured subject to policy conditions, limitations and exclusions.

CERTIFICATE HOLDER

METRO01

Metro
600 NE Grand Ave.
Portland, OR 97232

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Julie M. Carmicle

State of Oregon
Department of
Environmental
Quality

SOLID WASTE DISPOSAL SITE PERMIT: COMPOSTING FACILITY
Permit No. 1442

Oregon Department of Environmental Quality
2020 SW 4th Ave., Suite 400
Portland OR 97201
Telephone (Information): **(503)229-5353**

Issued in accordance with the provisions of Oregon Revised Statutes (ORS) Chapter 459, Oregon Administrative Rules (OAR) 340 Divisions 93, 95, 96 and 97 and ORS Chapter 468B and subject to the land use compatibility statement referenced below.

ISSUED TO:

McFarlane's Bark, Inc.
13345 SE Johnson Road
Milwaukie, OR 97222

FACILITY NAME AND LOCATION:

McFarlane's
13345 SE Johnson Road
Milwaukie, OR 97222

PROPERTY OWNER:

Marjorie Ann McFarlane
Dan McFarlane
1515 Windsor Drive
Gladstone, OR 97027

OPERATOR:

Dan McFarlane
McFarlane's
13345 SE Johnson Road
Milwaukie, OR 97222

ISSUED IN RESPONSE TO:

- A solid waste disposal site, composting permit application and associated documents, received on March 9, 2010.
- A Land Use Compatibility Statement from Clackamas County dated: December 8, 1998 and confirmed as still valid on April 19, 2010.

The determination to issue this permit is based on findings and technical information included in the solid waste permit application and in the permit record.

ISSUED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Audrey M O'Brien — December 30, 2011

Audrey O'Brien
Solid Waste Manager, Northwest Region

Date

Permitted Activities

Until such time as this permit expires or is modified or revoked, the permittee is authorized to establish, operate, and maintain a solid waste disposal site for composting activities and to construct, install, modify or operate stormwater and process water treatment and/or control facilities in conformance with the requirements, limitations, and conditions set forth in this document, including all attachments.

Unless specifically authorized by this permit, by a National Pollutant Discharge Elimination System (NPDES) or Water Pollution Control Facilities (WPCF) permit, or by Oregon Administrative Rule, any direct or indirect discharge to waters of the state is prohibited.

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Introduction

This document is a solid waste permit issued by the Oregon Department of Environmental Quality in accordance with Oregon Revised Statutes (ORS) 459, ORS 468B.050 and Oregon Administrative Rules (OAR), Chapter 340. This individual permit is issued to owners and operators of composting facilities handling greater than 100 tons per year of Types 1 or 2 feedstocks, or greater than 20 tons of type 3 feedstocks, or greater than 40 tons of Type 3 feedstocks when composting in containers designed to prohibit vector attraction and prevent nuisance and odor generation.

Rules relating specifically to composting facilities may be found in OAR Chapter 340, Divisions 93, 95, 96 and 97.

In this document

This document contains the following sections:

ALLOWABLE ACTIVITIES

1.0 AUTHORIZATIONS

1.1	**In this section**	This section describes the activities the permittee is authorized to conduct, including: • Authorization to receive specific types of feedstocks; • Authorization to receive other feedstocks or amendments; • Authorization of other activities; and • Water quality activities.
1.2	**Authorization to receive Type 1 feedstocks**	This permit authorizes the facility to accept the following feedstocks (Note: a detailed list of authorized feedstocks is listed in the DEQ-approved Operations Plan for this site.): • Type 1 feedstocks. These include source-separated yard and garden wastes, wood wastes, agricultural crop residues, wax-coated cardboard, vegetative food wastes including department approved industrially produced vegetative food waste, and other materials DEQ determines pose a low level of risk from hazardous substances, physical contaminants and human pathogens.
1.3	**Authorization to receive other feedstocks or amendments**	Feedstocks or amendments excluded from the above authorization may not be accepted unless DEQ has approved in writing an updated Site Operations Plan which addresses the new feedstocks or amendments.
1.4	**Authorization of other activities**	All facility activities must be conducted in accordance with the provisions of this permit. All reports and plans required by this permit become part of the permit by reference once approved by DEQ. Any conditions of report and plan approvals are also incorporated into this permit unless contested by the permittee within 30 days of the receipt of a conditional approval.
1.5	**Water quality activities**	The permittee is allowed to construct, install, modify, operate and maintain a compost leachate and/or stormwater collection and/or treatment system provided these activities are done in accordance with plans and specifications approved in writing by DEQ. No activities are to be conducted that could adversely impact groundwater quality. If adverse impacts to groundwater are suspected from a facility covered by this permit, DEQ may require the permittee to perform a groundwater investigation.

2.0 PROHIBITIONS

2.1	**In this section**	This section describes specific feedstocks or wastes the permittee is prohibited from accepting and specific activities the permittee is required to carry out if these prohibited feedstocks or wastes are discovered. These include: • Prohibited feedstocks or wastes; • Discovery of prohibited wastes; • Open burning; and • Sewage sludge (biosolids).
2.2	**Prohibited feedstocks or wastes**	The permittee is prohibited from accepting materials for composting that are not specifically authorized in Section 1.2 of this permit, unless the materials have been approved in accordance with the requirements of Section 1.3 of this permit. The permittee must not accept any wood waste that does not meet the definition of wood waste in OAR 340-093-0030 (97). The permittee must not accept unsorted, mixed domestic solid waste as a feedstock or for disposal at the composting facility. The permittee must not accept any materials that are listed in OAR 340-093-0040, as prohibited from disposal at solid waste disposal sites, including but not limited to hazardous waste as defined in ORS 466.005 and OAR 340, Division 101.
2.3	**Discovery of prohibited wastes**	In the event that the permittee discovers prohibited feedstocks or wastes at the composting facility, the permittee must, within 48 hours, notify DEQ and initiate procedures to isolate or remove the prohibited feedstocks or waste. Non-putrescible, non-hazardous, prohibited waste must be transported to a disposal or recycling facility authorized to accept such waste **within 90 days**, unless otherwise approved or restricted by DEQ. Putrescible, non-hazardous, prohibited wastes must be removed within 48 hours, unless otherwise approved or restricted in writing by DEQ. In the event the permittee discovers wastes that are hazardous or suspected to be hazardous, the permittee must, within 48 hours, notify DEQ. Hazardous wastes must be removed **within 90 days**, unless otherwise approved or restricted by DEQ. Temporary storage and transportation must be carried out in accordance with DEQ rules.
2.4	**Open burning**	The permittee must not initiate or maintain any open burning at this site.
2.5	**Sewage sludge (biosolids)**	The permittee must not accept any sewage sludge for composting at this facility, except Class A exceptional quality biosolids. If the permittee wishes to accept sewage sludge other than Class A exceptional quality biosolids, then the permittee must obtain the applicable water quality permit, in lieu of this solid waste permit, as required under ORS 468B and OAR 340-050.

OPERATIONS AND DESIGN

3.0 OPERATING CONDITIONS

3.1 In this section

This section describes specific operating conditions to which the facility must conform, including:

- Performance standards; and
- Pathogen reduction.

3.2 Performance Standards

The composting facility must be operated in conformance with the performance standards identified in OAR 340-096-0070:

1) All composting facilities must be designed, constructed, and operated in a manner that does not cause a discharge of leachate or stormwater from the facility to surface water, except:

(a) Leachate from a composting facility may be discharged to surface water only in compliance with a discharge permit issued by DEQ.

(b) Stormwater from a composting facility may be discharged to surface water only in compliance with a discharge permit issued by DEQ.

2) All composting facilities that collect and dispose of leachate or stormwater in engineered structures must comply with the applicable requirements of OAR 340-096-0130: Leachate Collection Design and Operating Requirements.

3) All composting facilities must be designed, constructed, and operated in a manner that does not cause a likely adverse impact to groundwater under OAR 340 Division 40. All composting facilities proposing to use infiltration in soil as a method for managing leachate or stormwater must comply with OAR 340-096-0120: Groundwater Protection.

4) All composting facilities must be designed, constructed, and operated in a manner that, to the greatest extent practicable, is consistent with proper facility design and operation, controls and minimizes odors that are likely to cause adverse impacts outside the boundaries of the facility.

5) All composting facilities must be designed, constructed, and operated in a manner that achieves human pathogen reduction as required by OAR 340-096-0140: Pathogen Reduction.

6) All composting facilities must be designed, constructed, and operated in a manner that controls or prevents propagation, harborage, or attraction of vectors, including but not limited to rats, birds, and flies.

7) All composting facilities must comply with all other applicable laws and regulations.

3.3 Pathogen reduction

The composting facility must be operated in conformance with OAR **340-096-0140 Special Rules Pertaining to Composting: Pathogen Reduction** including the following:

1. Analytical limits for composted material:

a) For composted material produced from Type 1 or Type 3 feedstock, or a mix of Type 1 and 3 feedstocks with less than 50% by volume of Type 2 feedstock,, analysis must be performed for salmonella or fecal coliform:

Parameter	Limitations
Fecal Coliform	Less than 1,000 Most Probable Number (MPN) per gram of total solids (dry weight).
Salmonella	Less than 3 Most Probable Number (MPN) per 4 grams of total solids (dry weight).

b) For composted material produced from feedstock containing more than 50% by volume of Type 2 feedstock in the initial pile, analysis must be performed for fecal coliform:

Parameter	Limitations
Fecal Coliform	Less than 1,000 Most Probable Number (MPN) per gram of total solids (dry weight).

2. Testing frequency for composted material to determine pathogen reduction success:

Amount and Type of Compost Produced Annually	Minimum Frequency	Type of Sample
Less than 2,500 tons of composted material from Type 1 and 2 feedstocks	Testing must be conducted once a year.	Composite from finished compost
Greater than 2,500 tons of composted material from Type 1 and 2 feedstock are produced per year	Testing must be conducted every 5,000 tons of feedstock used or a maximum of once every three months.	Composite from finished compost
Less than 2,500 tons of composted material from Type 3 feedstocks	Testing must be conducted once every 4 months.	Composite from finished compost
Greater than 2,500 tons of composted material from Type 3 feedstock	Testing must be conducted every 5,000 tons of feedstock used, or at least monthly if less than 5,000 tons of feedstock used in that month.	Composite from finished compost

4.0 OPERATIONS PLAN

4.1	**In this section**	This section describes the requirements associated with the composting facility Operations Plan, including: • Plan compliance • Initial Operations Plan; • Plan maintenance; and • Submittal address.
4.2	**Plan compliance**	The permittee must conduct all operations at the facility in accordance with an approved Operations Plan dated March 10, 2011, including any amendments. The DEQ approved Operations Plan is incorporated into the permit by reference. Note: The basic elements of an Operations Plan for a composting facility are listed in OAR 340-096-0026.
4.3	**Updated Operations Plan**	**Within 60 days of permit issuance**, the permittee must update the March 10, 2011, original draft Operations Plan to incorporate any DEQ required changes in response to public comment on the permit, and submit the plan to DEQ for approval.
4.4	**Plan maintenance**	The permittee must revise the Operations Plan as necessary to keep it up to date and reflective of current facility conditions and procedures. The permittee must submit revisions of the Operations Plan to DEQ for review and written approval prior to commencing any change in operations.
4.5	**Environmental Monitoring Plan**	The permittee must submit, for approval, an Environmental Monitoring Plan (EMP) to DEQ **within 180 days of permit issuance**. The EMP must include a sampling plan for stormwater runoff from the site to demonstrate whether stormwater controls at the site are adequate. Upon approval, this plan is incorporated into the approved Operations Plan and this permit by reference including all conditions of the approval and any updates.
4.6	**Submittal address**	All submittals under this section must be sent to: **Oregon Department of Environmental Quality** **Manager, Solid Waste Program** **2020 SW 4th Ave., Suite 400** **Portland OR 97201** **Phone: (503)229-5353**

5.0 RECORDKEEPING AND REPORTING

5.1	**In this section**	This section describes recordkeeping of operational information for the composting facility, including: • Noncompliance and leachate release reporting • Access to records • Recordkeeping procedures; and • Submittal address.
5.2	**Non-compliance reporting**	In the event that any condition of this permit or of DEQ's rules is violated, the permittee must immediately take action to correct the violation and to notify DEQ **within 24 hours** at (503) 229-5353. Response: In response to a notification, DEQ may conduct an investigation to evaluate the nature and extent of the problem, and may require additional corrective actions, as necessary.
5.3	**Leachate releases**	Unauthorized leachate releases to waters of the state must be reported to DEQ **within 24 hours**.
5.4	**Access to records**	Upon request, the permittee must make all records and reports related to the permitted facility available to DEQ.

5.5 Record-keeping procedures The permittee must keep records and submit reports according to the following:

Step	Action
1	Establish a location for document retention at the facility, or at another location mutually agreed to with DEQ.
2	Collect information during facility operations on the amount of each type of feedstock received, recording "0" if none is received. • At a minimum, the following types of feedstocks must be: 1) separately identified; and 2) categorized as originating either in or out-of-state: • Type 1, 2 and 3 feedstocks or amendments; o Leaves o Yard debris – compacted and uncompacted o Vegetative food waste and non-vegetative food waste o Agricultural crop residue o Wood chips – dry o Wood chips – green o Clean wood waste o Sawdust, wet o Sawdust, bone dry o Manure o Bedding • Other authorized feedstocks or amendments. Submit the information on the **Composting Facility Report** form provided by DEQ. **Date Due: January 31st of each year for the previous calendar year.** Pay the Annual Permit Compliance Fee required by OAR 340-097. Invoice will be sent out by DEQ. **Date Due: July 31st of each year.**
3	Permittees accepting non-agricultural, post-consumer recyclable materials generated in Oregon are required to complete a **Material Recovery Survey** on a form provided by DEQ. Information necessary to complete this survey includes: amounts and types of recyclable materials; county of origin of the material; and, names of companies providing the material(s). The survey also asks for information about what was done with the recyclable material, such as: made compost; shipped wood waste for hogged fuel; etc. The permittee is required to submit this survey to the local Wasteshed Representative. The survey is then forwarded by that person to DEQ. **Date Due: January 31st of each year for the previous calendar year.**
4	Keep a written, ongoing log showing assessment of composting processing parameters required in OAR 340-096-0090(5)(i). This log must be placed in the facility file.
5	Retain copies of all records and reports for ten years from the date created.
6	Update all records such that they reflect current conditions at the composting facility.

5.6 Submittal address

Submittals for item 2 (Composting Facility Report and the Annual Permit Compliance Fee) above must be sent to DEQ at:

Oregon Department of Environmental Quality
Land Quality Division
Solid Waste Program
811 SW Sixth Ave.
Portland, OR 97204

Phone: (503) 229-5913

Submittals for item 3 (Material Recovery Survey) above must be sent to the local Wasteshed Representative.

6.0 ENGINEERED STRUCTURE DESIGN AND MANAGEMENT

6.1 In this section

This section describes site design and construction requirements for engineered structures designed to collect leachate or stormwater, including:

- Facility Design and Construction Plan;
- Construction requirements;
- Construction documents;
- Construction report submittal;
- Approval to use; and
- Submittal address.

6.2 Facility Design and Construction Plan

Composting facilities that collect leachate or stormwater in engineered structures must comply with the requirements of OAR 340-096-0130 *Special Rules Pertaining to Composting: Leachate Collection Design and Management Requirements*. Structures subject to this Rule include, but are not limited to:

- Leachate collection and storage facilities;
- Stormwater collection and storage facilities;
- Constructed surfaces designed to protect groundwater

The permittee must contact DEQ prior to any site modification affecting these structures. DEQ may require the permittee to prepare and submit a modified Facility Design and Construction Plan, stamped by a registered professional engineer. If so required, the permittee must receive written approval of the modified Facility Design and Construction Plan from DEQ **prior to commencing construction**.

6.3 Construction requirements

The permittee must perform all construction in accordance with the approved plans and specifications, including all conditions of approval. Any amendments to those plans and specifications must be approved in writing by DEQ.

6.4	**Construction documents**	Prior to initiating construction, the permittee must submit and receive written Department approval of complete construction documents for the project to be constructed. The construction documents submitted must: • Define the construction project team; • Include construction contract documents specifying material and workmanship, and requirements to guide how the Constructor is to furnish products and execute work; and • Include a Construction Quality Assurance (CQA) plan describing the measures that will be taken to monitor and ensure that the quality of materials and the work performed by the Constructor complies with project specifications and contract requirements.
6.5	**Construction report submittal**	**Within 90 days** of completing construction, the permittee must submit to DEQ a Construction Certification Report, prepared by a qualified independent party, to document and certify that all required components and structures have been constructed in compliance with the permit requirements and approved design specifications. This submittal shall include "as constructed" facility plans which note any changes from the original approved plans.
6.6	**Approval to use**	The permittee must not accept feedstocks for storage, processing or composting in newly constructed facilities or areas until DEQ has accepted the Construction Certification Report. If DEQ does not respond in writing to the Construction Certification Report within 30 days of its receipt, the permittee may accept feedstock at the facility in the newly constructed facilities or areas.
6.7	**Submittal address**	All submittals to DEQ under this section must be sent to: **Oregon Department of Environmental Quality** **Manager, Solid Waste Program** **2020 SW 4th Ave., Suite 400** **Portland OR 97201-4987** **Phone: (503)229-5353**

COMPOSTING FACILITY GENERAL CONDITIONS

7.0 ADMINISTRATION

7.1 Definitions
Unless otherwise specified, all terms are as defined in OAR 340-093-0030,

7.2 Property rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights.

7.3 Department liability
DEQ, its officers, agents, or employees do not sustain any liability on account of the issuance of this permit or on account of the construction, maintenance, or operation of facilities pursuant to this permit.

7.4 Documents superseded
This document is the primary composting permit for the facility, superseding all other solid waste permits issued for this facility by DEQ.

7.5 Binding nature
Conditions of this permit are binding upon the permittee. The permittee is liable for all acts and omissions of the permittee's contractors and agents.

7.6 Access to disposal site
The permittee shall allow representatives of DEQ access to the facility at all reasonable times for the purpose of performing inspections, surveys, collecting samples, obtaining data and carrying out other necessary functions related to this permit.

7.7 Other compliance
Issuance of this permit does not relieve the permittee from the responsibility to comply with any applicable federal, state, or local laws or regulations.

7.8 Penalties
Violation of any condition of this permit or any incorporated plan may subject the permittee to civil penalties for each day of each violation, up to the maximum amount allowed by law at the time of the violation. ORS 468.140. At the time this permit is issued, Oregon law provides for penalties of up to $25,000 per day per violation.

8.0 PERMIT MODIFICATION

8.1 Mid-term review
At the mid-point of the life of the permit, DEQ may review the permit and determine whether or not the permit should be amended. While not an exclusive list, the following factors will be used in making that determination:

- Compliance history of the facility;
- Changes in volume and/or composition of feedstock(s);
- Changes in operations at the facility;
- Changes in state or federal rules which should be incorporated into the permit;
- Release of leachate to the environment from the facility; or
- Significant changes to DEQ-approved Design Plan or Operations Plan.

8.2 Modification
At any time in the life of the permit, DEQ or the permittee may propose changes to the permit.

8.3 Modification and revocation by Department

The Director may, at any time before the expiration date, modify, suspend, or revoke this permit in whole or in part in accordance with Oregon Revised Statutes 459.255 for reasons including, but not limited to, the following:

- Violation of any terms or conditions of this permit or any applicable statute, rule, standard or order of the Environmental Quality Commission;
- Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- A significant change in the quantity or character of feedstocks received;
- Non-compliant operation of the composting site; or
- A significant change in the composting process.

8.4 Modification by permittee

The permittee must apply for a modification to this permit if a significant change in facility operations is planned or there is a deviation from activities described in this document. The permittee must not implement any change in operations that requires a permit modification prior to receiving approval from DEQ.

8.5 Public participation

Significant changes in the permit will be made public by the issuance of a public notice as required by Department rules.

8.6 Changes in ownership or address

The permittee must report to DEQ in writing any changes in either ownership of the composting site property or of the name and address of the permittee or operator within ten (10) days of the change.

9.0 SITE OPERATIONS

9.1 Containers

The permittee must clean all containers on-site as needed to maintain a sanitary operating environment and to prevent malodors, unsightliness, and attraction of insects or other pests.

9.2 Vehicles

All composting vehicles and devices operated by the permittee, and using public roads, must be constructed, maintained, and operated so as to prevent leaking, shifting, or spilling of feedstocks and finished compost while in transit.

9.3 Litter control

Litter that results from the composting facility operation must be controlled such that the entire composting facility and adjacent lands are maintained virtually free of litter at all times. Any debris from the facility must be retrieved and properly disposed of as soon as possible that same operational day.

9.4 Air quality and noise

Dust, malodors, and noise must be controlled in accordance with DEQ's rules on air pollution and noise control.

9.5 Drainage

The permittee must divert surface drainage around or away from feedstock handling and grinding areas and active composting areas. The permittee must maintain surface water diversion ditches or structures in a serviceable condition and free of obstructions and debris at all times. Any significant damage must be reported to DEQ and repairs made as soon as possible.

9.6 Leachate prevention/ management

The permittee must operate the facility in a manner that deters leachate production to the maximum extent practicable. Leachate must be collected, removed and managed in a manner approved by DEQ.

9.7 Oil & Hazardous Material Spill Response

Any spill of oil or hazardous material must be cleaned up immediately as described in the facility Operations Plan. In addition to notifying the appropriate DEQ office, if the spill is of a reportable quantity the permittee must immediately report the spill to the Oregon Emergency Response System (OERS), at 1-800-452-0311.

Reportable quantities include:

- *Any* amount of oil spilled to waters of the state;
- Oil spills on land in excess of 42 gallons;
- 200 pounds (25 gallons) of pesticide residue; or
- Hazardous materials that are equal to, or greater than, the quantity listed in the Code of Federal Regulations, 40 CFR Part 302 (List of Hazardous Substances and Reportable Quantities), and amendments adopted before July 1, 2002. For a complete list of hazardous materials required to be reported, please refer to OAR 340-142-0050.

9.8 Public unloading area

The area(s) used by the public for unloading of feedstocks must be clearly defined by signs, fences, barriers, or other devices.

9.9 Public Access

Public access to the facility must be controlled, as necessary, to prevent unauthorized entry and dumping.

9.10 Legal control of property

The permittee must maintain legal control of the composting site property, including maintaining a current permit, contract or agreement that allows the operation of the facility if the site is not owned by the permittee.

9.11 Fire protection

Arrangements must be made with the local fire control agency to immediately acquire their services when needed and adequate on-site fire control protection, as determined through the local fire control agency, must be provided. Unauthorized fires must be extinguished immediately and reported to DEQ within 24 hours.

9.12 Signs

The permittee must post signs at the facility which are clearly visible and legible, providing the following information: Name of composting facility, emergency telephone number, days and hours of operation, authorized and prohibited wastes, solid waste permit number; and operator's address.

9.13 Vector Control

The permittee must provide rodent and insect control measures, as necessary, to prevent vector production and sustenance.

9.14 Truck Covers

The permittee must notify all in-coming feedstock haulers that trucks must be covered or suitably cross-tied to prevent any load loss during shipment, in conformance with OAR 340-093-0220.

9.15 Odor complaints

The permittee must attempt to resolve all complaints it receives regarding facility operations by doing the following:

- Contact the complainant within 24 hours to discuss the problem;
- Keep a record of the complaint, name and phone number of the complainant (when possible), date complaint was received and date of, and response by, the facility operator; and
- Immediately initiate procedures at the facility, when possible, to resolve the problem identified by the complainant.

For odor, litter or dust complaints, the permittee must report to DEQ as soon as complaints are received at the facility from five (5) different businesses and/or individuals about a given event or if an odor event lasts longer than 24 hours without resolution or mitigation.

9.16 Permit display
The permittee must display this permit, or a photocopy thereof, where operating personnel can readily refer to it.

COMPLIANCE SCHEDULE

10.0 SUMMARY OF DUE DATES

10.1 Summary The following is a summary of event-driven reporting required by this permit. This section does not include routine reporting and submittals required by this permit.

DUE DATE	ACTIVITY	RULE CITATION/ SECTION IN THIS PERMIT
Within 60 days of permit issuance	Submit for DEQ approval an updated Operations Plan. The Operations Plan should incorporate any DEQ required changes in response to public comment on the permit.	4.3
Within 180 days of permit issuance	Submit for DEQ approval an EMP for inclusion into the approved Operations Plan. The EMP should address stormwater sampling for indicator analytes of potential leachate from composting operations.	4.5
180 days prior to initiating any new construction for leachate or stormwater collection systems or groundwater protective surfaces.	Submit design and construction plans and receive written DEQ approval of plans.	OAR 340-096-0130 6.2
Prior to initiating construction.	Submit construction documents, including a Construction Quality Assurance Plan and receive written DEQ approval.	OAR 340-096-0130 6.4
Within 90 days after completion of any major construction and prior to accepting feedstock in new construction.	Submit Construction Certification Report for acceptance. Receive written DEQ approval of Report.	OAR 340-096-0130 6.5
One year prior to closure.	Notify DEQ in writing.	8.4

11.0 WHEN TO NOTIFY DEPARTMENT STAFF

Note: Contact Department staff at phone number listed in section 5.2, "Non-compliance reporting".

TOPIC	NOTIFICATION REQUIREMENTS	SECTION IN THIS PERMIT
Facility not able to meet requirements of this permit.	Contact DEQ for assessment.	All
Prohibited or hazardous waste discovered at facility.	Notify DEQ within 48 hours.	2.3
Conditions of permit violated.	Notify DEQ within 24 hours.	5.2
Leachate released from facility.	Notify DEQ within 24 hours.	5.3
Change in ownership of facility.	Notify DEQ in writing within 10 days.	8.6
Change in name or address of facility, name or address of permittee or name or address of operator.	Notify DEQ in writing within 10 days.	8.6
Odor complaints.	Notify DEQ after 5 complaints are received for same odor event or if odor persists unresolved after 24 hours.	9.15

STORMWATER POLLUTION CONTROL PLAN

McFarlane's Bark, Inc.
13345 SE Johnson Road
Milwaukie, Oregon
NPDES General Permit 1200-Z
DEQ File No. 110259

For
McFarlane's Bark, Inc.
August 31, 2021

Project: McFarlane-1-01

Stormwater Pollution Control Plan
Permit: 1200-Z

Site Name: McFarlane's Bark, Inc.
Site Owner: McFarlane's Bark, Inc.
SIC Code: 2875 – Fertilizers – Mixing Only

Original Plan Prepared by:
Terracon
700 NE 55th Avenue
Portland, OR 97213
T: (503) 659-3281

Plan Revisions Prepared by:
NV5
Erik Hedberg, P.E., Associate Engineer
9450 SW Commerce Circle, Suite 300
Wilsonville, OR 97070
T: (503) 968-8787
F: (503) 968-3068

DEQ File Number: 110259
EPA Number: ORR603374

Facility Contact: Dan McFarlane, dmcfarlane@mcfarlanesbark.com
Facility Contact Phone Number: (503) 659-4240

Site Physical Address:
13345 SE Johnson Road
Milwaukie, OR 97222
Clackamas County

Site Mailing Address:
13345 SE Johnson Road
Milwaukie, OR 97222

Plan Date: December 2017
Plan Update: August 31, 2021

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
[40 CFR 122.22]

Date 8/31/2021 Signature Dan McFarlane

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EXHIBITS

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of the SWPCP is to provide detailed information regarding the McFarlane's Bark facility, potential pollutant sources, and BMPs that will be implemented at the project site to meet the permit requirements set forth in the General Permit NPDES Stormwater Discharge Permit Number 1200-Z (1200-Z permit). The 1200-Z permit and the permit assignment letter are presented in Appendix A.

Acronyms and abbreviations used herein are defined at the end of this document.

1.2 BACKGROUND

On July 1, 2021, DEQ renewed the 1200-Z permit. Facilities covered under the 1200-Z permit are required to prepare an SWPCP that meets the conditions of the 1200-Z permit. Terracon previously prepared an SWPCP for McFarlane's that met the conditions of the previous 1200-Z permits. Changes to the renewed 1200-Z permit require an update to the SWPCP to maintain compliance. This SWPCP was updated based on information presented in the earlier SWPCP document, and new information to satisfy the conditions of the renewed 1200-Z permit.

2.0 PROJECT SITE DESCRIPTION

2.1 FACILITY LOCATION AND DESCRIPTION

The facility comprises Tax Lots 202 and 402[1] (approximately 5.78 acres) and is in Section 05, Township 2 South, Range 2 East of the Willamette Meridian in Clackamas County. The facility address is 13345 SE Johnson Road in Milwaukie, Oregon (project site). The project site vicinity topography and location map are included as Figures 1 and 2, respectively.

McFarlane's is a yard debris recycling, wood byproducts, and landscape material wholesale and retail business (SIC Code 2875 – Fertilizers, Mixing Only). Since moving to the current location in 1972, McFarlane's has produced and sold compost, topsoil, wood byproducts as well as landscaping bark. Other landscape products have been added as marked incentives increased.

Several structures are located at the site, as shown on Figure 3. Structures include an office building, covered maintenance area, and miscellaneous sheds. The site also includes paved areas, gravel, and landscaped areas. Potable water is supplied to the site by Clackamas River Water, and sewer services is provided by Clackamas County.

Typical hours of operation are 0800 to 1700 hours, Monday through Saturday, and 0900 to 1600 hours on Sunday, excluding holidays.

Access to the facility is through a gated entrance off Johnson Road. Access is restricted during non-business hours.

2.2 INDUSTRIAL ACTIVITY DESCRIPTION

[1] Easements located on Tax Lots 203 (0.07 acre), 204 (0.26 acre) and 401 (0.11 acre) are also relevant to site operations.

Industrial activities at the site consist of wholesale and retail yard debris recycling and resulting compost production, wood byproducts, bark, and wholesale and retail landscape material sales. Light preventative maintenance and refueling of material moving equipment and company vehicles is also performed onsite. Onsite and neighboring businesses are constructed with metal siding and roofing that may be contributing to metals found in discharge monitoring points DP-1 and DP-2. The SIC code for the project site includes the following:

- 2875 – Fertilizers – Mixing Only

2.3 PROJECT SITE DRAINAGE

Stormwater runoff at the project site is collected by two drainage basins. Most of the stormwater on the site (drainage area DP-1) is directed towards interior catch basins that discharge into a detention and settling pond located on the west portion of the site. Water in the detention and settling pond is pumped to the onsite compost piles to maintain adequate moisture content. If the detention and settling pond is close to full and the compost piles do not need watering, pond water is processed through a treatment system (as described in Section 7.2.1), and subsequently discharged to a vegetated swale with rock check dams along the northern boundary of the site where it flows to discharge point DP-1 (intermittent creek) that ultimately leads to Mt. Scott Creek.

Stormwater on the southeast portion of the site (drainage area DP-2) flows towards a drainage swale that directs stormwater through a culvert pipe along the southern boundary of the site. This portion of the site is an easement used for traffic of incoming and outgoing vehicles and is owned by the neighbor (Brophy Machine Works, Inc.). Approximately 60% of the stormwater originating in the DP-2 basin is generated from the three properties located south and east of the McFarlane's facility. The culvert discharges to the intermittent creek that ultimately leads to Mt. Scott Creek.

3.0 SIGNIFICANT MATERIALS AND POLLUTANTS

3.1 SIGNIFICANT MATERIALS ON SITE

Each facility must inventory the types of materials that are handled, stored, or processed on site. "Significant materials" are of particular concern and include, but are not limited to, the following:

Raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101 (14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; TSCA, fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant materials include the storage of production and finished compost and bark; loading and unloading of raw material and finished product; and conveyance of material onsite and to customer locations. Materials tha accumulate within the stormwater catch basins and settling pond are removed when needed and added to the compost piles.

Diesel fuel of the onsite material moving equipment (e.g., loaders, backhoes, etc.) is stored in a 15,000-gallon split double-walled aboveground AST. The split AST stores on-road and off-road diesel fuel. A delivery tanker delivers the diesel fuel to the AST. A second AST is used to store used motor oil at the site. Equipment is fueled and used oil is managed according to the procedures described in the SPCC Plan (see Appendix E).

In addition, trucks, vehicles, and other equipment working at the facility have the potential to generate dust or particulates. Several of the project site (and neighboring) buildings are constructed using galvanized metal, which is a common source of zinc.

The potential for maintenance-related pollutants to enter the stormwater system is greatly reduced because material storage, vehicle maintenance, and vehicle repair are primarily performed indoors, unless noted otherwise in this SWPCP. Potential for exposure to stormwater would be limited to truck loading/unloading and potential non-routine activities. Materials such as solvents, paint, and various chemicals, oils, and lubricants are used primarily in small quantities at the facility and stored and used indoors.

Disposal of hazardous materials or universal waste is periodically performed by a licensed waste hauler.

3.2 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

Potential pollutants in site runoff include metals, plastic, organic matter, oils/grease, and sediment. Sources of potential pollutants include yard debris, wood, earth moving equipment, onsite refueling activity, customer vehicles, and landscape materials. The processing of compost and bark products is an organic process. Particulates from bark dust, unpaved roadways, and windblown deposition are also present onsite. No metal processing is completed onsite other than separation of nails from accepted wood product using a magnetic drum. The suspect sources of metals are byproducts of site activities and metal siding/roofing from onsite and adjacent property structures.

4.0 IMPERVIOUS AREA

The site is approximately 6.03 acres and uses a portion of an easement at the southeast corner of the site that is approximately 0.34 acres. The total site area is approximately 6.37 acres, of which approximately 3.88 acres is paved, approximately 0.19 acre is covered by the site building roof and approximately 2.31 acres is compacted crushed rock. The total area drained by the DP-1 basin is approximately 6.03 acres and the total area drained by the DP-2 basin is approximately 0.34 acre; however, the DP-2 drainage area is currently subject to additional evaluation due to contributions from offsite properties. Any updates to the basin areas and implications for stormwater compliance will be reflected in forthcoming updates to this SWPCP. The boundaries of the drainage basins and drainage routes are shown on Figures 3 and 4.

5.0 RECEIVING WATER

Stormwater flows into an intermittent drainage ditch located west of the site that enters the Mt.

Scott watershed, and Mt. Scott Creek, in the Willamette River basin. Mt. Scott Creek is located approximately 660 feet north of the site and runs west-northwest towards Kellogg Creek, eventually joining the Willamette River approximately 3 miles northwest of the site.

6.0 MONITORING

The ultimate goal for permittees is to comply with water quality standards as specified in Oregon Administrative Rule 340-41. Water quality standards relative to McFarlane's are addressed below.

6.1 STORMWATER DISCHARGES

The 1200-Z permit includes benchmarks to assist the facility operator in determining if SWPCP implementation is reducing pollutant concentrations to below levels of concern. The 1200-Z permit uses georegions to assign statewide benchmarks. The McFarlane's facility is located in the Willamette Valley georegion. Benchmarks that apply to McFarlane's are summarized in Table 1.

Table 1. Stormwater Discharge Parameters (1200-Z Permit)

Parameter	1200-Z Permit Benchmark
Total copper	0.015 mg/L
Total lead	0.11 mg/L
Total zinc	0.14 mg/L
pH	5.5 – 9.0 S.U.
TSS	100 mg/L

In addition, sector-specific benchmarks are applicable to the site. As a result, McFarlane's is required to monitor for the following pollutants and respective sector-specific benchmarks:

Table 2. Sector-Specific Benchmarks

Parameter	1200-Z Permit Benchmark
Nitrate + Nitrite Nitrogen	10 mg/L
Phosphorous	2.0 mg/L

6.2 GENERAL MONITORING REQUIREMENTS

6.2.1 Monitoring Locations

Stormwater within the DP-1 basin flows into catch basins located throughout the site which route stormwater to a concrete detention pond. An aerator installed in the pond is used to help control odors. The aerator must be turned off at least one day prior to any planned discharge from the pond system into the DP-1 basin swale. Water in the pond is needed to spray compost piles throughout the year as necessary, and discharge events from the pond are infrequent[2]. If water

[2] The infrequent delivery of pond water to the DP-1 discharge point is the subject of ongoing correspondence with DEQ. Any changes to this discharge point and/or associated monitoring requirements resulting from DEQ discussions will be reflected in updates to this SWPCP.

in the pond needs to be discharged, water is pumped to a water treatment system (see Section 7.2.1 and Figures 4 and 5) before being routed to the vegetated swale with rock check dams. If sufficient flow is delivered to the swale system, stormwater discharge occurs at the northwest corner of the site, from discharge point DP-1 as illustrated on Figure 3. In accordance with discharges from the pond system, monitoring under this SWPCP will continue from this location.

Stormwater within the DP-2 basin receives stormwater input from offsite properties and flows through a vegetated swale near the southeast corner of the site, and subsequently through a 24-inch diameter corrugated steel pipe along the southern property line before discharge to an intermittent drainage ditch west of the property boundary. The location of discharge point DP-2 is at the end of the corrugated pipe as illustrated on Figures 3 and 4 and includes stormwater from offsite properties. Therefore, monitoring under this SWPCP will continue from this location.

6.2.2 Monitoring Frequency

The monitoring parameters, sampling type, and frequency are presented in Table 3. The 1200-Z permit conditions state that monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures are specified in the permit.

The 1200-Z permit allows for monitoring waivers if the monitoring criteria is met as described in Section 6.2.5.

Table 3. Permit Required Monitoring Parameters

Parameter	Type	Frequency
Total copper	Grab sample	Four times per year. Two samples collected between July 1 and December 31. Two samples collected between January 1 and June 30.
Total lead	Grab sample	
Total zinc	Grab sample	
pH	Grab sample	
TSS	Grab sample	
Sector specific: Nitrate + Nitrite	Grab sample	
Sector specific: Phosphorous	Grab sample	
Floating solids and obvious indicators of pollution in stormwater	Visual	Once per month
Oil sheen	Visual	
Foam, discoloration of stormwater	Visual	

Monthly visual observations for color, odor, turbidity, floating solids, and oil and grease sheen will be conducted at the discharge points during discharge events regardless of whether the monthly monitoring has already occurred. In addition, the grab samples should be observed in the field for color, odor, turbidity, floating solids, and oil and grease sheen. These observations will be recorded on the Preventative Maintenance and Inspection Forms that will be retained in Appendix B. Additional monthly visual monitoring requirements are described in Section 6.2.4.

The grab stormwater samples will be submitted to a qualified analytical laboratory and analyzed for the parameters listed in Tables 1 and 2, except for pH. The 1200-Z permit requires pH testing directly in the flow or testing within 15 minutes of sample collection. The pH readings must be measured using a properly calibrated pH meter. The 1200-Z permit does not allow the use of pH paper. The results for the listed parameters will be compared to the benchmarks shown in Tables 1 and 2. Benchmark concentrations will be coordinated with the analytical laboratory to confirm reporting limits are less than the respective benchmark concentrations. Laboratory analytical results will be retained in Appendix C.

6.2.3 Sampling Technique and Timing

Based on Schedule B of the 1200-Z permit, the grab sampling technique will be used to collect the stormwater discharge samples. Grab sampling is appropriate for McFarlane's because the stormwater discharge is expected to be relatively homogenous and consistent in composition. Grab samples will be collected at the locations shown on Figure 3. Sufficient volume for the required analyses will be collected in clean, laboratory-provided containers and handled in accordance with standard chain-of-custody procedures.

In addition to the frequency established in Tables 1 and 2, stormwater samples must be collected within the first 12 hours of the storm event or snowmelt that results in discharge from the project site or as soon as practicable. If the discharge cannot be sampled within this timeframe, documentation will be provided with the DMR form explaining why it was not practicable to collect samples within the 12-hour period. It is not required to sample outside of regular business hours or during unsafe conditions. In addition, stormwater samples must be collected at least 14 calendar days apart.

6.2.4 Monthly Visual Inspections

Visual site inspections will be conducted monthly and can be concurrent with stormwater monitoring and sampling. If the monthly visual inspection was performed and subsequent storm events produce sufficient runoff to discharge from the project site, additional visual inspections are required during the same month. Monthly inspections must include the discharge points shown on Figure 3. Each discharge point must be visually monitored for the presence of floating solids associated with industrial activity, foam, visible oil sheen, and discoloration of the stormwater discharge (if present). The inspections must include areas where spills of significant materials or industrial activities may occur and the catch basins within those areas. To conduct visual inspections, stormwater will be collected in a clean, colorless glass or plastic container in a well-lit area. Evidence of color, odor, turbidity, foam, floating solids, and oil sheen will be noted and documented in the Preventative Maintenance and Inspection Forms that will be retained in Appendix B.

If runoff resulting in discharge from DP-1 or DP-2 has not occurred during the month, "No Discharge" should be noted on the Preventative Maintenance and Inspection forms.

6.2.5 Monitoring Waivers

McFarlane's may request a monitoring waiver if the geometric mean of five consecutive qualifying sampling results is equal to or less than the statewide or sector-specific benchmarks or if pH results are within the benchmark range for five consecutive measurements. The monitoring waiver may be allowed for one or more of the 1200-Z permit parameters. To request a monitoring waiver, a monitoring waiver request and documentation (e.g., analytical laboratory results and/or pH readings from the five qualifying sampling events) must be submitted to DEQ. The DEQ will provide written notification if the waiver is granted or denied. If granted, the monitoring waiver is valid until July 1, 2025, or until the waiver is revoked. If a monitoring waiver is granted, monthly visual inspections are still required.

6.2.6 Response to a Benchmark Exceedance

If monitoring results exceed applicable concentration(s) or visual observations show indications of pollution in discharge, McFarlane's must complete a Tier 1 Corrective Action Response as described in Schedule A, Section 11 of the 1200-Z permit. Benchmark concentrations are provided in Section 6.1. Visual inspection criteria are provided in Section 6.2.4. If a triggering event occurs, McFarlane's must do the following before the next storm event, if possible, or no later than 30 calendar days of obtaining the monitoring results or performing the monthly visual inspection:

- Investigate the cause of the elevated pollutant levels and identify necessary corrective actions. This includes conducting pollutant sourcing tracing activities if warranted.
- Review the SWPCP and relevant control measures for compliance with the 1200-Z permit.
- Determine if corrective actions require a revision to the SWPCP. If revisions are made to the SWPCP, submit the revised pages, including an implementation schedule for control measures to Clean Water Services.
- Summarize the results of the investigation and corrective actions taken or planned in a Tier 1 Report, including the date corrective action was completed or expected to be completed and any SWPCP revisions.
- Implement any identified corrective actions as soon as practicable and before the next storm event, if possible.

Copies of completed Tier 1 Reports will be retained in Appendix D and provided to DEQ upon request.

6.2.7 Geometric Mean Benchmark Evaluation and Tier 2 Corrective Action Responses

For each full reporting year of permit coverage, McFarlane's is required to determine if the geometric mean of the monitoring results exceed the applicable statewide benchmarks described in Table 1. The geometric mean of qualifying samples must be reported to DEQ with the 4th quarter DMR form due on August 15. Based on the evaluation, a Tier 2 corrective action response is required if one or both of the following triggering events occurs:

- Fifty percent or more of the pH of qualifying sample results are outside of the pH benchmark range shown on Table 1.
- The geometric mean of qualifying sample results collected at any monitoring point exceeds one or more of the respective benchmark concentrations shown on Tables 1 and 2.

The geometric mean benchmark evaluation is parameter specific and must be conducted at the end of each full monitoring year and must be completed for each individual pollutant. Geometric mean benchmark evaluations and Tier 2 corrective action responses are not required for pollutants that are already addressed by previous Tier 2 corrective actions.

A Tier 2 Corrective Action Response may include one of the following:

- A Tier 2 Report
- A Tier 2 Mass Reduction Waiver Request
- A Tier 2 Background Waiver Request

A description of each Tier 2 Corrective Response Action is described below. The Tier 2 Report, Tier 2 Mass Reduction Waiver Request, or Tier 2 Background waiver request will be submitted as an additional appendix to the SWPCP. The updated SWPCP must be submitted to DEQ no later than December 31 (six months after the end of the full reporting year). The DEQ may approve additional time if requested. A Tier 2 corrective action or mass reduction measure must be installed and implemented no later than September 30 (one year and nine months after the Tier 2 proposal corrective action response submittal deadline). The DEQ may approve additional time if requested. The DEQ will notify McFarlane's if the action is approved or denied within 60 days of receiving the proposed corrective action response.

6.2.7.1 Tier 2 Report

The Tier 2 Report must provide proposed active or passive treatment measures that will be implemented with the goal of achieving benchmark concentrations. The Tier 2 Report must include the following:

- The rationale for choosing the selected measure
- The projected reduction in pollutant concentration
- The implementation schedule

The proposed measures must be incorporated into the SWPCP. The relevant portions of the revised SWPCP must be prepared and stamped by an Oregon-registered professional engineer. Monitoring must resume at discharge points substantially similar to where Tier 2 Corrective Actions were implemented. Tier 1 Corrective Action Responses (described in Section 6.2.6) must be followed if sampling and/or pH testing results exceed the benchmark parameters.

The completed Tier 2 Report and respective DEQ correspondence will be retained in Appendix D.

6.2.7.2 Tier 2 Mass Reduction Waiver

McFarlane's may request a mass reduction waiver from the requirements of the Tier 2 Report. For a Tier 2 Mass Reduction Waiver, McFarlane's must implement volume reduction measures

that will reduce the pollutant mass loading at the discharge point(s) where the full-reporting year geometric mean concentrations exceeded the benchmark concentrations. Examples of volume reduction measures include vegetated swales, rain gardens, and stormwater harvesting. Like Tier 2 Reports, the Tier 2 Mass Reduction Waiver request and the revised SWPCP must include data and analysis to support the rationale for the mass load reduction selection, a description of the measure(s), and an implementation schedule. The relevant portions of the revised SWPCP must be prepared and stamped by an Oregon-registered professional engineer or Oregon-certified engineering geologist.

Monitoring must resume at substantially similar discharge points where Tier 2 Corrective Actions were implemented. Tier 1 Corrective Action Responses (described in Section 6.2.6) must be followed if sampling and/or pH testing results exceed the benchmark parameters.

The completed Tier 2 Mass Reduction Waiver Request and respective DEQ correspondence will be retained in Appendix D.

6.2.7.3 Tier 2 Background Waiver

The County may request a background waiver from the requirements of the Tier 2 Report if the benchmark exceedance(s) is solely attributed to pollutants that are naturally occurring in the environment and not associated with industrial activities at the project site. The Tier 2 Background Waiver request must include an evaluation and supporting data showing exceedances are attributed only to background conditions. The waiver request will require revisions to the SWPCP, but the revisions do not require a stamp from an Oregon-registered professional engineer or Oregon-certified engineering geologist.

The completed Tier 2 Background Waiver request and respective DEQ correspondence will be retained in Appendix D.

7.0 PROJECT SITE CONTROLS

Project site controls or BMPs are often used to reduce the contribution of pollutants from a facility to surface waters. Project site controls can include operational, structural, or treatment measures. Source control measures are used to prevent potential industrial pollutants from contacting stormwater that discharges to receiving waters. Project site and source control measures have been implemented at the site to satisfy the NTBELs in the 1200-Z permit. In general, the most effective stormwater management strategy involves a combination of source controls and treatment BMPs.

7.1 NARRATIVE TECHNOLOGY-BASED EFFLUENT LIMITS

McFarlane's engages in good housekeeping practices to minimize exposure of manufacturing, processing, and material storage areas (including loading/unloading, disposal, cleaning, maintenance and fixed fueling areas) to rain, snow, snowmelt, and runoff. Efforts are made to use grading to divert stormwater away from these areas and prevent stormwater contamination. Drip pans and/or absorbents are used under and around leaking or leak-prone vehicles and/or equipment. Spills or leaks are cleaned promptly using adsorbents to prevent discharge of pollutants.

This section describes BMPs implemented at the project site to address the following NTBELs:

- Minimize exposure
- Oil and grease
- Waste chemicals and material disposal
- Erosion and sediment control
- Debris control
- Dust generation and vehicle tracking of industrial materials
- Housekeeping
- Spill prevention and response
- Preventative maintenance
- Employee education
- Non-stormwater discharges

BMPs presented in this section have been derived from DEQ-, and EPA-recommended stormwater management BMPs.

7.1.1 Minimize Exposure

McFarlane's minimizes the amount of unwanted materials from being processed and accepted at the site. Many materials are not accepted at the facility including railroad ties, pressure treated lumber, Formica-surfaced materials, trash, garbage, plastic, and others. Owners of these unaccepted materials are required to take them back.

Wood debris containing nails is accepted. A magnetic drum is utilized to separate the nails from the wood. The nails and metal are stored in a covered dumpster near the northeast corner of the site and picked up by a metals recycler when full. These materials are sold to be utilized as burner (hog) fuels.

7.1.2 Oil and Grease

Diesel fuel is stored in a double-walled AST near the northeast corner of the site. Used motor oil is stored in an AST with concrete secondary containment and used oil filters are stored in a drum in the northeast portion of the building. Other petroleum-based products are stored inside the building or in trailers to minimize exposure to precipitation.

Equipment is regularly maintained. The smaller equipment is serviced inside of the maintenance portion of the building where there are no floor drains. The larger pieces of equipment are maintained outside. Technicians and employees are trained to properly capture drained fluids. Spiled oils and grease clots are immediately wiped up. In addition, customer vehicle movement is limited to a drive lane along the south side of the site.

An SPCC Plan has been prepared for the facility, and a copy of the SPCC is included as Appendix E. Copies of the SPCC Plan are in the site office. See Figure 3 for facility spill kit locations.

If visual monitoring results indicate that fuel spills or leaks may be impacting stormwater quality, the appropriate Tier 1 Corrective Action Responses will be undertaken to address potential impacts.

7.1.3 Waste Chemicals and Material Disposal

A stand-alone parts cleaner with a drum beneath is located inside the maintenance portion of the building. The parts cleaner is self-contained and recirculates the solvent. SafetyKleen services the parts cleaner by removing used cleaner and adding new cleaner. Used motor oil, used oil filters, and used parts cleaner are picked up for proper recycling and disposal by SafetyKleen.

Garbage is stored in a covered bin and picked up for disposal by Clackamas Disposal. Plastic and glass are recycled and picked up by Clackamas Disposal. Clean paper and cardboard are recycled and added to the burner (or hog) fuels.

7.1.4 Erosion and Sediment Control

Erosion and sediment are controlled onsite using natural and anthropogenic means. The north, west and south sides of the site are bermed. Stormwater leaving the site at the northwest corner (stormwater discharge location DP-1) is collected across the site using catch basins and storm pipes directing the collected water into the existing detention and settling pond. Water in the pond is used to moisture-condition the compost piles. If water needs to be discharged from the detention and settling pond, the water goes through a treatment process (described in Section 7.2.1) before being pumped into the vegetated swale with rock check dams. Secondary treatment of the stormwater occurs by flowing through the vegetated swale with rock check dams before discharging offsite.

All vehicle maneuvering areas on the site are paved or graveled. The ground is sloped towards catch basins in graveled and paved areas. Catch basins and the detention/settling pond are inspected monthly and pumped of sediment, boomed, and skimmed as necessary. Natural grassy areas and the vegetated swales are maintained to minimize erosion.

7.1.5 Debris Control

Raw materials (e.g., yard debris, wood byproducts and bark) are brought to the site to be processed. These raw materials are stored in piles on paved portions of the site and processed into compost, topsoil, biofuel (hog fuel), wood byproducts as well as bark dust. Piles are frequently maintained to minimize their footprints.

7.1.6 Dust Generation and Vehicle Tracking

Vehicles enter and exit the site near the southeast corner of the property. Great Western Sweeping sweeps the southeastern portion of the property weekly to remove accumulated dust and sediment.

7.1.7 Housekeeping

Good housekeeping practices will be used at the facility to reduce potential pollutant loading to stormwater. These practices include the following:

- Keeping the facility neat and orderly
- Improving operation and maintenance of industrial machinery and processes
- Implementing careful material storage practices

- Keeping significant materials, particularly vehicle fluids, away from the stormwater drainage systems
- Regular cleaning and maintenance of the stormwater system
- Collecting and recycling used materials
- Prompt cleaning of spilled material
- Training employees in the basic cleanup procedures and good housekeeping practices

The diesel AST is double-walled and designed to contain a spill. The used oil AST is housed in a concrete secondary containment structure located in the northeastern portion of the building. Other petroleum-based products are stored inside structures (building, shed and trailers) to prevent contact with stormwater. Spillage is contained, removed, and disposed of appropriately before contact with surface water per the company Hazard Communication and Emergency Action Plan manual and SPCC Plan stored onsite (see Appendix E). Significant spills or leaks should be recorded on the "List of Significant Spills or Leaks Form" in Appendix B and the completed form should be retained in Appendix F.

Scheduled equipment and vehicle maintenance is conducted indoors where feasible. Washing of equipment and repairs of disabled equipment occur at the site. Catch basins should be protected from receiving oil and grease with BMPs such as filter bag inserts and/or skimmers if necessary. Materials such as oil and grease are to be considered combustible and shall be disposed of offsite, through appropriate means. Any hazardous materials used in vehicle maintenance are to be stored in appropriate containers with covers to control excess sediment, nutrients, metals and bacteria by keeping exposed areas clean and preventing and cleaning up spills immediately, limiting debris from entering catch basins and maintaining the stormwater collection and conveyance systems.

The stormwater catch basins, detention/settling pond, vegetated swales, and treatment system are also inspected monthly. Sediment and debris are removed periodically as needed. The sediment and debris that accumulate within the detention/settling pond is removed annually or more often as needed.

7.1.8 Spill Prevention and Response

Spill prevention consists of implementing safe operating procedures to reduce the likelihood of a spill while handling, storing, or using significant materials.

McFarlane's has a written spill cleanup plan in place (see Appendix E). Spill kits are located in the maintenance building and near the pump island to respond to spills and prevent spills from entering stormwater conveyance structures. Chemicals are stored in buildings or the wash bay. The following BMPs should be implemented to prevent spills:

- Store all non-petroleum-based liquids on an impervious surface that is surrounded with a containment berm or dike that can contain the volume contained in the largest tank. Petroleum-based liquids and oils should be contained in a double-walled tank or surrounded by a containment berm or dike that can contain 100% of the largest tank plus sufficient freeboard for precipitation from a 25-year, 24-hour storm event (4.0 inches).
- Prevent precipitation from accumulating in containment areas with a roof or equivalent

structure or refer to the SPCC plan for procedures on how the facility will manage and dispose of accumulated water if a containment area cover is not practical.

- Locate spill kits within 25 feet of chemical storage areas. At a minimum, spill kits shall include:
    - Oil absorbents capable of absorbing 15 gallons of fuel (e.g., absorbent pads and/or cat litter)
    - A storm/trench drain plug or cover kit
    - A non-water containment boom, a minimum of 10 feet in length with a 12-gallon absorbent capacity
    - A non-metallic shovel
    - Two 5-gallon buckets with lids
- Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)
- Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible. Drain fluids from equipment and vehicles prior to onsite storage or disposal.
- Inspect tank containment areas, if applicable, regularly to identify problem components such as fittings, pipe connections, and valves, for leaks/spills, cracks, corrosion, etc.
- Place adequately sized drip pans beneath all mounted tap and drip/spill locations during filling/unloading of tanks. Valved drain tubing may be needed in mounted drip pans.
- Sweep and clean the tanks that are leaking, corroded, or otherwise deteriorating.
- All AST installations shall comply with the Uniform Fire Code and the National Electric Codes.
- Maintain a spill log that includes the following information for chemical and petroleum spills: date, time, amount, location, and reason for spill; date/time cleanup completed, notifications made, and staff involved.

Debris from the composting and bark production areas are picked up and swept as needed and added to the material piles. Sediment in the pond and catch basins are removed (with a super-sucker or other means) as necessary. The sediment is kept onsite and added to the material piles.

Spill kits are located near the diesel fueling AST, used oil AST, scale house and maintenance building. Preventative maintenance is performed to reduce vehicle oil and/or grease leakage onsite.

The diesel AST is scheduled for improvements with an oil/water separator and awning as part of future capital improvement programs.

The SPCC Plan should be reviewed and updated as needed. A copy of the SPCC Plan is kept on file at the site (see also Appendix E). A brief summary of response procedures is provided below:

<u>SPILL:</u>

- Block off area with cones and caution tape if necessary
- Inform onsite personnel, other visitors, and nearby businesses as necessary for safety. Implement evacuations as necessary
- Protect trench drains (e.g., apply neoprene mat or similar)
- Utilize one of the many onsite carbon-based products (e.g., cat litter) or other absorbent material; whichever is closest to the spill to help contain a spill
- Place absorbent pads directly on the spill
- If mini-booms are necessary to prevent spill from spreading:
    - Anchor mini-booms with brick or stone
    - Link booms together using built-in connectors
    - When joining two or more mini-booms, overlap slightly

VEGETATED SWALES:

- Place mini-booms on angle to flow of water
- Anchor with stones or heavy objects
- Place pads on spill area

Spill policy and training are incorporated into the company's Emergency Action Plan. Preventative maintenance of stormwater BMPs is performed monthly at the diesel AST, detention/settling pond, and catch basins. All portions of the stormwater system will be repaired immediately after discovery of discrepancies. New employees receive orientation and training programs within 30 days of hiring as part of the SWPCP, Hazard Communication and Emergency Action Plans. All employees are to renew training of these plans annually. Employee training is further discussed in Sections 7.1.10 and 8.3.

7.1.9 Preventative Maintenance

McFarlane's will evaluate preventative maintenance measures through regular inspection and maintenance of stormwater BMP devices. This includes inspecting and testing of equipment and systems to reveal conditions that could cause breakdowns or failures that could increase discharges of pollutants to surface waters. Evaluation of SWPCP-related preventative maintenance measures will be documented during regular inspections using the Monthly Inspection Form and the Comprehensive Site Evaluation/Inspection – Best Management Practices Review form included in Appendix B. The completed forms should be kept onsite within this SWPCP in Appendix G.

Inspections of outside areas of the site, potential pollutant areas and the stormwater drainage systems will be conducted at least monthly to check the effectiveness of the SWPCP.

Applicable BMPs will be evaluated during the inspection to determine if they minimize stormwater pollution.

The form in Appendix B titled "Monthly Site Inspection" has been developed to aid in this inspection requirement. When needed, the form should be modified to reflect updated site conditions. Unsatisfactory conditions will be recorded, and appropriate action taken to correct problems. The findings of the inspection will be reported to Dan McFarlane and NV5 as appropriate. Records of inspections must be maintained for three years. At a minimum, the

inspection records include:

- Who conducted the inspection
- When the inspection was conducted
- The results or findings of the inspection
- The corrective actions to be taken
- The implementation date of corrective actions

7.1.10 Employee Education

An important aspect of an effective SWPCP is an employee education program. To meet the 1200-Z permit conditions, McFarlane's maintains an employee orientation and education program to inform personnel on the components and goals of the SWPCP. Personnel who work in areas where industrial materials or activities are exposed to stormwater or are responsible for implementing activities necessary to meet the conditions of the 1200-Z permit (e.g., inspectors, maintenance personnel) must be trained. The training must cover both the specific control measures used to achieve the NTBELs and the monitoring, inspection, reporting, and documentation requirements in the 1200-Z permit. The education and training must occur no later than 30 calendar days of hiring or change in duties (e.g., become responsible for implementing the components and goals of this SWPCP) and annually thereafter. McFarlane's and NV5 will provide the training. Orientation and annual training activities will be documented on an employee training form. An example Employee Training Form and completed training records will be retained in Appendix H.

7.1.11 Non-Stormwater Discharges

McFarlane's does not engage in industrial activities which result in non-stormwater discharges. Fuels and oils are stored on the site in a fashion that prevents contact with stormwater.

7.2 SITE-SPECIFIC BMPs

7.2.1 Detention and Settling Pond

Catch basins located throughout the site direct surface runoff to a detention and settling pond located in the northwest portion of the site. Stormwater is allowed to accumulate in the pond during storm events and stormwater is treated through settling and biological uptake when the aerator is not operating. Water in the pond is used to spray compost piles as necessary. When water in the pond needs to be discharged, a pump located near the southern portion of the pond pumps stormwater to a treatment system described below.

Water is pumped from the pond at approximately 35 gpm through a check valve into two static in-line mixers. The first static mixer receives metered coagulant (Dungeness AAS) at a dosage of 60 ppm. The second static mixer receive flocculant (Dungeness Chitosan 1%) at a dosage of 25 ppm. As the coagulant and flocculant are added and thoroughly mixed, the process of flocculation occurs. The treated water then flows to the two, tandem cone-bottom tanks for settling. The solids in the bottom of the tank are returned to the pond by a manually controlled pump, when required. These solids are added back to the composting piles. The clear water in the upper horizon of the tanks is pumped and discharged to the vegetated swale for final treatment. A turbidity control system monitors the outflow to ensure that all discharge meets NTU requirements. If the readings are within limits, the water is pumped to the vegetated swale.

If the discharge does not meet the turbidity limits, the meter will automatically direct water back to the pond for re-treatment. Both systems pumps and metering pumps are collectively interlocked electronically to prevent treatment overdose and tank overflow. Figure 5 illustrates the process flow of the treatment system. Appendix I includes O&M documents for the chitosan system.

7.2.2 Vegetated Swale

Treated water is pumped via piping to the upstream end of the vegetated swale on the northern property boundary and allowed to travel the length of the swale before discharging near the northwest corner of the site. The vegetated swale is intended to treat runoff through filtering by the rock check dams, vegetation lining the channel and subsoil matrix, in addition to infiltration into the underlying soils. The vegetated swale is inspected monthly to ensure that thick vegetative cover is present to provide adequate functionality. Minimal maintenance is required; however, vegetation should be trimmed as necessary, and obstructions of flow should be removed to limit debris accumulation and mosquito breeding. Vegetated swales with rock check dams work to manage sediment, nutrients, oil and grease, and organics.

7.3 SECTOR-SPECIFIC LIMITS

The identified SIC code for the site is as follows:

- 2875 – Fertilizers – Mixing Only

Activities associated with SIC Code 2875 meet the requirements set forth in Schedule E, Sector C (Agricultural Chemicals) of the 1200-Z permit. The sector-specific benchmark monitoring concentrations are summarized in Table 2. The 1200-Z permit does not prescribe additional housekeeping training, or SWPCP requirements for SIC Code 2875.

8.0 PROCEDURES AND SCHEDULES

8.1 SPILL PREVENTION AND RESPONSE PROCEDURES

Spill prevention and response procedures have been developed for the site to prevent impacts to stormwater runoff from inadvertent leaks or spilled materials. Spill prevention consists of implementing safe operating procedures to reduce the likelihood of a spill while handling, storing, or using significant materials. Response procedures include actions necessary to contain and clean up a spill of significant materials once a spill has occurred.

8.1.1 Spill Prevention Procedures

Procedures for preventing spills and for providing prompt response to control spills are included as part of the SWPCP and SPCC employee training programs. The following general spill prevention procedures will be used:

- Using spill and overfill prevention equipment
- Continuous monitoring during storage tank filling to prevent spilling and overfilling
- Protecting fuel and vehicle storage areas from stormwater contact
- Cleaning of storage areas with dry methods
- Storing chemicals and petroleum products inside under cover

8.1.2 Spill Response Procedures

Response procedures include actions necessary to contain and clean up a spill of significant materials once a spill has occurred. In the event of a spill, the initial response efforts listed below should be followed:

1. React in a manner consistent with approved health and safety plans to promote personal safety and safety of others. If the spilled material is a petroleum- or oil-based product, consult the McFarlane's SPCC Plan.
2. Evaluate the spill hazard to the following:
   - Yourself
   - Others
   - The environment
   - The property
3. Report the spill to the Dan McFarlane or Kathleen McFarlane.
4. Attempt to keep the spill from reaching any body of water or catch basin.
5. Attempt to actively contain the spill within the area in which it occurred, including one or more of the following measures:
   - Block drainage systems from which spill can escape
   - Build dams around the spill
   - Dig holes in low spots to contain the spill
6. Notify applicable contacts of the spill. Table 4 provides a list of individuals and agencies to notify in case a spill occurs, as appropriate. Dan McFarlane or his designee is the primary representative responsible for any agency notification and contact.
7. Determine if a Reportable Quantity release has occurred. See the SPCC Plan for a list of Reportable Quantity thresholds for materials used at the project site that have reportable quantities. (Note: These substances may be contained in products that do not go by the specific chemical name. Check the safety data sheet for the material that was released to determine if it contains a Reportable Quantity substance.)
8. If a Reportable Quantity release has occurred, notification of the following agencies is MANDATORY (if in doubt, report):
   - National Response Center – as soon as possible, but within 15 MINUTES of confirmation of the release
   - Oregon Emergency Response System – as soon as possible, but within 1 HOUR of confirmation of the release
   - DEQ – as soon as possible and practicable after notification of above agencies
9. Dan McFarlane or his designee should review, document, and report to DEQ the cause of the incident, the response actions, the cleanup, and other pertinent issues or circumstances.
10. The DEQ will determine if any additional reporting is necessary.

Table 4. Emergency Spill Incident Contacts

Contact	Phone Number	Title
McFarlane's – Spill Prevention Team		
Dan McFarlane	(503) 659-4240 (C) (503) 522-8009	President
State/Federal/Local Government Agencies		
DEQ (Stormwater)	(503) 229-5438	Call DEQ contacts FIRST; they will help you determine the appropriate notification steps. Dan McFarlane, or his designee, is the primary representative responsible for any agency notification and contact.
National Response Center (Oil and Reportable Quantity spills only)	(800) 424-8802	
Oregon Emergency Response System (Oil and Reportable Quantity spill reporting)	(800) 452-0311	
Emergency Response Contractors		
Fire	911	
Police	911	
Medical Facility	(503) 513-8300	Providence Milwaukie Hospital, Emergency Services

8.2 PREVENTATIVE MAINTENANCE PROCEDURES

Monthly Preventative Maintenance inspections (discussed in Section 7.1.9) are conducted regardless of stormwater runoff. Employees and supervisors will routinely monitor their areas for unreported spills, staining, and areas of standing water. Proper storage of possible pollutants will be verified, and unusual conditions will be reported to Dan McFarlane.

The condition and levels of sediment in the catch basins are visually inspected monthly. Inspections of the stormwater treatment system will be conducted in general accordance with the manufacturer's recommendations.

Completed inspection forms are made part of the permanent record, and corrective actions are tracked in this manner. Information included on inspection forms documents the problem, the nature of the corrective action required, and the steps taken to prevent this problem from happening in the future, including training or re-training. Copies of completed forms are retained in Appendix G of this SWPCP.

8.3 EMPLOYEE EDUCATION SCHEDULE

In addition to the training information contained in Section 7.1.10, employee awareness activities undertaken at the site are shown in Table 5.

Table 5. Employee Awareness

Activity	Objective	Frequency
Emergency Stop Shutoff Signage at Fuel AST	To provide easy identification of shutoff location.	Signage replaced as needed
Stormwater Pollution Control Training	To create an awareness regarding stormwater pollution. All applicable employees receive this training.	Within 30 days of hire or change in responsibilities Annually thereafter
Spill Response Training	To provide all applicable employees with the proper procedures on spills.	Annually

8.4 RECORD KEEPING AND INTERNAL REPORTING PROCEDURES

McFarlane's is required to demonstrate implementation of record keeping and internal reporting procedures so that facility records include relevant information pertaining to the SWPCP. Documentation and reporting that are kept at the project site will include the following:

- Employee training records
- Monthly preventative maintenance inspection reports
- Any incidents of spills or leaks of significant materials with the necessary corrective actions taken
- Tier 1 reports (discussed in Section 6.2.4)

Example blank Spill Log/Incident Report and Sample Stormwater Training Sign-In Roster are presented in Appendix B.

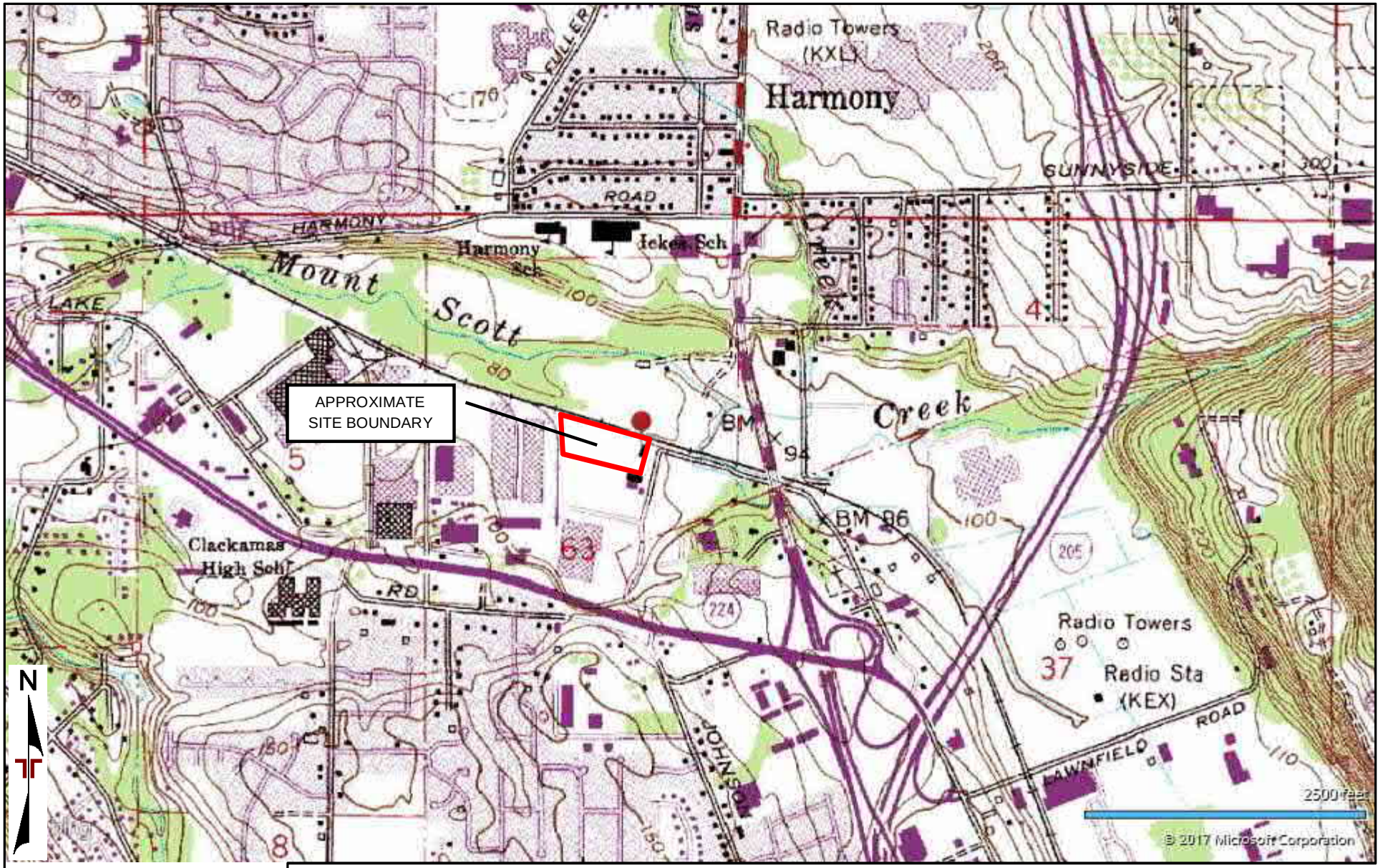
The above documents will be maintained on site and made available for review upon request.

8.4.1 Reporting

McFarlane's is required to submit the DMR with associated stormwater analytical data to DEQ on a quarterly basis as shown on the schedule below.

Reporting Quarter	Months	DMR Due Date
1st	July – September	November 15
2nd	October – December	February 15
3rd	January – March	May 15
4th	April – June	August 15

If the facility has qualified for a Tier 2 Corrective Action response, McFarlane's must submit the Tier 2 report, Tier 2 Mass Reduction Waiver request, or Tier 2 Background Waiver request as described in Section 6.2.7.



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: GLADSTONE, OR (1/1/1984).

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	HNO
Drawn by:	CPD
Checked by:	HNO
Approved by:	JJK

Project No.	82177170
Scale:	AS SHOWN
File Name:	EX.1
Date:	12.18.2017

Terracon
4103 SE International Way Ste 300
Portland, OR 97222-8854

TOPOGRAPHIC MAP

SWPCP
MCFARLANE'S BARK INCORPORATED
13345 SE JOHNSON ROAD
MILWAUKIE, OREGON

EXHIBIT

1

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: GLADSTONE, OR (1/1/1984).

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	HNO
Drawn by:	CPD
Checked by:	HNO
Approved by:	JJK

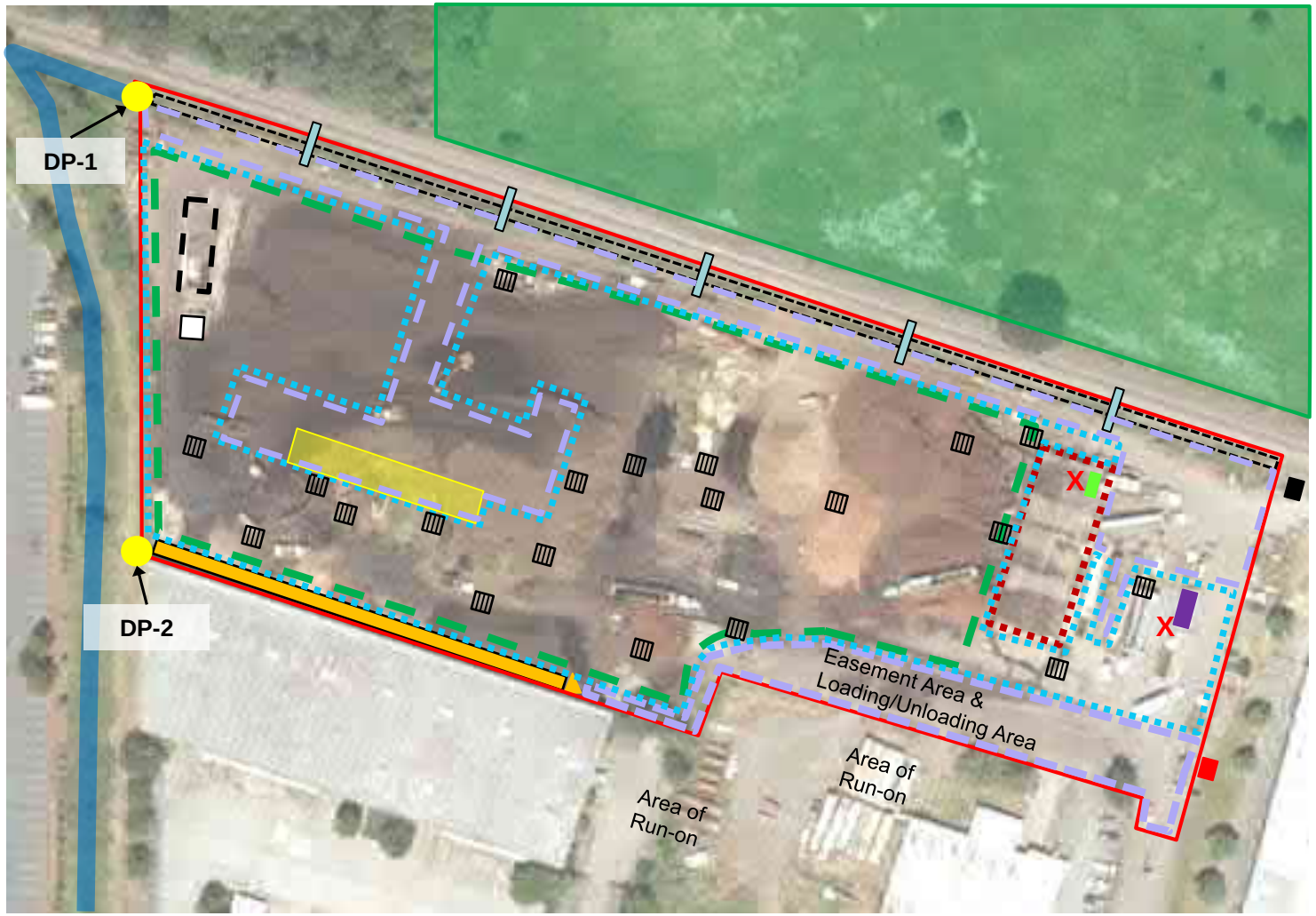
Project No.	82177170
Scale:	AS SHOWN
File Name:	EX.2
Date:	12.18.2017

Terracon
4103 SE International Way Ste 300
Portland, OR 97222-8854

SITE LOCATION MAP

SWPCP
MCFARLANE'S BARK INCORPORATED
13345 SE JOHNSON ROAD
MILWAUKIE, OREGON

EXHIBIT
2



LEGEND

- = Site Boundary
- = Site office building
- = Water Treatment Shed
- = Outfall from Adjacent Property (Run-on)
- = Metals Recycling Bins

Control Measures

- = Catch Basin
- = Vegetated swale
- = Detention and Settling pond
- = Culvert
- = Culvert inlet/outlet
- = Rock Check Dam

Discharge/Sampling

DP-1 = Stormwater discharge/ sampling location

Material Handling/ Access Areas

- = Unpaved (gravel) Area
- = Paved Area
- = Area Being Improved with Concrete Pavement
- = Aboveground Storage Tank
- = Used Oil Tank
- X = Spill Kit
- = Material Handling, Storage, and Access

Surface Waterbodies

- = Wetland area (offsite)
- = Intermittent Drainage Ditch

N

0 100ft 200ft

SOURCE: google.com

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

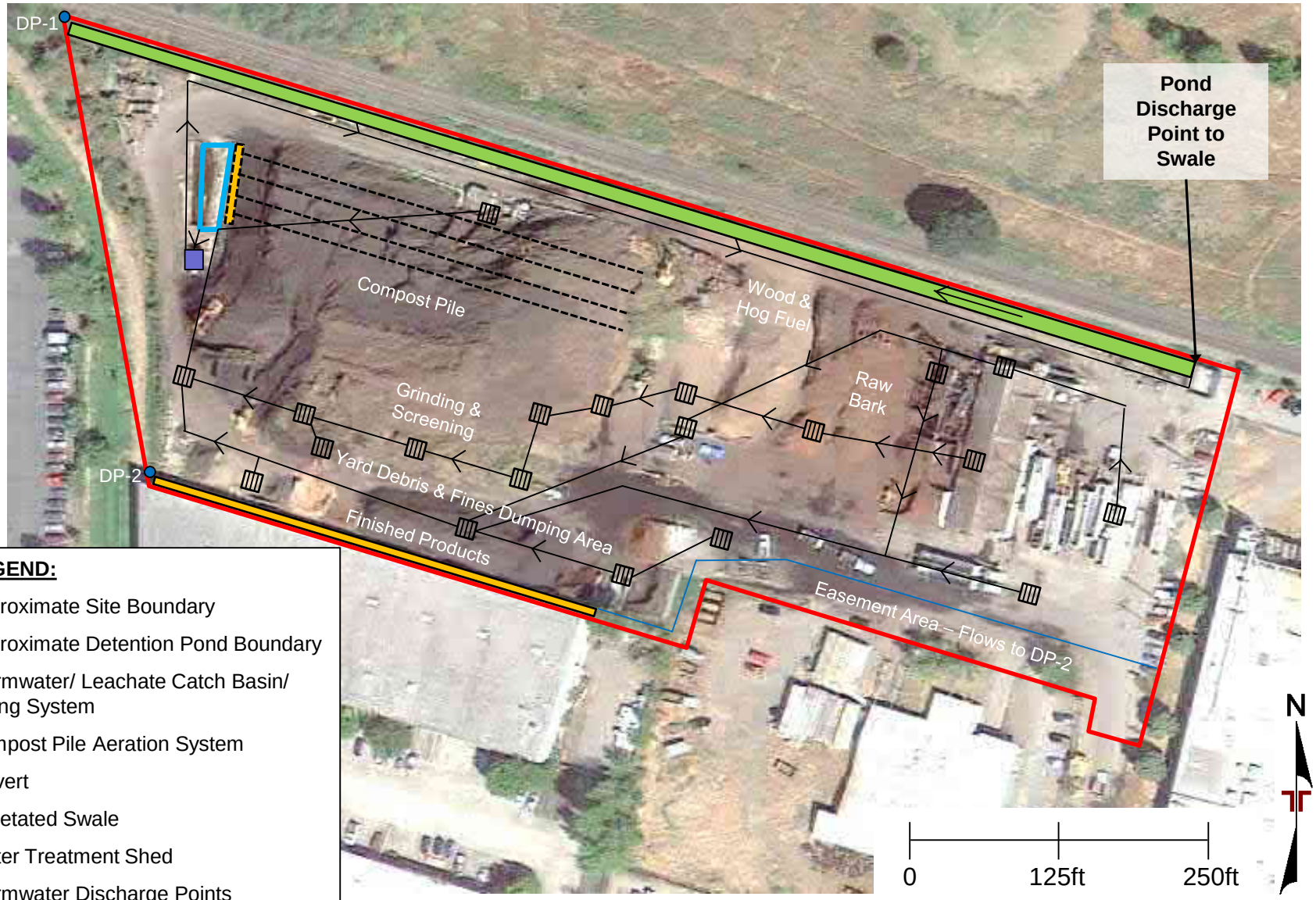
Project Manager:	HNO
Drawn by:	JPH/CPD
Checked by:	HNO
Approved by:	JJK
Project No.	82177170
Scale:	AS-SHOWN
File Name:	EX.3
Date:	12.18.2017

Terracon
Consulting Engineers & Scientists
4103 SE International Way, Suite 300 Portland, OR 97222
PH. (503) 659-3281 FAX. (503) 659-1287

SITE FEATURES MAP

SWPCP
MCFARLANE'S BARK INCORPORATED
13345 SE JOHNSON ROAD
MILWAUKIE, OREGON

EXHIBIT 3



LEGEND:

- Approximate Site Boundary
- Approximate Detention Pond Boundary
- Stormwater/ Leachate Catch Basin/ Piping System
- Compost Pile Aeration System
- Culvert
- Vegetated Swale
- Water Treatment Shed
- Stormwater Discharge Points

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	HNO
Drawn by:	AJJ
Checked by:	HNO
Approved by:	JJK

Project No.	82177170
Scale:	SHOWN
File Name:	Ex. 4
Date:	DEC. 2014

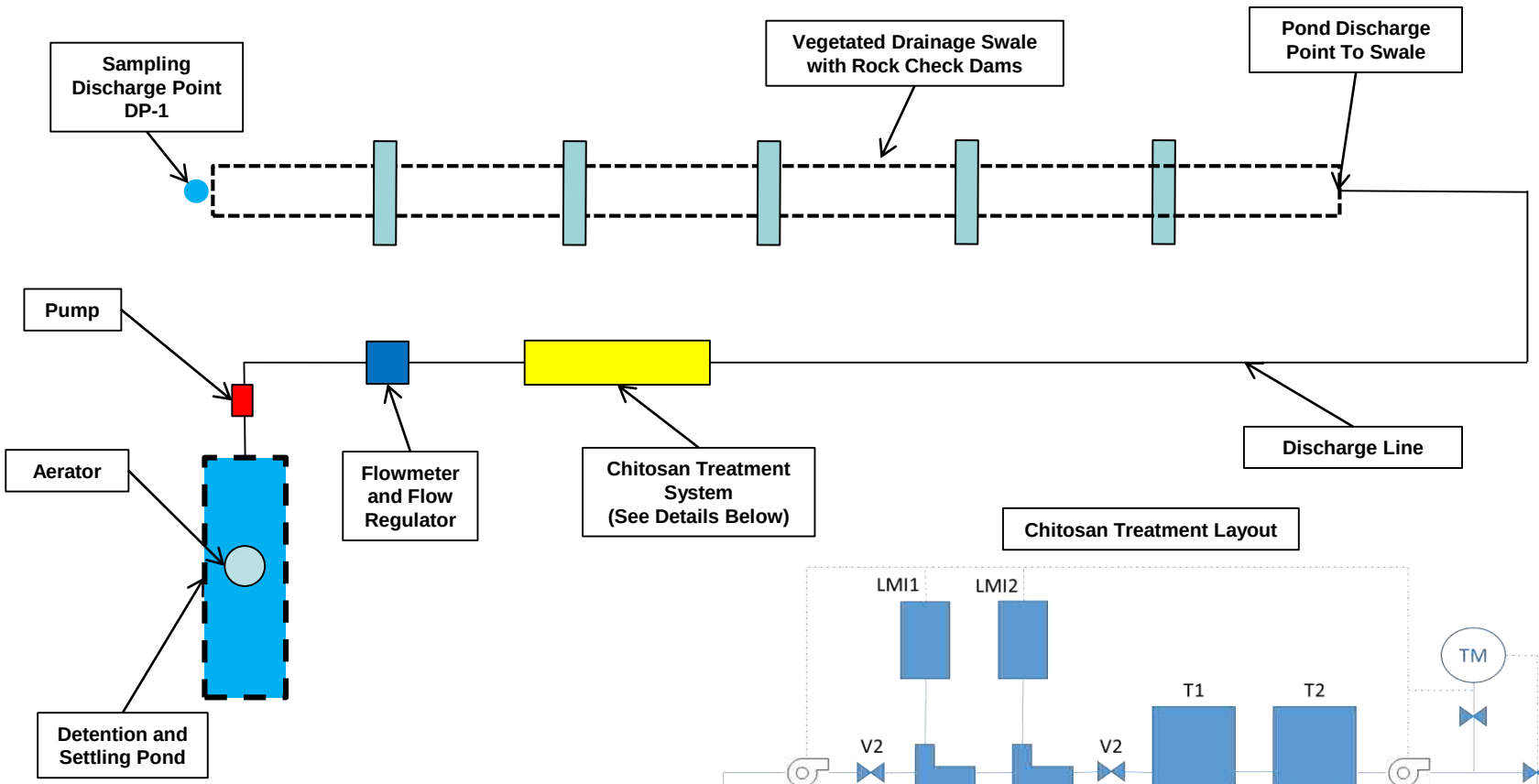
Terracon
Consulting Engineers & Scientists
4103 SE International Way, #300 Portland, Oregon 97222
PH. (503) 659-3281 FAX. (503) 659-1287

CATCH BASIN DRAINANGE AND POND LOCATION MAP

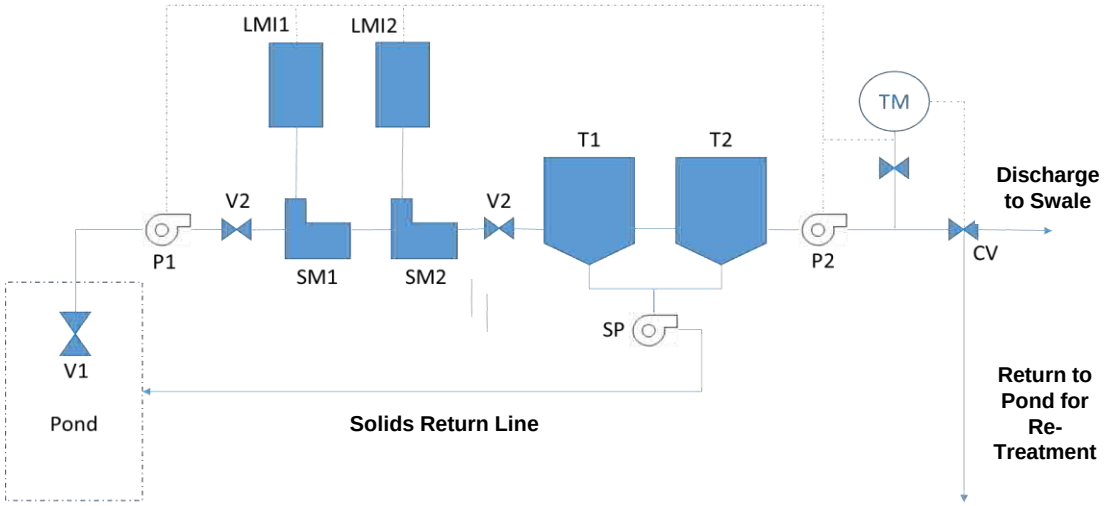
MCFARLANE'S BARK, INC.
13345 SE JOHNSON ROAD
MILWAUKIE, CLACKAMAS COUNTY, OREGON

EXHIBIT 4

PROCESS FLOW DIAGRAM



Chitosan Treatment Layout



Chitosan Treatment Components:
V1 – Check Valve, 2”
P1, P2 – Centrifugal pumps, 1 HP.
LMI1, LMI2 – Metering pumps, 0.01-1.0 GPH
SM1, SM2 – 2” Static mixers with injection ports
T1, T2 Ryan Herco 1,000 gallon tanks
SP – Sump pump, manually operated
TM – Turbidity meter/controller
CV – Control valve, operated by turbidity controller

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	HNO
Drawn by:	HNO
Checked by:	GRH
Approved by:	JJK

Project No.	82177170
Scale:	N.T.S.
File Name:	
Date:	12.18.2017

Terracon
Consulting Engineers & Scientists
4103 SE International Way, Suite 300 Portland, OR 97222
PH. (503) 659-3281 FAX. (503) 659-1287

ON-SITE INLINE TREATMENT SYSTEM

MCFARLANE’S BARK INCORPORATED
13345 SE JOHNSON ROAD
MILWAUKIE, CLACKAMAS COUNTY, OREGON

Exhibit

5

APPENDIX A

PERMIT ASSIGNMENT LETTER AND 1200-Z PERMIT

Oregon
Kate Brown, Governor

Department of Environmental Quality
Northwest Region Portland Office/Water Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503) 229-5263
FAX (503) 229-6957
TTY 711

May 27, 2021

DANIEL MCFARLANE
MCFARLANE, DANIEL
13345 SE JOHNSON RD
MILWAUKIE, OR 97222-1270

RE: **REVISED LETTER**
Issuance NPDES Permit Number 1200-Z
File Number: 110259 EPA Number. : ORR603374
Facility: MCFARLANE'S BARK, INC., 13345 SE JOHNSON RD, MILWAUKIE, CLACKAMAS COUNTY
SIC Code(s): 2875

Dear Permit Registrant:

Please recycle the monitoring table received and replace it with the monitoring table on page 2 of this revised letter. Mount Scott Creek was incorrectly identified as impaired for pH.

DEQ has reissued the 1200-Z, effective July 1, 2021. Attached is your revised monitoring requirements under the reissued permit, starting July 1, 2021. All monitoring waivers expire on July 1, 2021. Please review the information closely. If you identify any discrepancies in the tables, please contact me as soon as possible.

It is your responsibility to comply with the new permit conditions and monitoring requirements. DEQ will be transitioning to electronic Discharge Monitoring Reports during this permit cycle. As such, you will not receive the first page of the permit identifying your facility as registered under the renewed permit.

Please visit our industrial stormwater permits webpage to find a copy of the permit and associated documents. https://www.oregon.gov/deq/wq/wqpermits/Pages/Stormwater-Industrial.aspx

Respectfully,

Jenni Seven, WQ Permit Coordinator

Enclosure: Monitoring Requirements

Monitoring Requirements

You must monitor for the pollutants in the table below. If discharge to a Category 5: 303(d) listed receiving water for pH, total copper, total lead, total zinc and/or E. coli, the table below will not include statewide or sector-specific benchmarks for those pollutants. Exceedance of impairment monitoring may escalate to a water quality-based effluent limit during this permit cycle. Please read Schedule A.13 and Schedule C carefully. Tier 2 geometric mean evaluations are required annually. Please read Schedule A.12 carefully.

Georegion	Pollutant	Statewide Benchmark	Unit	Frequency
Willamette Valley	Total Copper	0.015	mg/L	Four times per year
Willamette Valley	Total Lead	0.11	mg/L	Four times per year
Willamette Valley	Total Zinc	0.14	mg/L	Four times per year
Willamette Valley	pH	5.5-9.0	s.u.	Four times per year
Willamette Valley	TSS	100	mg/L	Four times per year
SIC code of Industrial Activity	**Pollutant**	**Sector-specific Benchmark**	**Units**	**Frequency**
2875	Nitrate + Nitrite Nitrogen	10	mg/L	Four times per year
2875	Phosphorus	2.0	mg/L	Four times per year

GENERAL PERMIT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
INDUSTRIAL STORMWATER DISCHARGE PERMIT No. 1200-Z
Department of Environmental Quality
700 NE Multnomah St., Suite #600 Portland, OR 97232
Telephone: (503) 229-5630 or 1-800-452-4011 toll free in Oregon
Issued pursuant to ORS 468B.050 and the Federal Clean Water Act

REGISTERED TO:

SOURCES COVERED UNDER THIS PERMIT:

A facility that may discharge industrial stormwater to surface waters or to conveyance systems that discharge to surface waters of the state and,

1. The stormwater is associated with an industrial activity identified in Table 1: Sources Covered or listed in Table 2: Additional Industrial Activities Covered; or
2. The facility is notified in writing the Director determines coverage under this permit is required for its stormwater discharges pursuant to 40 CFR 122.26(a)(9)(i)(D).

Note:

1. Facilities may apply for conditional exclusion from the requirement to obtain coverage under this permit if there is no exposure of industrial activities and materials to stormwater pursuant to 40 CFR §122.26(g); see Permit Coverage and Exclusion from Coverage.
2. The following are not eligible to obtain coverage under this permit:
    i. Construction activities. This activity is covered under a separate general permit.
    ii. Any source with primary Standard Industrial Classification codes 2951 and 3273, including mobile asphalt and concrete batch plants; and Standard Industrial Classification code 14, Mining and Quarrying of Nonmetallic Minerals, Except Fuels. These activities are covered under a separate general permit.
    iii. Any source that has obtained an individual NPDES permit for the discharge, unless the source is otherwise eligible for coverage under this permit and DEQ has approved the source's application for coverage under this general permit.
    iv. Any source that discharges to a sanitary sewer system and the discharge is approved by the sanitary sewer operator.

Issuance Date: March 25, 2021

_____

Justin Green, Administrator
Water Quality Division

PERMITTED ACTIVITIES

Until this permit expires, is modified, or revoked, the permit registrant is authorized to construct, install, modify, or operate stormwater treatment or control facilities, and to discharge stormwater and non-stormwater discharges specifically authorized by the permit to surface waters of the state in conformance with all the requirements, limitations, and conditions set forth in the following:

Unless specifically authorized by this permit, by regulation issued by EPA, by another NPDES permit, or by Oregon Administrative Rule or Oregon Revised Statute, any other direct or indirect discharge to waters of the state is prohibited, including non-stormwater discharges to an underground injection control system.

Schedule E contains sector-specific federal requirements. Schedule F contains General Conditions that are included in all general permits issued by DEQ. If conflicts arise between Schedule E or Schedule F and any other schedule of the permit, the requirements in Schedule E or Schedule F may not apply.

Table 1: Sources Covered

Industrial Sources Covered Under this Permit
Facilities with the following primary Standard Industrial Classification (SIC) codes: 10 Metal Mining 12 Coal Mining 13 Oil and Gas Extraction 20 Food and Kindred Products 21 Tobacco Products 22 Textile Mill Products 23 Apparel and Other Finished Products Made From Fabrics and Similar Material 24 Lumber and Wood Products, Except Furniture (Activities with SIC 2411 Logging that are defined in 40 CFR §122.27 as silvicultural point source discharges are covered by this permit.) 25 Furniture and Fixtures 26 Paper and Allied Products 27 Printing, Publishing and Allied Industries 28 Chemicals and Allied Products Manufacturing and Refining (excluding 2874: Phosphatic Fertilizers) 29 Petroleum Refining and Related Industries (excluding 2951, covered by 1200-A) 30 Rubber and Miscellaneous Plastics Products 31 Leather and Leather Products 32 Glass, Clay, Cement, Concrete and Gypsum Products (excluding 3273, covered by 1200-A) 33 Primary Metal Industries 34 Fabricated Metal Products 35 Industrial and Commercial Machinery and Computer Equipment 36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment 37 Transportation Equipment 38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks 39 Miscellaneous Manufacturing Industries 4221 Farm Product Warehousing and Storage 4222 Refrigerated Warehousing and Storage 4225 General Warehousing and Storage 5015 Motor Vehicle Parts, Used 5093 Scrap and Waste Materials
Facilities with the following primary SIC codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations[1]: 40 Railroad Transportation 41 Local and Suburban Transit and Interurban Highway Passenger Transportation 42 Trucking and Courier Services, Except Air (excluding 4221, 4222, and 4225) 43 United States Postal Service 44 Water Transportation 45 Transportation by Air 5171 Petroleum Bulk Stations and Terminals, except petroleum sold via retail method
Steam Electric Power Generation including coal handling sites
Landfills, land application sites and open dumps
Hazardous Waste Treatment, storage and disposal facilities
Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, recycling, and reclamation of municipal or domestic sewage (including land dedicated to the disposal of sewage sludge that are located within the confines of the facility) with the design flow capacity of 1.0 mgd or more, or required to have a pretreatment program under 40 CFR §403

[1]Eligibility based on auxiliary operations; however, once covered all stormwater discharge associated with industrial activities are regulated under this permit.

Facilities that discharge stormwater into the Columbia Slough or Portland Harbor that is exposed to any of the industrial activities listed in Table 2 below, are eligible to obtain permit coverage under the NPDES 1200-Z permit.

Table 2: Additional Industrial Activities Covered

Discharges to Columbia Slough and Portland Harbor
Maintenance of vehicles, machinery, equipment, and trailers (including repairs, servicing, washing, testing and painting)
Storage of vehicles, machinery, equipment (including disposal/refuse containers stored by a disposal/refuse contractor/vendor), and trailers (including rental, sales, wrecked vehicles, fleet, and general storage)
Materials storage (including raw materials; bulk fuels, chemicals, detergents, and plastic pellets; finished materials; lumber and food products; wholesale gravel, sand, and soil stockpiles; and bulk liquids other than water)
Waste handling (including recycled product storage, composting, tires, and bulk hazardous waste)
Commercial animal operations (such as kennels, race tracks, and veterinarians not covered under a Confined Animal Feeding Operation permit)
Fuel distribution and sales (including bulk stations, fuel oil dealers, manned and unmanned retail stations, fleet fueling, mobile fueling, and truck stops)
Any former activity that resulted in significant materials (as defined in Schedule D) remaining on-site

CONDITION I

PERMIT COVERAGE AND EXCLUSION FROM COVERAGE

1. **New Discharger to Impaired Waters** (see Schedule D.3, Definitions)
   a. A new discharger to an impaired water without a Total Maximum Daily Load (TMDL), based on the EPA-approved Category 5: 303(d) list in effect at the time of permit application for pH, copper, lead, zinc, iron, and E. coli that correspond to the specific pollutant(s) for which the water body is impaired must meet one of the following conditions to obtain coverage under this permit:
      i. Prevent exposure to stormwater for pH, copper, lead, zinc, iron and E. coli that correspond to the specific pollutant(s) for which the water body is impaired. Document the procedures taken to prevent exposure in the Stormwater Pollution Control Plan (SWPCP).
      ii. Provide technical demonstrations that sources of pH, copper, lead, zinc, iron and E.coli that correspond to the specific pollutant(s) for which the water body is impaired are not present at the site and document these findings and considerations in the SWPCP.
      iii. Provide DEQ or agent stormwater discharge analytical sampling results to demonstrate the discharge of stormwater is not expected to cause or contribute to an exceedance of water quality standards for pH, copper, lead, zinc, iron and E. coli that correspond to the specific pollutant(s) for which the water body is impaired at the point of discharge and retain in the SWPCP.
   b. If unable to demonstrate pH, copper, lead, zinc, iron and E. coli that correspond to the specific pollutant(s) for which the water body is impaired will not be present in the discharge, provide DEQ or agent with other technical information that demonstrates the discharge is not expected to cause or contribute to an exceedance of water quality standards at the point of discharge and document the rationale in the SWPCP.
      i. Prior to DEQ granting coverage, DEQ or agent will determine and document that Condition I.1.a or b has been satisfied.
   c. A new discharge of pollutant may be authorized by this permit to an impaired water with a TMDL (based on EPA-approved TMDLs as of March 31, 2021) under one of the following circumstances:
      i. The TMDL does not establish industrial stormwater wasteload allocations, the compliance with the terms and conditions of the permit is presumed consistent with the TMDL.
      ii. The TMDL establishes industrial stormwater wasteload allocations, and DEQ determines that there is sufficient remaining loading capacity in the TMDL to allow for the new industrial stormwater discharge.
   d. If a new discharge to an impaired water is authorized under this permit, DEQ or agent will establish additional monitoring and site controls as necessary. DEQ or agent may determine a compliance schedule is necessary.
   e. DEQ may determine that coverage under an individual NPDES permit is required.
   f. Conditions I.1.a and I.1.c above do not apply if the waterbody is impaired for:
      i. Biological communities (biocriteria), including harmful algal blooms and aquatic weeds, where no pollutant including indicator or surrogate pollutants, is specified as causing the impairment; or
      ii. Temperature, habitat and flow modifications.

2. Application Requirements for New Permit Coverage

a. The following conditions apply to:
   i. New facility: Submit a complete application to DEQ or agent (see Schedule D.4 for description of agent) at least 60 calendar days before initiating the activity that requires permit coverage, unless DEQ or agent approved a later date.
   ii. Existing facility with stormwater discharges associated with industrial activities identified in Table 1 or Table 2 operating without coverage under any NPDES permit for those discharges: Immediately submit a complete application to DEQ or agent, unless DEQ or agent approved a later date.
   iii. Existing facility that is designated by the Director as needing a stormwater permit pursuant to 40 CFR §122.26(a)(9)(i)(D): No later than 60 calendar days of being notified by DEQ that permit coverage is required, submit a complete application to DEQ or agent.
   iv. Existing facility with stormwater discharges authorized by an individual NPDES permit that seeks coverage under this permit: Submit a complete application to DEQ or agent and a copy of the individual NPDES permit.

b. A complete web-based electronic application, as required by DEQ, must include the following:
   i. Applicable permit fees;
   ii. DEQ-approved application form;
   iii. A determination, on a DEQ-approved form, from the local government agency with land use jurisdiction that states the use is compatible with acknowledged local land use plans; and
   iv. One PDF copy of the SWPCP.

c. DEQ will accept paper applications:
   i. With an approved waiver from electronic submission; or
   ii. Until directed by DEQ.

d. Permit Coverage
   i. Prior to granting the applicant coverage under this permit, DEQ will provide a 30 calendar day public notice period on the applicant's SWPCP. DEQ or agent will respond to any applicable public comments.
   ii. DEQ will notify the applicant if coverage is granted or denied. When coverage is granted, DEQ or agent will specify and communicate monitoring requirements to the permit registrant.

e. If coverage is denied or the applicant does not wish to be regulated by this permit, the applicant must apply for an individual permit in accordance with OAR 340-045-0030 or cease discharge.

3. Existing Facilities Covered Under the 1200-Z NPDES General Permit Reissued in 2018

a. DEQ will notify existing permit registrants of assignment under the current permit. Permit registrants that seek uninterrupted coverage must submit an updated SWPCP to DEQ or agent by August 31, 2021, unless DEQ or agent approved a later date.

b. Existing permitted facilities must comply with the implementation deadlines established under the previous 1200-Z NPDES permit, including Tier 2 corrective action requirements.

c. Existing permitted facility that intend to change industrial processes at the site to an new primary industrial sector must submit the following to DEQ or agent at least 60 calendar days before initiating the planned change:

i. A determination, on a DEQ-approved form, from the local government agency with land use jurisdiction that states the new industrial use is compatible with acknowledged local land use plans;
ii. A revised SWPCP; and
iii. Environmental management plan review fee.

d. DEQ will provide a 30 calendar day public notice period on the revised SWPCP.
e. DEQ or agent will specify and communicate monitoring requirements to the permit registrant.

4. Name Change or Transfer of Permit Coverage

a. For a name change or transfer of permit coverage between legal entities, the new owner or operator must submit a web-based electronic transfer or legal name change to DEQ, when directed by DEQ a paper form is no longer accepted, no later than 30 calendar days after the name change or transfer of control of the facility is complete. A complete name change or transfer must include the following:
   i. One Name Change and/or Permit Transfer form;
   ii. One PDF copy of an updated SWPCP; and
   iii. Permit transfer, legal name change fee.
b. DEQ will notify the applicant if the name change or transfer is approved or denied.
c. Transfer of permit coverage between legal entities where there will also be a change in an industrial processes at the site to a new primary industrial sector are ineligible for permit transfer. The new owner or operator must submit an application for new permit coverage under this permit as required in Condition I.2 above.

5. "No Exposure" Conditional Exclusion from Permit Coverage

a. An owner or operator that applies for a "no exposure" conditional exclusion under 40 CFR §122.26(g) from coverage under this permit must:
   i. Protect industrial materials and activities from exposure to rain, snow, snowmelt, and runoff by using a storm resistant shelter, except as provided in the Environmental Protection Agency (EPA) Guidance Manual for Conditional Exclusion from Stormwater Permitting Based on "No Exposure" of Industrial Activities to Stormwater (EPA 833-B-00-001, June 2000) and EPA's Fact Sheet on Conditional No Exposure Exclusion for Industrial Activity (EPA 833-F-00-015, revised December 2005). Storm resistant shelters with unsealed zinc or copper roofing materials are not eligible for the "no exposure" conditional exclusion;
   ii. Ensure that known significant materials from previous operations are controlled, removed or otherwise not exposed to stormwater.
   iii. When directed to do so by DEQ, complete and sign a web-based electronic DEQ-approved certification, that there is no stormwater exposure to industrial materials and activities from the entire facility, otherwise submit in paper format.
   iv. Submit the signed certification to DEQ or agent once every five years, beginning five years after the date of first submittal. If DEQ or agent does not comment on the "no exposure" certification within 60 calendar days, the "no exposure" conditional exclusion is deemed approved. DEQ or agent may notify the applicant of its approval. The owner or operator must keep a copy of the approved certification on-site.

v. Allow DEQ or agent to inspect the facility to determine compliance with the "no exposure" conditions listed above; and
vi. If the facility discharges through a municipal separate storm sewer system (MS4) submit a copy of the "no exposure" certification to the MS4 operator (for example, local municipality or district), if requested, and allow inspection and public reporting by the MS4 operator.

b. Limitations for obtaining or maintaining the exclusion:
i. This exclusion is available on a facility-wide basis only, not for individual discharge points.
ii. If any industrial materials or activities become exposed to rain, snow, snowmelt, or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement. Any conditionally exempt discharger who anticipates changes in circumstances must apply for and obtain permit coverage before the change of circumstances.
iii. DEQ or agent retains the authority to determine that the "no exposure" conditional exclusion no longer applies and require the owner or operator to obtain permit coverage.

6. Authorized Non-Stormwater Discharges

a. Subject to the terms and conditions of the permit and Oregon law, the following non-stormwater discharges are authorized:
i. Discharges from emergency or unplanned fire-fighting activities;
ii. Fire hydrant flushing and maintenance;
iii. Potable water, including water line flushing;
iv. Uncontaminated condensate from air conditioners, coolers, chillers and other compressors, and from outside storage of refrigerated gases and liquids;
v. Landscape watering and irrigation drainage;
vi. Exterior vehicle wash water that does not use hot water or detergent; restricted to less than eight per week;
vii. Pavement wash water that does not use hot water, detergent or other cleaning products, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing;
viii. Routine external building wash down that does not use hot water, detergent or other cleaning products;
ix. Uncontaminated ground water or spring water;
x. Foundation or footing drains where flows are not contaminated with process materials; and
xi. Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

7. Limitations on Coverage

a. Pursuant to OAR 340-045-0033(10), DEQ may deny permit coverage to an applicant or revoke existing coverage under this permit and require the owner or operator to apply for and obtain an individual permit.
b. The permit registrant must separate any piping of interior floor drains and process wastewater discharge points from the storm drainage system to prevent unpermitted discharge of pollutants to waters of the state. Discharge from floor drains to the stormwater drainage system is a violation of this permit.

c. Any other wastewater discharge or disposal, including stormwater mixed with wastewater is not authorized under this permit and must be permitted in a separate permit, unless the wastewater is reused or recycled without discharge or disposal, or is discharged to the sanitary sewer with approval from the sanitary sewer system operator.
d. Except for sectors G, H, L and K in accordance with Schedule E, construction stormwater discharge resulting from disturbance of an acre or more is not authorized.
e. Coverage under this permit is not available under the following circumstances:
    i. If all stormwater discharges are regulated by another NPDES permit, except a MS4 permit.
    ii. If stormwater discharges were included in a permit that has been or is in the process of being denied, terminated or revoked unless the source is otherwise eligible for coverage under this permit and DEQ approves the source's application to register under this permit and simultaneously revokes coverage under the other permit pursuant to OAR 340-045-0033(8).
    iii. If stormwater discharge is covered under an individual NPDES permit that establishes site-specific numeric water quality-based effluent limitations.
    iv. For a new discharger to waters designated as Outstanding Resource Waters for antidegradation purposes under 40 CFR 131.12(a)(3) and OAR 340-041-0004.
f. Any operator eligible for coverage not seeking coverage under this general permit must apply for an individual NPDES permit in accordance with the procedures in OAR 340-045-0030.

SCHEDULE A

EFFLUENT LIMITATIONS AND PERMIT COMPLIANCE

1. Narrative Technology-based Effluent Limits

The permit registrant must meet the following narrative technology-based effluent limits and additional sector-specific limits in Schedule E of this permit, if applicable.

a. Minimize exposure - Minimize exposure of manufacturing, processing, material storage areas, loading and unloading, disposal, cleaning, maintenance and fixed fueling areas to rain, snow, snowmelt and runoff. To the extent technologically available and economically practicable and achievable in light of best industry practice, the permit registrant must do the following:

i. Locate materials and activities indoors or protect them with storm resistant covers if stormwater from affected areas may discharge to surface waters. Acceptable covers include, permanent structures such as roofs or buildings or properly secured temporary covers such as tarps;

ii. Use grading, berming, or curbing to divert stormwater away from these areas and prevent stormwater contamination;

iii. Locate materials, equipment and activities in containment and diversion systems, including the storage of leaking or leak-prone vehicles and equipment awaiting maintenance, to prevent leaks and spills from contaminating stormwater;

iv. Use drip pans or absorbents under or around leaking or leak-prone vehicles/equipment or store indoors;

v. Drain fluids from equipment and vehicles prior to on-site storage or disposal;

vi. Perform all cleaning operations indoors, under cover or in bermed areas that prevent runoff and run-on and also captures overspray, unless allowed by Condition I.6; and

vii. All wash water must be managed indoors or in bermed areas, disposed into sanitary sewer or drain to a proper collection system such as a closed-loop system or vegetated area that does not discharge into the stormwater drainage system unless Condition I.6 which allows authorized non-stormwater discharge is met.

b. Oil and Grease - Employ oil/water separators, booms, skimmers or other methods to eliminate or minimize oil and grease contamination in stormwater discharges.

c. Waste Chemicals and Material Disposal - Recycle or properly dispose of wastes to eliminate or minimize exposure of pollutants to stormwater. Cover all waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste to prevent exposure of stormwater to these pollutants. Acceptable covers include, storage of bins or dumpsters under roofed areas or use of lids or properly secured temporary covers such as tarps.

d. Erosion and Sediment Control - Stabilize exposed areas, including areas where industrial activity has taken place in the past and significant materials remain, and contain runoff using structural and nonstructural controls to minimize erosion of soil at the site and sedimentation. Employ erosion control methods, such as vegetating exposed areas, graveling or paving to minimize erosion of soil at the site. Employ sediment control methods, such as detention facilities, vegetated filter strips, bioswales, flow velocity dissipation devices or other permanent erosion or sediment controls to minimize sediment loads in stormwater discharges. Identify any use of stabilization polymers or chemicals. For activities that involve land disturbance, the permit

registrant must contact the local municipality to determine if there are other applicable requirements related to stormwater control.

e. Debris Control - Employ screens, booms, settling ponds, or other methods to eliminate or minimize waste, garbage and floatable debris in stormwater discharges and ensure that this debris is not discharged to receiving waters.
f. Dust Generation and Vehicle Tracking of Industrial Materials - Minimize generation of dust, off-site tracking and discharge of soil, particulates and raw, final or waste materials.
g. Housekeeping - Routinely clean all exposed areas that may contribute pollutants to stormwater with measures such as sweeping at regular intervals, litter pick-up, keeping materials orderly and labeled, promptly clean-up spills and leaks, proper maintenance of vehicles and stowing materials in appropriate containers.
h. Spill Prevention and Response Procedure - Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans that include methods for spill prevention and clean-up and notification procedures. At a minimum, the permit registrant must conduct spill prevention and response measures including the following:
    i. Clean up spills or leaks promptly using absorbents or other effective methods to prevent discharge of pollutants and use spill/overflow protection equipment;
    ii. Store all hazardous substances (see Schedule D.3, Definitions), petroleum/oil liquids, and other chemical solid or chemical liquid materials that have potential to contaminate stormwater within berms or other secondary containment devices to prevent leaks and spills. If the use of berms or secondary containment devices is not practicable, then store such substances in areas that do not drain off-site or into the storm sewer system;
    iii. Plainly label containers to encourage proper handling and facilitate proper response if spills or leaks occur as required by local, state and federal rules;
    iv. Implement preventative measures, such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
    v. Develop procedures for expeditiously stopping, containing, and cleaning up leaks, spills and other releases. Make the methods and procedures available to appropriate personnel. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures. Have the necessary clean-up material on-site and readily available; and
    vi. Procedures for notification of appropriate facility personnel, DEQ or agent, and the Oregon Emergency Response System (1-800-452-0311), when a spill may endanger health or the environment. Contact information must be in locations that are readily accessible and available.
i. Preventative Maintenance - Regularly inspect, clean, maintain, and repair all industrial equipment and systems and materials handling and storage areas that are exposed to stormwater to avoid situations that may result in leaks, spills, and other potential releases of pollutants discharged to receiving waters. Clean, maintain and repair all control measures, including stormwater structures and temporary measures, catch basins, and treatment facilities to ensure effective operation as designed and in a manner that prevents the discharge of pollution.
j. Employee Education - Develop and maintain an employee orientation and education program to inform personnel of the pertinent components and goals of this permit and the SWPCP.
    i. Training must cover:

(1) Specific control measures used to achieve the narrative technology-based effluent limits, such as spill response procedures and good housekeeping practices, and
(2) Monitoring, inspection, reporting and documentation requirements.

ii. The permit registrant must ensure that the following personnel are trained and understand the facility's specific requirements and their responsibilities:
(1) Personnel who are responsible for the design, installation, maintenance, or repair of controls including, pollution prevention and treatment measures;
(2) Personnel responsible for the storage and handling of chemicals and materials that could contribute pollutants to stormwater;
(3) Personnel who are responsible for conducting or documenting monitoring or inspections as required in Schedule B; and
(4) Personnel who are responsible for conducting and documenting corrective actions.

iii. Education and training must be documented and must occur:
(1) No later than 30 calendar days after hiring an employee who works in areas where stormwater is exposed to industrial activities or conducts duties related to the implementation of the SWPCP;
(2) No later than 30 calendar days after change in duties for key personnel in Schedule A.1.j.ii; and
(3) Annually thereafter.

iv. Education and training must be documented and include which specific employees received training. A log of training dates must kept on-site and submitted to DEQ or agent upon request.

k. Non-Stormwater Discharges - Eliminate any non-stormwater discharges not authorized by a NPDES permit (see Condition I.6 for a list of authorized non-stormwater discharges).

2. Control Measures for Numeric and Narrative Technology-based Effluent Limits

a. The permit registrant must select, design, install, implement and maintain control measures, including all best management practices (BMPs), to meet the narrative technology-based effluent limits in Schedule A.1, and Schedule E, and numeric technology-based effluent limitations guidelines in Schedule B.1 of this permit. The permit registrant must describe these measures, maintenance schedules and frequency of housekeeping measures in the SWPCP.

b. For narrative and numeric technology-based effluent limits that require the permit registrant to minimize pollutants in the discharge, the permit registrant must reduce or eliminate pollutants to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice. The term "minimize" is defined in Schedule D.3.

c. In selecting the appropriate control measures to meet these limits, the permit registrant may consider the age of the equipment and facilities involved, the processes employed, the engineering aspects of the application of various types of control techniques, the pollutant reductions likely to be achieved, any adverse environmental or energy effects of potential measures, and the costs of achieving pollutant reductions.

d. The permit registrant must install, implement and maintain the control measures in accordance with good engineering practices and manufacturers' specifications. Any deviation from the manufacturers' specifications must be explained in the SWPCP.

e. DEQ or agent may require the permit registrant to take corrective actions to meet the narrative technology-based effluent limits in Schedule A.1 and Schedule E of this permit. Failure to implement any narrative technology-based effluent limits in Schedule A.1 and Schedule E, and other control measures or operational practices described in the SWPCP is a permit violation.
f. If modifications to the control measures are necessary to meet technology-based effluent limits in this permit, the permit registrant must implement the modifications before the next storm event if practicable or no later than 30 calendar days from discovering the violation, unless DEQ or agent approve a later date.

WATER QUALITY-BASED EFFLUENT LIMITATIONS

3. Water Quality Standards

a. The permit registrant must not cause or contribute to an exceedance of instream water quality standards as established in OAR 340-041.
b. If at any time the permit registrant discovers, or DEQ or agent determines, that the discharge causes or contributes to an exceedance of instream water quality standards, the permit registrant must take the following corrective actions:
   i. No later than 24-hours after the discovery or being informed of the determination by DEQ:
      (1) Investigate the conditions that caused or contributed to the exceedance; and
      (2) Review the SWPCP and the selection, design, installation and implementation of control measures to ensure compliance with this permit.
   ii. No later than 30 calendar days after the discovery or determination, submit a Water Quality Standards Report to DEQ or agent that documents the following:
      (1) The results of the permit registrant's investigation, including the date the exceedance was discovered and a brief description of the conditions that caused or contributed to the exceedance;
      (2) Corrective actions taken or planned to be taken, including the date the corrective action was completed or is expected to be completed; and
      (3) If the permit registrant determines that SWPCP revisions are necessary based on the investigation, the permit registrant must submit a revised SWPCP to DEQ or agent with the Water Quality Standards Report.
   iii. The permit registrant must implement the corrective action before the next storm event, if possible, or no later than 30 calendar days after discovery or determination, whichever comes first unless DEQ or agent approved a later date.
c. If information in the application, required reports, or from other sources indicates that the discharge has caused or contributed to an exceedance of water quality standards, either in the receiving waterbody or a downstream waterbody, DEQ will notify the permit registrant if any of the following are necessary:
   i. Additional monitoring and site controls;
   ii. A compliance schedule with a deadline for correcting the violation; or
   iii. Permit revocation under this general permit, and require the permit registrant to obtain coverage under an individual permit.

d. If DEQ or agent determines that additional site-specific requirements are necessary, the permit registrant must revise the SWPCP. DEQ will hold a 30 calendar day public notice period on the revised SWPCP.

4. Discharges to Impaired Waters

a. Existing discharger to an impaired water without a TMDL based on EPA-approved Category 5: 303(d) list that is in effect at the time of permit assignment must comply with Schedule A.3 and:
   i. The permit registrant that have complied with Condition I.1.a or b must implement and maintain any control measures or conditions on the site that enabled the permit registrant to become eligible for permit coverage. The permit registrant must modify such measures or conditions as necessary pursuant to Schedule A.2 and schedules outlined in the SWPCP.
   ii. The permit registrant must comply with impairment pollutant monitoring in accordance with Schedules B.3, B.4 and B.5 and additional monitoring established by DEQ or agent. When the discharge enters an impaired watershed unit, the listing will only be applied if there is a hydrologic connection between the receiving water and assessment water body causing the impairment.
   iii. Impairment monitoring results of qualifying sample that exceed impairment monitoring concentrations in Table 5 and Table 5A, as required by Schedules B.3, B.4 and B.5 may be used in conjunction with other relevant information to determine an exceedance of water quality standards.

b. Existing Discharger to an impaired water with a TMDL (based on EPA-approved TMDLs as of March 31, 2021) must comply with Schedule A.3 and:
   i. Must comply with all applicable requirements of TMDLs with wasteload allocations for industrial stormwater discharges.
   ii. If DEQ or agent determines that additional site-specific requirements are necessary, the permit registrant must revise the SWPCP. DEQ will hold a 30 calendar day public notice period on the revised SWPCP.

STORMWATER DISCHARGE

5. Statewide and Sector-Specific Benchmarks

a. Benchmarks are screening concentrations, not numeric effluent limits. A benchmark exceedance, therefore, is not a permit violation, but failing to take the required corrective action is a permit violation.

b. The permit registrant must determine whether site controls are effectively reducing pollutant concentrations in stormwater discharges, or if maintenance or implementation of additional controls is necessary when a benchmark is exceeded.

6. Mass Reduction Measures Certification

a. For mass reduction measures installed during previous permit cycles in response to an approved Tier 2 mass reduction waiver that reduced the mass of the pollutants discharged at or above DEQ-approved design storm capacity, the permit registrant must submit to DEQ or agent an evaluation that is certified by an Oregon registered professional engineer (PE) or Oregon certified

engineering geologist (CEG) stamp of the following information, as applicable, to validate the system is operating as intended:

i. Proper installation and maintenance specifications as originally designed;
ii. Infiltration testing or other demonstrations to confirm intended performance metrics;
iii. Confirmation that operation and maintenance specifications have been performed;
iv. Information concerning drawdown;
v. Whether any corrective actions are needed; and
vi. Estimated design life expectancy of the system and any plan to rejuvenate or replace measures.

b. The permit registrant must submit the mass reduction measures stamped certification to DEQ or agent by December 31, 2021, unless DEQ or agent approve a later date.
c. The permit registrant must provide DEQ or agent with operation and maintenance records upon request and meet all maintenance schedules specified in the stamped certification.
d. If the stamped certification includes corrective action, the permit registrant must complete corrective action by September 30, 2022.
e. For mass reduction measures installed during previous permit cycles that reduced the mass of the pollutants discharged at or above DEQ-approved design storm capacity not in response to Tier 2 mass reduction waiver, the permit registrant must meet Schedule A.6.a-d and submit, retroactively, to DEQ or agent a Tier 2 mass reduction waiver checklist.
f. DEQ or agent will notify the permit registrant within 60 calendar days from receipt if mass reduction measures certification is approved or denied.

7. Effluent Limitations

a. An exceedance of an applicable numeric effluent limit is a permit violation. See Schedule A.13, B.7.g and B.15.
b. Numeric effluent limits are established as follows:
   i. Numeric technology-based effluent limits based on industrial activities in Table 3, Schedule B.1 applicable to concentrations in Schedule E promulgated by EPA's effluent limitation guidelines under federal regulations 40 CFR, Subchapter N.
   ii. Numeric water quality-based effluent limits will apply to facilities:
      (1) Based on discharges to Category 5: 303(d) list in effect at the time of permit assignment for pH, copper, lead, and zinc that correspond to the specific pollutant(s) for which the water body is impaired in response to monitoring results in accordance Schedule A.13.e; and
      (2) Established by wasteload allocations in a TMDL as identified by DEQ or agent.
c. Narrative water quality-based effluent limits are established as follows:
   i. Based on discharges to Category 5: 303(d) list in effect at the time of permit assignment for E. coli and iron that correspond to the specific pollutant(s) for which the water body is impaired in response to monitoring results in accordance Schedule A.13.i and j.

STORMWATER POLLUTION CONTROL PLAN

8. Preparation and Implementation of SWPCP

a. The SWPCP must be prepared by a person knowledgeable in stormwater management and familiar with the facility.

b. The SWPCP must be signed and certified in accordance with 40 CFR §122.22.
c. In accordance with Schedule A.2, the SWPCP must include control measures/BMPs that implement each narrative technology-based effluent limit to eliminate or reduce the potential to contaminate stormwater and prevent exceedance of instream water quality standards.
d. The permit registrant must implement the SWPCP and any revisions to the plan. Failure to implement any narrative technology-based effluent limits, other control measures or operational practices described in the SWPCP is a violation of this permit.
e. If the permit registrant fails to implement the control measures in the SWPCP, the permit registrant must take corrective actions and implement the measures before the next storm event if practicable or no later than 30 calendar days after the discovery, unless a later date is approved by DEQ or agent.
f. The permit registrant must keep the SWPCP current and revise it as necessary to reflect current site conditions and changes to the site.

9. SWPCP Revisions

a. The Permit registrant must prepare SWPCP revisions in compliance with Schedule A.8.a-c.
b. The permit registrant must submit SWPCP revisions to DEQ or agent for the following reasons:
   i. Change in site contact(s);
   ii. In response to a corrective action or inspection;
   iii. Changes to the site, operations or control measures that may significantly change the nature of pollutants present in stormwater discharge; or significantly increase the pollutant(s) levels, discharge frequency, discharge volume or flow rate;
   iv. Changes to the monitoring points; or
   v. Changes to discharge points.
c. Change to site contact must be made through the web-based electronic system when available, except for facilities located in agents' jurisdictions, until directed by DEQ or agent.
d. Review of the revisions by DEQ or agent prior to implementation is not required, unless there is a change to the location of monitoring points. The permit registrant may not change monitoring points until DEQ or agent have approved the SWPCP revision.
e. DEQ or agent may require the permit registrant to revise the SWPCP at any time. The permit registrant must submit revisions through the web-based electronic system, when directed by DEQ, no later than 30 calendar days from the request date or the change to the facility, unless DEQ or agent approved a later date.
f. The proposed revisions are deemed accepted after 30 calendar days after receipt unless the permit registrant receives a response from DEQ or agent.
g. SWPCP revisions are not subject to public notice unless revisions are in response to Condition I.3.c and when the SWPCP revisions include additional site-specific requirements in response to a Water Quality Standard Report in accordance with Schedule A.3 or an EPA-approved TMDL as of March 31, 2021, in accordance with Schedule A.4.b of this permit.
h. For Tier 2 SWPCP revision submittal requirements, refer to Schedule A.12.

10. Required Elements

The SWPCP, at a minimum, must include the components below and describe how the permit registrant intends to comply with the narrative technology-based effluent limits in Schedule A.1 and

eliminate or reduce the potential to contaminate stormwater and prevent any exceedance of instream water quality standards.

a. Title Page - The title page of the SWPCP must contain the following information:
   i. Plan date;
   ii. Name of the site;
   iii. Name of the site operator or owner;
   iv. The name of the person(s) preparing the SWPCP;
   v. File number and EPA permit number as indicated in permit coverage documents;
   vi. Primary SIC code and any co-located SIC codes;
   vii. Contact person(s) name, telephone number and email; and
   viii. Physical address, including county, and mailing address if different.

b. Site Description - The SWPCP must contain the following information, including any applicable information required in Schedule E of the permit:
   i. Site map(s) including the following, labeled clearly:
      (1) general location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features;
      (2) drainage patterns, with flow arrows;
      (3) conveyance and discharge structures, such as piping or ditches;
      (4) exact location of all monitoring points, labelled with a unique three-digit identifying number starting with 001, 002, etc. used for web-based electronic reporting and indicate "monitoring point;"
      (5) outline of the drainage area for each discharge point;
      (6) paved areas and buildings within each drainage area;
      (7) locations of discharge points if different from monitoring points;
      (8) areas used for outdoor manufacturing, treatment, storage, or disposal of significant materials;
      (9) areas known or discovered significant materials from previous operations;
      (10) existing structural control measures for minimizing pollutants in stormwater runoff;
      (11) structural features that reduce flow or minimize impervious areas;
      (12) material handling and access areas;
      (13) hazardous waste treatment, storage and disposal facilities;
      (14) location of wells including waste injection wells, seepage pits, drywells;
      (15) location of springs, wetlands and other surface waterbodies both on-site and adjacent to the site;
      (16) location of groundwater wells;
      (17) location and description of authorized non-stormwater discharges;
      (18) location and description of spill prevention and cleanup materials; and
      (19) locations of the following materials and activities if they are exposed to stormwater and applicable:
         A. fueling stations;
         B. vehicle and equipment maintenance cleaning areas;
         C. loading/unloading areas;
         D. locations used for the treatment, storage, or disposal of wastes;
         E. liquid storage tanks;

F. processing and storage areas;
G. immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
H. transfer areas for substances in bulk;
I. machinery; and
J. locations and sources of run-on to your site from adjacent property.

ii. A description of industrial activities conducted at the site and significant materials stored, used, treated or disposed of in a manner which exposes those activities or materials to stormwater. Include in the description the methods of storage, usage, treatment or disposal.
iii. Location and description, with any available characterization data, of areas of known or discovered significant materials from previous operations.
iv. Regular business hours of operation.
v. For each area of the site where a reasonable potential exists for contributing pollutants to stormwater runoff, a description of the potential pollutant sources that could be present in stormwater discharges and if the source is associated with a co-located SIC code.
vi. A description of control measures installed and implemented to meet the technology and water quality-based requirements in Schedule A.1 –A.4, Schedule A.13 and any applicable sector-specific requirements in Schedule E of this permit. Include a description of how the stormwater control measures address potential pollutant sources from industrial activities and significant materials on-site, spills and leaks and authorized non-stormwater discharges. Include known maintenance schedules and frequency of housekeeping measures.
vii. A description of stormwater treatment controls or source controls, including low impact development, in response to corrective action requirements and operation and maintenance procedures. Include safety data sheets for any stormwater treatment chemicals or substances used in stormwater treatment and stored on site.
viii. An estimate of the amount of impervious surface area (including paved areas and building roofs) and the total area drained by each stormwater discharge point to be reported in area units.
ix. The name(s) of the receiving water(s), latitude and longitude of discharge point(s), and applicable SIC code, if facility has co-located operations. If discharge point is to a municipal storm sewer system, the name(s) and latitude and longitude of the receiving waters and the name of the municipality.
x. The identification of each discharge point and the location(s) where stormwater monitoring will occur as required by Schedule B.6. The monitoring point must also be labeled in the on the site map as "monitoring point." Existing discharge points excluded from monitoring must include a description of the discharge point(s) and data or analysis supporting that the discharge point(s) are substantially similar as described in Schedule B.7.c.ii of this permit.

c. Procedures and Schedules -The SWPCP must contain the following information to meet the narrative technology-based effluent limits in Schedule A.1 of this permit:
i. Spill Prevention and Response - Procedures for preventing and responding to spills and clean-up, documentation and notification procedures. Indicate who is responsible for on-site management of significant materials and include their contact information. Spills prevention plans required by other regulations may be substituted for this provision if the spill prevention plan addresses stormwater management concerns and the plan is included with the SWPCP.

Otherwise the SWPCP must contain all spill prevention and response procedures, schedules and documentation requirements in Schedule A.1.

(1) Indicate how spill response will be coordinated between the permit registrant and otherwise unpermitted tenants. The permit registrant is ultimately responsible for spills of tenant and appropriate response.

d. Preventative maintenance - Procedures for conducting inspections, maintenance and repairs to prevent leaks, spills, and other releases from drums, tanks and containers exposed to stormwater and the scheduled regular pickup and disposal of waste materials. Include the schedule or frequency for maintaining all control measures and waste collection.

e. Operation and Maintenance Plans - Include an operation and maintenance plan for active and passive treatment systems and mass reduction measures. The O&M plan must include, as appropriate to the type of treatment system, items such as system schematic, manufacturer's maintenance/operation specifications, chemical use, treatment volumes and a monitoring or inspection plan and frequency. For passive treatment and low impact development control measures, such as mass reduction measures, include routine maintenance standards.

f. Employee Education - The elements of the training program must include the requirements in Schedule A.1.j. Include a description of the training content and the required frequency.

BENCHMARK EXCEEDANCES AND VISUAL OBSERVATION CORRECTIVE ACTIONS

11. Tier 1 Corrective Action Response based on Exceedances of Benchmarks and Visual Observations that Show Signs of Pollution

a. If any of the triggering events occur, the permit registrant must complete the Tier 1 corrective actions below.

b. Triggering events include:

i. If qualifying sample results exceed any applicable statewide benchmark(s) in Table 4 of this permit or any sector-specific benchmarks in Schedule E; or

ii. Visual observations that show signs of pollution in the discharge as specified in Schedule B.12.a.vii.

c. Tier 1 corrective action and reporting must include:

i. Investigate the cause of the elevated pollutant levels, including conducting, commencing or planning for any needed pollutant source tracing activities. Ensure that known or discovered significant materials from previous operations are controlled, removed or otherwise not exposed.

ii. Review the SWPCP to ensure it is implemented; evaluate selection, design, installation and implementation of control measures for compliance with this permit and manufacturers' specifications. Evaluate whether any previous pollutant source isolation actions are complete and whether additional modifications are necessary.

iii. Evaluate any treatment measures, infiltration devices and mass reduction measures, including if they were properly installed, maintained and implemented and whether maintenance, corrections, or modifications are necessary.

iv. Tier 1 corrective action response(s) must be assessed and implemented at all substantially similar discharge points.

v. Tier 1 report - Summarize the following information in a Tier 1 report:

(1) The results of the site the assessment in Schedule A.11.c.i-iii.

(2) Corrective actions taken or planned to be taken, including date corrective action completed or expected to be completed. Where the permit registrant determines that corrective action is not necessary, provide the basis for this determination.

(3) Document whether SWPCP revisions are necessary.

vi. Tier 1 corrective action response may include documentation and implementation of industrial-specific checklists as provided by DEQ (see DEQ's industrial stormwater permits webpage for resources regarding source and operations controls, including the industrial-specific checklists), in addition to a Tier 1 report.

vii. The permit registrant must keep Tier 1 reports and industrial-specific checklists on site, and copies provided to DEQ or agent upon request.

d. Deadlines:

i. Implement Tier 1 corrective actions before the next storm event, if possible, or no later than 30 calendar days after receiving the monitoring results or completing the monthly visual inspection, whichever comes first. If the permit registrant fails to complete the corrective action within this timeframe, an explanation must be documented in the Tier 1 Report, and corrective actions must be completed as soon as practicable.

ii. Submit revised SWPCP in accordance with Schedule A.9., as needed.

e. Exemptions:
   i. Permit registrants subject to Tier 2 corrective action response, prior to completion of Tier 2, a Tier 1 corrective action response is not required when monitoring results exceed the benchmark for the same pollutant and monitoring point.
   ii. If stormwater monitoring results from properly maintained mass reduction measures installed at or above DEQ-approved designed storm capacity exceed benchmarks, the permit registrant is not required to complete a Tier 1 corrective action.

12. Tier 2 Corrective Action Response based on Geometric Mean Benchmark Evaluation:

a. Permit registrants subject to a Tier 2 installation deadline of June 30, 2021, or later in response to a Tier 2 corrective action response triggered under the previous permit, are not required to conduct Tier 2 evaluation for the same pollutant(s) and monitoring point(s) during this permit cycle.
b. Once a monitoring point triggers Tier 2 corrective action response for a pollutant, in subsequent full reporting years a Tier 2 geometric mean evaluation and Tier 2 corrective action response are not required more for the same pollutant(s) and monitoring point(s).
c. The permit registrant must use all qualifying samples collected during the full reporting year to calculate the geometric mean, except sample results from properly maintained mass reduction measures installed at or above DEQ-approved designed storm capacity.
d. If any of the triggering events occur, the permit registrant must complete the Tier 2 corrective actions below.
e. Triggering events include:
   i. The geometric mean of qualifying sample results collected at any monitoring point exceeds any applicable statewide benchmark(s) in Table 4, during each full reporting year (see Schedule D.3, Definitions).
   ii. For the pH benchmark, if 50 percent or more of qualifying sample results collected at any monitoring point during two full reporting years, are outside of the pH benchmark range.
f. Corrective action and Reporting must include:
   i. The permit registrant must submit a SWPCP appendix including: Tier 2 report, a Tier 2 mass reduction waiver request, or a Tier 2 background waiver request as described below.
   ii. Properly apply and size approved Tier 2 corrective action responses and mass reduction measures to all substantially similar discharge points.
   iii. Tier 2 Report
      (1) The Tier 2 report must include a proposal for active or passive treatment. This may include a combination of source removal, control and treatment measures, with the goal of achieving the benchmark(s) in this permit. The report must include the rationale for the selection of the control and treatment measures, the projected reduction of pollutant concentration(s) and the schedule for implementing these measures.
      (2) An Oregon registered professional engineer (PE) must design and stamp the portion of the SWPCP that addresses these control measures.
g. At discharge points where Tier 2 has been implemented:
   i. The permit registrant must take Tier 1 corrective actions in accordance with Schedule A.11.

ii. The permit registrant must sample substantially similar discharge points for the parameters that triggered Tier 2. For exceptionally large facilities where sampling at all substantially similar discharge points are infeasible, DEQ or agent may approve a modification.
iii. The permit registrant may request a monitoring waiver if the geometric mean of five consecutive qualifying sample results collected at any monitoring point is equal to or below the benchmark.

h. Exemptions:
i. Tier 2 Mass Reduction Waiver
(1) The permit registrant may request an exemption from the requirements in Schedule A.12.f.iii above by submitting a mass reduction waiver request if the permit registrant implements or has implemented volume reduction measures, such as low impact development practices, that will or has resulted in reductions of the mass load of pollutants in the discharge below the mass equivalent of the applicable statewide benchmark(s) in Table 4 of this permit.
(2) The mass reduction waiver request and the revised SWPCP must include data and analysis to support the rationale for the mass load reduction selection. The mass reduction waiver request must include a description of the measure(s), and a mass load analysis, and expected implementation date(s).
(3) An Oregon Professional Engineer (PE) or Oregon certified engineering geologist (CEG) must design and stamp the portion of the SWPCP that addresses the mass reduction measures.
ii. Tier 2 Background Waiver
(1) The permit registrant may request a background waiver exemption from the requirements in Schedule A.12.f.iii and A.12.h.i above if the permit registrant can sufficiently demonstrate the benchmark exceedance(s) is attributed solely to the presence of the pollutant(s) in natural background and is not associated with industrial activities at the site (see Schedule D.3, Definitions).
(2) The background waiver request must include the supporting rationale and any data collected by the facility or others (including peer-reviewed literature studies) which is used to demonstrate that the exceedances are due solely to background conditions that describe and quantify the levels of background pollutants in the discharge.

i. Deadlines:
i. The permit registrant must submit a proposed Tier 2 corrective action response to DEQ or agent no later than December 31 (six months after the end of the full reporting year that triggered Tier 2) unless DEQ or agent approved a later date.
ii. DEQ or agent will notify the permit registrant within 60 calendar days of receipt if Tier 2 corrective action is approved or denied.
iii. Tier 2 corrective action(s) or mass reduction measures(s) must be installed and implemented no later than September 30 (a year and nine months after the Tier 2 proposal corrective action response submittal deadline) unless DEQ or agent approved a later date. If the permit registrant changes the specifics of the corrective actions before implementation, revisions must be submitted and approved by DEQ or agent before implementation. Corrective action revisions do not change the Tier 2 implementation deadline.

iv. No later than 30 calendar days from implementing Tier 2 corrective actions or mass reduction measures, the permit registrant must inform DEQ or agent of the date of completion. This notification requirement also applies to facilities with an implementation deadline established in the previous permit.
v. No later than 30 calendar days from implementing all Tier 2 corrective actions or mass reduction measures, the permit registrant must submit all new and modified control measures and any associated changes to monitoring or discharge points within a SWPCP revision.

CATEGORY 5: 303(d) LIST IMPAIRMENT EXCEEDANCE RESPONSE

13. Water Quality-based Effluent Limits

a. The permit registrant must comply with water quality-based effluent limits for discharges to impaired receiving waters based on the EPA-approved Category 5: 303(d) list in effect at the time of permit assignment for pH, copper, lead, zinc, iron and E. coli that correspond to the specific pollutant(s) for which the water body is impaired when monitoring results trigger the events specified below.
b. The permit registrant must use all qualifying samples except sample results from properly maintained mass reduction measures installed at or above DEQ-approved designed storm capacity.
c. For E. coli and iron, if the triggering events occur, the permit registrant must comply with narrative water quality-based effluent limits.
d. For pH, copper, lead and zinc, if the triggering events occur, the permit registrant must comply with numeric water quality-based effluent limits at the pollutant concentrations in Table 5 as required by Schedule B.3.
e. Triggering events for pH, copper, lead and zinc:
   i. If two consecutive qualifying sample results collected at any monitoring point falls outside the basin-specific range for pH in Appendix A as required by Schedule B.3 at each monitoring point subject to impairment monitoring for which the water body is impaired for pH.
   ii. If two consecutive qualifying sample results collected at any monitoring point exceed the impairment concentrations for copper, lead, or zinc in Table 5, as required by Schedule B.3 subject to impairment monitoring.
   iii. If a qualifying sample result collected at any monitoring point is greater than two times the impairment concentrations in Table 5, as required by Schedule B.3 for copper, lead, or zinc subject to impairment monitoring.
f. When the impairment monitoring as required by Schedule B.3 escalates to a numeric water quality-based effluent limit based on triggering events above in Schedule A.13.e, the permit registrants must notify DEQ or agent no later than 30 calendar days from receiving the monitoring results. At such time, permit registrant may request up to a two-year compliance schedule in accordance with Schedule C.
g. The permit registrants must sample all discharge points subject to numeric water quality-based effluent limit, including those previously designated as substantially similar.
h. Permit registrants that discharge into Category 5: 303(d) listed receiving waters for fecal coliform or enterococcus must monitor stormwater discharge that correspond to the specific pollutant and report as specified in Table 6 and Table 7 applicable to impairment pollutants. DEQ may require

additional narrative water quality-based effluent limits if a public health risk is identified from the discharge.

i. Triggering event for E. coli:
   i. If two consecutive qualifying sample results collected at any monitoring point exceeds the impairment concentration for E. coli in Table 5A, as required in Schedule B.4 subject to impairment monitoring, the permit registrant must implement the following narrative water quality-based effluent limits:
      (1) Prevent rodents, birds, and other animals from feeding/nesting/roosting at the facility to the degree practicable. Nothing in this section shall be construed as allowing violations of any applicable federal, state or local statutes, ordinances, or regulations including the Migratory Bird Treaty Act;
      (2) Clean storm sewer lines, including catch basins, annually. Frequency of cleaning may be reduced, or decreased to catch basins, only after the first annual cleaning if the source of the E. coli exceedances are identified and the storm sewer lines are determined to not be a contributing factor. Flushed water and solids must be disposed of properly and not allowed to discharge;
      (3) If the source of the exceedances is not readily identified, perform a one-time dry weather inspection to identify and eliminate any sanitary sewer cross-connections or leaky sewer pipes;
      (4) Investigate and document any human dwelling encampments;
      (5) Install additional source or operational controls to address known sources of fecal contamination such as green waste, illegal dumping, dumpsters or garbage trucks and grease bins, and portable toilets as applicable; and if applicable,
      (6) Conduct and report biochemical speciation identification results to indicate non-fecal discharges.

j. Triggering event for iron:
   i. If two consecutive qualifying sample results collected at any monitoring point exceeds impairment concentration for iron in Table 5A, as required by Schedule B.4 subject to impairment monitoring, the permit registrant must implement the following narrative water quality-based effluent limits:
      (1) Demonstrate compliance with the erosion and sediment control narrative technology-based effluent limit in Schedule A.1.d. and stabilize all exposed soils that have potential to discharge;
      (2) Implement sweeping or other equivalent methods of cleaning sufficient to minimize the discharge of sediment and debris, but in no case less than once per calendar quarter when industrial activity has occurred at the site;
      (3) Clean storm sewer lines, including catch basins, annually. Frequency of cleaning may be reduced or decreased to catch basins only after the first annual cleaning if the source of the iron exceedances are identified and the storm sewer lines are determined to not be a contributing factor. Flushed water and solids must be disposed of properly and not allowed to discharge; and
      (4) Install additional source and operational controls to the extent practicable to address known sources of iron pollution such as permanent structures by removing, replacing or sealing corroding metal.

k. The permit registrant must complete the narrative water quality-based effluent limits no later than 90 calendar days from receiving monitoring results of the triggering event above in Schedule A.13.h and i and continue as required. SWPCP revisions documenting completion are required as specified in Schedule A.9.

l. If the permit registrant is unable to comply with the numeric or narrative water quality-based effluent limits, it is a permit violation and permit coverage may be revoked under this general permit and coverage required under an individual permit.

PERMIT COMPLIANCE

14. Authorization Under This Permit

a. Any noncompliance with any of the requirements of this permit constitutes a violation of the Clean Water Act and Oregon Revised Statues (ORS) 468B.025(2).

b. Corrective actions and compliance within the time periods specified for remedying noncompliance with the permit do not absolve the permit registrant of the initial underlying violations.

c. Where corrective action is triggered by an event that does not itself constitute a violation, such as a benchmark exceedance, there is no permit violation associated with the triggering event provided that the permit registrant must take the corrective action within the deadlines identified in this permit.

d. A new permit registrant with a new facility or an existing facility without a stormwater discharge permit must implement stormwater control measures to meet new technology and water quality-based requirements in Schedule A.1 – A.4, including applicable sector-specific requirements in Schedule E of this permit, no later than 90 calendar days after receiving permit coverage. Control measures that require capital improvements must be completed no later than two years after receiving permit coverage, unless DEQ or agent approved a later date.

e. The permit registrant must complete corrective action associated with monitoring exceedances.

SCHEDULE B

MONITORING REQUIREMENTS

1. **Numeric Effluent Limitations Based on Effluent Limitations Guidelines:** Permit registrants that engage in a "regulated activity" described in Table 3 below must monitor stormwater discharges for numeric technology-based effluent limits in accordance with concentrations in Schedule E. Numeric technology-based effluent limits are based on Industry-specific stormwater effluent limitations guidelines as established by EPA.

Table 3: Numeric Effluent Limitations Based on Effluent Limitations Guidelines

Regulated Activity	40 CFR Part/Subpart	Effluent Limit
Discharge from asphalt emulsion facilities (co-located SIC code only, 2951 covered under the 1200-A)	Part 443, Subpart A	See Schedule E.D.2
Discharge from material storage piles at cement manufacturing facilities	Part 411, Subpart C	See Schedule E.E.5
Discharge from hazardous waste landfills	Part 445, Subpart A	See Schedule E.K.3
Discharge from non-hazardous waste landfills	Part 445, Subpart B	See Schedule E.L.7
Discharge from coal storage piles at steam electric generating facilities	Part 423, Subpart E	See Schedule E.O.5
Discharge containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Part 449, Subpart S	See Schedule E.S.7

2. **Statewide Benchmarks:** The permit registrant must monitor stormwater discharges for the benchmarks in Table 4. In addition permit registrants must monitor for any sector-specific benchmarks in Schedule E. See Schedule B.7.c for exceptions.

Table 4: Statewide Benchmarks

Georegion	pH s.u.	Total Copper mg/L	Total Lead mg/L	Total Zinc mg/L	TSS mg/L	BOD mg/L	Total Phosphorus mg/L	E. coli organism/100 mL
Columbia Slough	5.5-9.0	0.017[2]	0.10[2]	0.24[2]	30	24	0.16	406[1]
Portland Harbor	5.5-9.0	0.015[2]	0.24[2]	0.24[2]	30			
Cascades	5.5-9.0	0.016	0.018	0.068	100			
Coastal	5.5-9.0	0.017	0.039[2]	0.086	100			
Columbia River Mainstem	6.0-9.0	0.023	0.21	0.35	100			
Eastern	5.5-9.0	0.031	0.077[2]	0.16	100			

Georegion	pH s.u.	Total Copper mg/L	Total Lead mg/L	Total Zinc mg/L	TSS mg/L	BOD mg/L	Total Phosphorus mg/L	E. coli organism/100 mL
Willamette Valley	5.5-9.0	0.015[2]	0.11[2]	0.14[2]	100			
Marine Waters	6.0-9.0	0.025	1.10	0.46	100			

[1]Columbia Slough dischargers are only subject to benchmark monitoring, no impairment monitoring
[2]Applied regional translators

3. **Discharges into Category 5: 303(d) listed waters for pH, copper, lead and zinc:** The permit registrant must monitor for pH, total copper, total lead and total zinc at all discharge points into impaired receiving waters that correspond to the specific pollutant(s) for which the water body is impaired. For discharges unable to meet the impairment concentrations for pH, total copper, total lead and total zinc monitoring requirements escalate to a numeric water quality-based effluent limit equal to the impairment monitoring concentrations. See Schedule A.13.e and Schedule C.

Table 5: Impairment Monitoring Concentrations and Numeric Water Quality-based Effluent Limits

Georegion	Total Copper mg/L	Total Lead mg/L	Total Zinc mg/L	pH s.u.
Columbia Slough	0.017[2]	0.017[2]	0.042[2]	Basin-Specific[1]
Portland Harbor	0.015[2]	0.017[2]	0.041[2]	
Cascades	0.016	0.006	0.021	
Coastal	0.017	0.017[2]	0.043	
Columbia River Mainstem	0.023	0.046	0.082	
Eastern	0.031	0.037[2]	0.070	
Willamette Valley	0.015[2]	0.027[2]	0.057[2]	
Marine Waters	0.0058	0.22	0.095	

[1]See Appendix A for basin-specific pH concentrations
[2]Applied regional translators

4. **Discharges into Category 5: 303(d) listed waters for E. coli and iron:** The permit registrant must monitor for E. coli and total iron at all discharge points into impaired receiving waters that correspond with the specific pollutant for which the water body is impaired. For discharges unable to meet the impairment concentrations for E. coli and total iron in accordance with Schedule A.13.h.i, the permit registrant must comply with narrative water quality-based effluent limits and continue monitoring discharge. Discharges into the Columbia Slough are not be subject to E. coli impairment monitoring.

Table 5A: Impairment Monitoring Concentrations

Impairment Pollutant	Impairment Concentrations
E. coli	406 organisms/100 mL
Total iron	10 mg/L

5. **Discharges into Category 5: 303(d) listed Receiving Waters for Fecal Coliform and Enterococcus:** The permit registrant must monitor for fecal coliform and enterococcus at all discharge points that correspond to the specific pollutant for which the water is impaired. There are no established impairment monitoring concentrations.

6. Pollutant Parameters

a. Benchmarks

i. The permit registrant must monitor for the applicable statewide benchmark pollutants identified in Table 4 of this permit. The permit registrant must also monitor for benchmarks identified in Schedule E for applicable industrial sector(s), for both primary industrial activity and any co-located industrial activities.

ii. If a discharge point is subject to a statewide benchmark(s) for the same parameter that also has a benchmark(s) in Schedule E, the statewide benchmark concentrations are applied as the target concentration.

iii. If discharge point is into the Pacific Ocean and a saltwater benchmark is established in Table 4 or Schedule E, the saltwater benchmark will be applied as the target concentration. For dischargers into estuarine waters, the more stringent benchmark between the freshwater and saltwater benchmarks are applied as the target concentration.

iv. When assigning coverage under the permit, DEQ or agent will specify and communicate benchmark monitoring requirements to the permit registrant.

b. Impairment Pollutants

i. The permit registrant must monitor for pH, total copper, total lead, total zinc, total iron and fecal indicator bacteria: E. coli, fecal coliform and enterococcus, pollutant(s) based on discharge into Category 5: 303(d) listed receiving waters that correspond to the specific pollutant(s) for which the water body is impaired.

ii. DEQ or agent will notify the permit registrant of additional impairment monitoring and the specific concentrations if required, based on new listings in the current EPA-approved Category 5: 303(d) list in effect at the time of permit assignment.

iii. For discharge point(s) required to monitor for impairments as required by Schedule B.3 and B.4 for a pollutant that has a benchmark, the permit registrant will not be subject to benchmark monitoring.

iv. DEQ or agent will specify and communicate impairment pollutant(s) monitoring requirement to the permit registrant.

(1) If the pollutant for which the waterbody is impaired is expressed in the form of an indicator or surrogate pollutant, the permit registrant must monitor for that indicator or surrogate pollutant.

(2) No monitoring is required for biological communities (biocriteria), including harmful algal blooms and aquatic weeds, where no pollutant including indicator or surrogate pollutants, is specified as causing the impairment; or temperature, or habitat and flow modifications.

v. The permit registrant must meet Schedule B.6.b.i unless the permit registrant provides monitoring data demonstrating that the pollutant(s) for which the waterbody is impaired are not present in the discharge.

c. Numeric Effluent Limits

i. DEQ or agent will specify and communicate monitoring requirements applicable to numeric effluent limit(s) to the permit registrant.

ii. For discharge point(s) required to monitor for a numeric water quality-based effluent limit, the permit registrant will not be subject to benchmark monitoring for the same pollutant.

iii. The permit registrant may not reduce monitoring requirements associated with substantially similar discharge points in accordance with Schedule B.7.c.ii for discharges with applicable effluent limits. The permit registrant must sample all discharge points subject to numeric effluent limit(s).

7. Sampling Procedures

a. Grab Sampling

i. For each discharge point monitored, collect a grab or composite sample of stormwater discharges. Discharges from discharge points with shallow overland/sheet flows may need to be concentrated to obtain a sample.

ii. Composite samples may be used as an alternative to grab sampling, except when monitoring for pH, bacteria or oil and grease. Composited samples must be collected from the same storm event. The permit registrant may not switch between grab sampling to composite sampling during a full reporting year without prior approval from DEQ or agent.

iii. The permit registrant must perform all monitoring using proper sampling techniques in accordance Schedule F, Section C3.

b. Representative Sample

i. Samples must be representative of the discharge.

ii. Monitoring points must be identified in the SWPCP.

iii. Stormwater discharges regulated by this permit include stormwater run-on that commingles with stormwater discharges associated with industrial activity.

iv. If discharges authorized by this permit commingle with discharges authorized under a separate NPDES permit, any required sampling of the authorized discharges must be performed at a point before they mix with other waste streams, to the extent practicable. When combined flows are unavoidable, sampling must include all permitted parameters.

v. Authorized non-stormwater discharges under Condition I.6 of this permit must only be sampled when commingled with stormwater discharges associated with industrial activity.

vi. Stormwater flows may combine into a common on-site treatment facility; discharges in excess of the design storm capacity must be sampled if the minimum monitoring frequency has not been achieved.

vii. The permit registrant shall, to the extent practicable, sample stormwater associated with industrial activity as it flows off-site before it combines with stormwater, wastewater or other waste permitted streams, or from areas outside the facility, or mixes with any surface water.

c. Multiple Discharges - Each discharge point must be monitored unless:

i. Discharge point serves an area without exposure of stormwater to industrial activities.

ii. Discharge point has effluent that is substantially similar to the effluent(s) of a monitored discharge point and the same BMPs are implemented and maintained at the substantially similar discharge points or drainage areas that lead to the discharge points. Substantially similar effluent(s) are discharges from drainage areas serving comparable activities where the discharges are expected to be similar in composition. The determination of substantial similarity of effluent(s) must be based on past monitoring data or an analysis supporting that the discharge points are substantially similar. The supporting data or analysis must be included in the SWPCP. This provision does not apply to discharge point(s) subject to a numeric effluent limit.

iii. Discharge points from approved mass reduction measures that reduced the mass of pollutants at or above DEQ-approved design storm capacity. For mass reduction measures installed during previous permit cycles, the permit registrant must comply with Schedule A.6.

d. Timing - The discharge must be monitored during the first 12 hours of the discharge event, which is a storm event or snowmelt resulting in an actual discharge from a site. If it is not practicable to collect the sample within this period, collect the sample as soon as practicable and provide documentation with the Discharge Monitoring Report why it was not practicable to take samples within the first 12 hour period. The permit registrant is not required to sample outside of regular business hours of operation or during unsafe conditions.

e. Sampling for pH - pH sampling must be done by either measuring the pH directly in the flow, or analyzing the sample within 15 minutes of sample collection.
   i. The permit registrant must perform pH monitoring with a properly calibrated pH meter.
   ii. The permit registrant must follow pH meter manufacturers' specifications and keep meter in good working order.
   iii. pH paper may not be used to comply with the monitoring requirements established in this permit.

f. Monitoring Frequency - The permit registrant must monitor stormwater discharge according to the frequency described in Table 6, unless DEQ or agent grant a monitoring waiver or approve a monitoring variance.
   i. Qualifying stormwater samples must be collected at least 14-days apart.
   ii. The permit registrant may collect more samples than the minimum frequency described below, but must report this additional data in the Discharge Monitoring Report. All qualifying samples must be included to establish a monitoring waiver in Schedule B.9 or to conduct the geometric mean evaluation in Schedule A.12 of this permit, except from approved mass reduction measures that reduced the mass of pollutants at or above DEQ-approved design storm capacity. For mass reduction measures installed during previous permit cycles, the permit registrant must comply with Schedule A.6.

g. Exceedance of Numeric Effluent Limit – The permit registrant must conduct follow-up monitoring of any pollutant that exceeds the numeric effluent limit(s) no later than 30 calendar days (or during the next storm event should none occur within 30 calendar days) of receiving the monitoring results. If the follow-up monitoring exceeds the numeric effluent limit, the permit registrant must monitor the discharge four times per year until compliance with the numeric effluent limit is achieved. Once monitoring achieves the effluent limit concentration, semi-annual frequency may resume.

Table 6: Monitoring Frequency

Pollutant Category	Minimum Frequency
All applicable statewide benchmarks in Table 4, any applicable sector-specific benchmarks in Schedule E and any impairment pollutants	Four times per year, two samples between January 1 and June 30, and two samples between July 1 and December 31
Any applicable numeric effluent limitations	Two times per year, One sample between January 1 and June 30, and one sample between July 1 and December 31 (unless exceed numeric effluent limit, four times per year)
Any wasteload allocations or additional schedules in EPA-approved TMDL	As specified in the TMDL

8. Monitoring Variance

a. If the permit registrant missed a sample due to no storm events of sufficient magnitude to produce run-off during regular business hours of operation and safe conditions, a monitoring variance must be requested. Variance requests are required to be submitted on February 15 and August 15 with the Discharge Monitoring Report for each missed sample. A "no discharge" claim monitoring variance request must include supporting data and analysis demonstrating why there was no discharge for monitoring to occur. If DEQ or agent has evidence contradicting the information in the permit registrant's monitoring variance request, failure to complete the required monitoring is cited as a permit violation. Supporting data must be included in the request, and may include:

i. State or federal authorities declared the year a drought year.
ii. Demonstration that rainfall in the area where the permit registrant's facility is located was 20 percent or more below the three-year average rainfall for that area.
iii. Photo documentation, rain gauge data, detention basin storage volumes, storm infiltration rate or retention capacity.

9. Monitoring Waiver for Benchmarks and Impairment Pollutant Monitoring

a. A monitoring waiver may be requested from DEQ or agent for the following circumstances:

i. When the benchmark concentrations have been achieved during a full reporting year, as demonstrated by:
(1) The geometric mean of five consecutive qualifying sample results collected at any monitoring point is equal to or below the applicable statewide or sector-specific benchmarks; or
(2) For pH, qualifying sample results collected at any monitoring point are within the range for five consecutive readings; or
(3) For parameters and discharge point(s) that triggered Tier 2 during this permit cycle, after the corrective action has been implemented and qualifying sample results during a full reporting year achieve the conditions above in Schedule A.8.a.i.(1) or (2).

ii. When impairment monitoring results collected at any monitoring point indicate non-detect for four consecutive qualifying samples, or after two full reporting years all qualifying sample results collected at any monitoring point are equal or below the impairment monitoring

concentrations in Table 5 and Table 5A. For pH impairment monitoring after two full reporting years all qualifying sample results collected at any monitoring point are within the basin-specific pH range as specified in Appendix A, referenced in Table 5.

iii. If the exceedance(s) of a benchmark or impairment pollutant is attributed solely to the presence of the pollutant(s) in background and is not associated with industrial activities at the site. The permit registrant may submit a background waiver report to DEQ or agent that describes the investigation and analysis to demonstrate that the exceedances is due to background conditions. The report must include any data collected by the permit registrant or others (including peer-review literature studies) that describe the levels of background pollutant in the discharge.

iv. If a facility is inactive and unstaffed and no industrial materials or activities are exposed to stormwater, the permit registrant is not required to conduct monitoring for the remainder of the permit term.

(1) The permit registrant must provide documentation with the Discharge Monitoring Report indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to stormwater, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii).

(2) The permit registrant must sign and certify the statement in accordance with D8 in Schedule F of this permit.

b. The permit registrant's monitoring waiver request must include documentation to support the request. Monitoring waivers may be requested for individual parameters at each monitoring point.

c. DEQ or agent will notify the permit registrant if a monitoring waiver is approved or denied. Until approval of the monitoring waiver is received, the permit registrant must continue monitoring.

d. Approved monitoring waivers are valid until the last full reporting year of the permit term, which begins on July 1, 2025.

e. There is no reduction in monitoring allowed for:

i. Visual observations, unless the site is inactive or unstaffed and there are no industrial materials or activities exposed to stormwater and the permit registrant meets requirements in Schedule B.9.a.vii of this permit;

ii. The first and last full reporting year of the permit cycle;

iii. Impairment monitoring subject to a compliance schedule in Schedule C; and

iv. Monitoring for numeric effluent limits.

f. Reinstatement of Monitoring

i. It is the responsibility of the permit registrant to reinstate discharge monitoring under any of the following circumstances or if notified by DEQ or agent:

(1) Prior monitoring used to establish the monitoring waiver was improper or sampling results were incorrect;

(2) Changes to site conditions are likely to affect stormwater discharge characteristics, such as change in SIC code, process change or increased pollutants sources exposed to stormwater;

(3) Additional monitoring occurs and the sampling results exceed benchmark(s) or impairment monitoring concentrations in Table 5 or Table 5A;

(4) On July 1, 2025, for benchmark and impairment monitoring waiver approvals; or

(5) For inactive or unstaffed sites, the facility becomes active or staffed, or industrial materials or activities become exposed to stormwater.

g. Revocation of Monitoring Waiver
   i. DEQ or agent may revoke the monitoring waiver based on any of the above conditions in Schedule B.9.f.i.1-5 or in response to an inspection, corrective action, or upon discovery of the discharge which has caused or contributed to a water quality standard exceedance. DEQ or agent will notify the permit registrant that the monitoring waiver is revoked.

10. **Additional Monitoring-** DEQ or agent may notify the permit registrant of additional discharge monitoring requirements. Any such notice will state the reasons for the additional monitoring, monitoring location and pollutant to be monitored, frequency and period of monitoring, sample types and reporting requirements.

11. **For a new permit registrant discharging to Clackamas River, McKenzie River above Hayden Bridge (River Mile 15), and North Santiam River** under OAR 340-041-0350 - For potential or existing dischargers that did not have a permit prior to January 28, 1994, and existing dischargers that have a NPDES stormwater discharge permit but request an increased load limitation.
    a. No later than 180 calendar days after obtaining permit coverage, the permit registrant must submit to DEQ a monitoring and water quality evaluation program. This program must be effective in evaluating the in-stream impacts of the stormwater discharge as required by OAR 340-041-0350(7)(a).
    b. No later than 30 calendar days from DEQ approval, the permit registrant must implement the monitoring and water quality evaluation program.

INSPECTIONS

12. **Monthly Inspection Requirements**
    a. The permit registrant must inspect areas where industrial materials or activities are exposed to stormwater and areas where stormwater control measures, including infiltration devices, mass reduction measures, structures, catch basins, and treatment facilities are located. Inspections must include an evaluation of control measures consistent with the SWPCP requirements. Inspections must include observations of all discharge points as well as the following:
       i. Industrial materials, residue, or trash that may have or could come into contact with stormwater;
       ii. Leaks or spills from industrial equipment, drums, tanks, and other containers;
       iii. Offsite and internal tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
       iv. Tracking or blowing of raw, final, or waste materials that results in exposure of stormwater falling on the site;
       v. Evidence of, or the potential for, pollutants entering the drainage system;
       vi. Evidence of pollutants discharging to receiving waters at all discharge point(s);
       vii. Visual observation for the presence of floating and suspended solids, color, odor, foam, visible oil sheen, or other obvious indicators of pollution in the stormwater discharge at all discharge

point(s), including discharge points that have been authorized to be substantially similar in accordance with Schedule B.7.c.ii; and

viii. Stormwater control measures, including treatment, infiltration devices and mass reduction measures, to ensure they are functioning properly, and maintained on designed schedules.

b. Inspections must be conducted by personnel that have completed employee training and are familiar with all aspects of the SWPCP.
c. Conduct visual inspections at the site on a monthly basis when the facility is in operation. The permit registrant must perform visual observations for signs of pollution as required by Schedule B.12.a.vii above during a discharge event if one occurs during the month, regardless whether the monthly site inspection has already occurred.
d. For exceptionally large facilities where monthly inspections of all areas or visual observation at all substantially similar discharge points are infeasible, DEQ or agent may approve a modified inspection frequency.
e. Conduct visual observations of a sample in a clean, colorless glass or plastic container in well-lit area during regular business hours of operation and safe conditions.
f. The permit registrant's visual observations sample collection does not need to conform to sample collection requirements in Section D8 within Schedule F, but must be representative of the stormwater discharge.
g. Immediately take all reasonable steps to temporarily minimize or prevent the discharge of pollutants until permanent corrective action is complete.
h. Conduct all corrective action required as a result of inspection and visual observation.
i. Document monthly inspections in an inspection report that is retained on-site and submitted to DEQ or agent upon request. The inspection report must include:
    i. The inspection date and time;
    ii. The name(s) of inspector(s);
    iii. Control measures and treatment facilities needing cleaning, replacement, maintenance, reconditioning or repair;
    iv. The condition of the drainage and conveyance system and need for maintenance;
    v. Previously unidentified sources of pollutants;
    vi. Stormwater discharge visual observations, (Tier 1 report is required if visual observation shows evidence of stormwater pollution listed in Schedule B.12.a.vii.);
    vii. Nature of the discharge; whether caused by snow or rain; and
    viii. Any corrective action response, source control or maintenance taken or scheduled to remedy problems found.

REPORTING AND RECORDKEEPING REQUIREMENTS

13. Reporting Monitoring Data

a. The permit registrant must submit all monitoring results required in this permit web-based electronically, when directed by DEQ or agent. Paper submittal must be on DEQ-approved Discharge Monitoring Report (DMR) forms.
    i. DMRs are due quarterly as specified in Table 7, as required in Schedule B.14 for samples taken during the preceding calendar quarter.

ii. Reports must include laboratory results from the testing laboratory, including minimum detection level, Quality Assurance/Quality Control and analytical methods for the parameters analyzed.
iii. The permit registrant must submit pH field notes and chain-of-custody.
iv. Report non-detections as directed by DEQ. In calculating the geometric mean, use one-half of the detection level for non-detections.
v. Report all sample results from monitoring points.
vi. The permit registrant must sign and certify submittals of Discharge Monitoring Reports, any additional reports, and other information in accordance with the requirements of Section D8 within Schedule F of this permit.

b. The permit registrant must report Tier 2 geometric mean benchmark evaluation on the DMR due on August 15 after each full reporting year.
c. Electronic Submission
i. When directed by DEQ, the permit registrant must submit sampling results and lab and field reports and other information required by Schedule B using DEQ's web-based electronic system.
ii. A permit registrant may apply for a waiver from web-based electronic reporting. The request must be submitted on a DEQ-approved form and a fee may be assessed.
iii. Permit registrants in agents' jurisdictions will continue to submit DEQ-approved DMR forms in paper format until notified by DEQ and agent of phased electronic submission requirements.

14. Discharge Monitoring Reports Submission:
The permit registrant must submit all data by required Discharge Monitoring Report due dates. Failure to submit a DMR is a violation, even if there was no discharge during a quarter.

Table 7: DMR Submission Deadlines

Reporting Quarters	Months	DMR Due Dates
1st	July-September	November 15
2nd	October-December	February 15[1]
3rd	January-March	May 15
4th	April-June	August 15[1]

[1]Variance request must be submitted semi-annually, as applicable

15. Exceedance Report for Numeric Effluent Limits - If follow-up monitoring pursuant to Schedule B.7.g of this permit exceeds a numeric effluent limit, the permit registrant must submit an Exceedance Report to DEQ or agent no later than 30 calendar days after receiving the monitoring results. The report must include the monitoring data from this monitoring event and the preceding monitoring event(s), an explanation of the contributing factors that resulted in the exceedance, and what the permit registrant has done to correct the violation or intends to do if the corrective actions are not complete.

16. **Record Keeping Procedures** – The permit registrant must record and maintain the following information at the facility. All records must be retained by the permit registrant for at least three years and made available to DEQ, agent or local municipality upon request.
    a. A copy of the SWPCP and any revisions, including revised stamped SWPCP from Tier 2 corrective action;
    b. A copy of this permit;
    c. DEQ's notice of permit coverage under the current permit term;
    d. Documentation of maintenance and repairs of control measures, treatment systems and mass reduction measures;
    e. Mass reduction measures re-certification as required by Schedule A.6;
    f. Tier 1 reports, including industrial-specific checklist(s);
    g. All inspection reports;
    h. Documentation of any benchmark exceedance and corrective action taken;
    i. All copies of any reports or corrective action submitted to DEQ or agent;
    j. Spills or leaks of significant materials (See Schedule D.3, Definitions) that impacted or had the potential to impact stormwater or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature;
    k. Documentation to support a claim that a facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections;
    l. Discharge Monitoring Reports, laboratory reports, pH calibration and field sampling notes;
    m. Compliance schedule reports as specified in Schedule C;
    n. Numeric limits exceedance reports;
    o. Water Quality Standards Report; and
    p. Employee education materials and records of training.

17. Summary of Reporting Requirements and Submittal Date

The permit registrant must submit all reports through a web-based electronic system when directed by DEQ and agent.

Table 8: Reporting Requirements

Permit Condition	Permit Schedule	Report Required	Due Date
Must not cause or contribute to a violation of instream water quality standard	Schedule A.3	Water Quality Standards Corrective Action Report	No later than 30 calendar days after receiving monitoring results
Certification of mass reduction measures installed during previous permit cycles	Schedule A.6	Stamped certification	December 31, 2021
SWPCP submission	Schedule A.9	SWPCP revision	No later than 30 calendar days after the completion of modification or as requested by DEQ or agent
Sample results exceed applicable statewide or sector-specific benchmarks or visual observations show signs of pollution	Schedule A.11	Tier 1 Report	No later than 30 calendar days after receiving monitoring results; Retain on-site and submit upon request
Geometric mean exceeds statewide benchmarks in full reporting year (July1 – June 30)	Schedule A.12	Tier 2 Report	No later than December 31, six months after June 30 (date triggered)
		Tier 2 Mass Reduction Waiver	
		Tier 2 Background Waiver	
Confirmation of Tier 2 implementation	Schedule A.12.i.iv	Notification confirming Tier 2 proposal installation	No later than 30 calendar days of implementation
Sample results continue to exceed benchmark for Tier 2 parameters post-implementation	Schedule A.11.c.v	Tier 1 Report	No later than 30 calendar days after receiving monitoring results; Retain on-site and submit upon request
Trigger numeric water quality-based effluent limit	Schedule A.13.e	WQBEL notification and compliance schedule request	No later than 30 calendar days after receiving monitoring results
Submission of monitoring results after the preceding calendar quarter	Schedule B.14	Discharge Monitoring Report	No later than February 15, May 15, August 15, and November 15
Sample results exceed numeric effluent limitations	Schedule B.15	Exceedance Report	No later than 30 calendar days after receiving monitoring results and increase monitoring frequency

SCHEDULE C

COMPLIANCE SCHEDULES

1. **Numeric Water Quality-based Effluent Limits:** If the permit registrant is subject to numeric water quality-based effluent limits as required by triggering events in Schedule A.13.e, unable to immediately comply with applicable effluent limits, and has requested a compliance schedule as specified in Schedule C.2., the permit registrant must comply with the following compliance schedule milestones in Table 9. The permit registrant is allowed a compliance schedule when site modifications to implement a combination of source control and treatment are necessary to achieve numeric water quality-based effluent limit. Final numeric water quality-based effluent limits become enforceable when consistent compliance is achieved, or a maximum of 24 months following the trigger event specified in Schedule A.13.e, whichever occurs first.
   a. Failure to comply with the final compliance schedule within 24 months following the qualifying event specified in Schedule A.13.e is a permit violation.
   b. Consistent compliance with the effluent limits for this section shall be demonstrated by achieving compliance with the applicable effluent limit(s) for one full reporting year, unless the permit registrant provides, and DEQ or agent accepts, a rationale for why the monitoring data is not representative of anticipated future performance.

2. **Compliance Schedule Milestones:** A permit registrant will be allowed a compliance schedule if monitoring results indicate that stormwater discharges do not meet numeric water quality-based effluent limit concentrations in Table 5 that correspond to the specific pollutant(s) for which the water body is impaired. The permit registrant must request a compliance schedule from DEQ or agent and shall carry out the actions by the specified due dates below.

Table 9: Compliance Schedules

Action	Due Date[1]
1. Identify the source of contamination in stormwater discharge and determine if source control, treatment, or both will be used to achieve compliance with the applicable numeric effluent limit(s).	Within 6 months
2. Submit plans for structural modification of existing facilities or the construction of new facilities consistent with the determination in Action 1.	Within 12 months
3. Commence modifications/installations as specified in Action 2.	Within 18 months
4. Comply with final effluent limits and submittal of a revised SWPCP	Within 24 months

[1] In relation to the date of the triggering events specified in Schedule A.13.e occurred

3. **Status Reports:** Permit registrant shall submit status reports to DEQ or agent within 14-days after each action due date listed in Table 9. Status reports shall include the following information:
   a. A status summary of the progress towards completing the actions specified in Table 9, including any relevant documentation or findings necessary to demonstrate compliance with the applicable due dates.
   b. Confirmation of completion of the required action or a communication with DEQ or agent that the permit registrant will be delayed in implementing the required action. Notifications of a delay must include reasons for the delay and a revised schedule for ensuring compliance with the final

due date to comply with the numeric water quality-based effluent limits within 24 months. DEQ or agent will notify the permit registrant no later than 30 calendar days from receipt if the delay is approved or denied. An extension of the final compliance date is prohibited.

SCHEDULE D

SPECIAL CONDITIONS

1. Releases in Excess of Reportable Quantities. This permit does not relieve the permit registrant of the reporting requirements of 40 CFR §117 Determination of Reportable Quantities for Hazardous Substances and 40 CFR §302 Designation, Reportable Quantities, and Notification.

2. Availability of SWPCP and Monitoring Data. The Stormwater Pollution Control Plan and stormwater monitoring data must be made available to government agencies responsible for stormwater management in the permit registrant's area.

3. Definitions

For the purpose of this permit:

a. Arid areas means portion of the state where annual precipitation averages range from 0 to 10 inches.
b. Background pollutants include substances that are naturally occurring in soils or groundwater. Background pollutants do not include legacy pollutants from earlier activity on the site, or pollutants in run-on from neighboring sources that are not naturally occurring.
c. Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the state." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. See 40 CFR 122.2.
d. Capital Improvements means the following improvements that require capital expenditures:
    i. Removal or permanent isolation from exposure to stormwater of significant materials left from previous activities on the site.
    ii. Treatment best management practices including to settling basins, oil/water separation equipment, grassy swales, detention/retention basins, and media filtration devices.
    iii. Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
    iv. Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of stormwater to treatment systems.
    v. Roofs and appropriate covers for manufacturing areas.
    vi. Volume reduction measures, including low impact development control measures.
e. Co-located Industrial Activities means any industrial activities, excluding the primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i - ix, xi) and identified in Table 1: Sources Covered of the permit. An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations or identified in Table 1.
f. Columbia Slough means the waterway in northern Multnomah County flowing roughly parallel to the Columbia River between Fairview Lake and the Willamette River. *Confirm discharges to Columbia Slough by contacting the cities of Portland or Gresham.*

g. Compliance Schedule means a schedule of remedial measures, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with a water quality-based effluent limit. See *Schedule of compliance* in 40 CFR 122.2.
h. Control Measure means any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the state.
i. Discharge Point means the location where stormwater flows leave the facility and enters waters of the state directly or indirectly through a separate storm sewer system, including the location where any sheet flow leaves a facility.
j. Existing Discharger means an operator applying for coverage under this permit for discharges authorized previously under an NPDES general or individual permit.
k. Feasible means technologically possible and economically practicable and achievable in light of best industry practices.
l. Full reporting year is from July 1 of one year to June 30 of the following year (for example, the 2021/2022 full reporting year is from July 1, 2021, through June 30, 2022).
m. Hazardous Substances is defined in 40 CFR §302 Designation, Reportable Quantities, and Notification.
n. High Quality Waters means those waters that meet or exceed levels that are necessary to support the propagation of fish, shellfish, and wildlife; recreation in and on the water; and other designated beneficial uses. Waters identified on the Category 5: 303(d) listed waters as not meeting applicable state water quality standards for a given pollutant are not high quality waters.
o. Immediately means in the context of repair or maintenance to control measures, the day you identify that a control measure needs to be maintained, repaired, or replaced, you must take all reasonable steps to minimize or prevent the discharge of pollutants until you can implement a permanent solution. However, if you identify a problem too late in the work day to initiate action, you must perform the action the following work day morning.
p. Impaired Waters means those waters identified by a State or EPA pursuant to Section 303(d) (Category 5) of the Clean Water Act as not meeting applicable State water quality standards for one or more pollutants. This may include both waters with approved TMDLs (Category 4), and those for which a TMDL has not yet been approved.
q. Industrial Activity means the categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi) or activities identified by DEQ as a significant contributor of pollutants, such as Table 2.
r. Industrial-specific Checklists means technical assistance document for optional use to assist permit registrants with a Tier 1 corrective action response comprised of universal and sector-specific source and operational control measures for major industrial groups. When implemented will assist in reducing sources of pollution exposed to stormwater. The permit registrant is expected to complete the universal checklists designed for all industrial sectors covered under this permit as well as sector-specific checklists applicable to SIC codes industrial activities at the site.
s. Industrial Stormwater means stormwater discharge associated with industrial activity (40 CFR 122.26(b)(14)).
t. Material Handling Activities include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.

u. Minimize means reduce or eliminate, or both, to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.
v. Monitoring Point for the purpose of this permit, means the location where stormwater discharge is sampled.
w. New Discharger means a facility from which there is or may be a discharge, that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, which is not a new source, and which has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.
x. New Source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced: after promulgation of standards of performance under section 306 of the CWA which are applicable to such source, or after proposal of standards of performance in accordance with section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.
y. No Exposure means all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. See 40 CFR 122.26(g).
z. Operator means any entity with a stormwater discharge associated with industrial activity that meets either of the following two criteria:
    i. The entity has operational control over industrial activities, including the ability to modify those activities; or
    ii. The entity has day-to-day operational control of activities at a facility necessary to ensure compliance with this permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by this permit).
aa. Outstanding Resource Waters means those waters designated by the Environmental Quality Commission where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values or where special water quality protection is needed to maintain critical habitat areas.
bb. Portland Harbor means the study area of EPA's Portland Harbor Superfund site located in the Lower Willamette River from approximately river mile 1.9 to 11.8.
cc. Primary industrial activity means any activities performed on-site that are (1) identified by the facility's primary SIC code; or (2) included in the narrative descriptions of 122.26(b)(14)(i), (iv), (v), or (vii), and (ix). Narrative descriptions in 40 CFR 122.26(b)(14) identified above include: (i) activities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (iv) hazardous waste treatment storage, or disposal facilities including those that are operating under interim status or a permit under subtitle C of the Resource Conservation and Recovery Act (RCRA); (v) landfills, land application-sites and open dumps that receive or have received industrial wastes; (vii) steam electric power generating facilities; and (ix) sewage treatment works with a design flow of 1.0 mgd or more.
dd. Qualifying samples are samples that are collected at least 14-days apart, are analyzed using approved methods (see Schedule F), and satisfy the Quality Assurance/Quality Control requirements of the method.
ee. Regular business hours of operation means those timeframes when the facility is engaged in its primary production process, with personnel that have completed the required SWPCP training.

ff. Run-on sources of stormwater means stormwater that drains from land located upslope or upstream from the regulated facility.

gg. Semi-arid areas means where annual rainfall averages range from 10 to 20 inches.

hh. Significant Materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; TSCA, fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with stormwater discharges.

ii. Storm event means a precipitation event that results in a measurable amount of precipitation to results in an actual discharge (except otherwise specified in Schedule E).

jj. Stormwater means stormwater runoff, snow melt runoff and surface runoff drainage. See 40 CFR 122.26(b)(13).

kk. Stormwater Discharge Associated with Industrial Activity, the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under Part 122. For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, state, or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14). The term also includes those facilities designated under the provisions of 40 CFR 122.26(a)(1)(v). See 40 CFR 122.26(b)(14)

ll. Stormwater Conveyance means a sewer, ditch, or swale that is designed to carry stormwater; a stormwater conveyance may also be referred to as a storm drain or storm sewer.

mm. Total Maximum Daily Load (TMDL) is the sum of the individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources and background. See OAR 340-041-0002(65) and OAR 340-042-0030(15).

nn. Treatment Measures mean Best Management Practices that are intended to remove pollutants from stormwater. These measures include: settling basins, oil/water separation equipment, detention/retention basins, media filtration devices, electrocoagulation, constructed wetlands and bioswales.

oo. Wasteload Allocation (WLA) means the portion of receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation. See OAR 340-041-0002(67).

4. Local Public Agencies Acting as DEQ's Agent

DEQ has entered into agreement which authorize certain local governments and special districts to act as its agent in implementing portions of this permit. The agent conducts the following activities, including: application and SWPCP review, inspections, monitoring data review, stormwater and wastewater monitoring, and verification and approval of no-exposure certifications. Where DEQ has entered into such an agreement, DEQ or agent will notify the permit registrant of where to submit no-exposure certifications, and other notifications or correspondence associated with this permit.

5. Terminating Permit Coverage

a. The permit registrant must meet the following conditions:
   i. Cease all industrial operations and stormwater discharge associated with industrial activity as defined in 40 CFR 122.26(b)(14); or
   ii. Obtain NPDES coverage under an individual permit; or
   iii. A new owner or operator legally acquires responsibility of property or industrial activity.
   iv. Conditions for termination under sectors G, H and I have been met, as applicable.

b. To terminate permit coverage, registrants must:
   i. Complete and submit a Notice of Termination to DEQ or agent for approval.
   ii. Resolve all outstanding invoices and compliance issues.

c. Until termination has been approved by DEQ, the permit registrant must comply with all permit conditions.

SCHEDULE E

SECTOR-SPECIFIC REQUIREMENTS

1. The permit registrant must meet the sector-specific requirements in Schedule E associated with their primary industrial activity and any co-located industrial activities, as defined in Schedule D of this permit. The sector-specific requirements apply to the areas of the facility where the sector-specific activities occur.
2. These sector-specific requirements in Schedule E are in addition to the requirements in Schedule A, Schedule B, and Schedule C of this permit.
3. Pacific Ocean discharges will use saltwater benchmarks as the target concentrations, when one is established in this Schedule.
4. Estuarine waters discharges, the more stringent benchmark between the freshwater and saltwater benchmarks are applied as the target concentration. If no saltwater benchmark is listed, the freshwater benchmark is applied.
5. If a discharge point is subject to a statewide benchmark(s) for the same parameter that also has a benchmark(s) in Schedule E, the statewide benchmark supersedes Schedule E concentrations. Other hardness-dependent metals concentrations are calculated in Table 10 using median hardness for each georegion.

Table 10: Metals Concentrations

Georegion	Median Hardness mg/L	Total Cadmium[1] mg/L	Total Chromium III[1] mg/L	Total Nickel[1] mg/L	Total Selenium[2] mg/L	Total Silver[1] mg/L
Cascades	12.9	0.00039	0.34	0.083	0.013	0.00011
Coastal	29.75	0.0010	0.67	0.17	0.013	0.00047
Columbia River Mainstem	63.8	0.0024	1.2	0.32	0.013	0.0017
Columbia Slough	29.4	0.00099	0.66	0.17	0.013	0.00046
Eastern	53.3	0.0019	1.1	0.28	0.013	0.0013
Portland Harbor	28.55	0.00095	0.65	0.16	0.013	0.00044
Willamette Valley	41.9	0.0015	0.88	0.22	0.013	0.00085

[1]See Endnote E and Endnote F equations for hardness-based metals, Table 30: Aquatic Life Water Quality Criteria
[2] DEQ Memorandum, Implementations Instruction for Selenium

6. Table E-1 below identifies SIC codes and activities descriptions that are required to meet the sector-specific requirements in Schedule E of the permit.

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
SECTOR A: TIMBER PRODUCTS	
2421	General Sawmills and Planing Mills
2411	Logging
2426	Hardwood Dimension and Flooring Mills
2429	Special Product Sawmills, Not Elsewhere Classified
2431-2439 (except 2434, see Sector W)	Millwork, Veneer, Plywood, and Structural Wood
2448	Wood Pallets and Skids
2449	Wood Containers, Not Elsewhere Classified
2451, 2452	Wood Buildings and Mobile Homes
2491	Wood Preserving
2493	Reconstituted Wood Products
2499	Wood Products, Not Elsewhere Classified
2441	Nailed and Lock Corner Wood Boxes and Shook
SECTOR B: PAPER AND ALLIED PRODUCTS	
2631	Paperboard Mills
2611	Pulp Mills
2621	Paper Mills
2652-2657	Paperboard Containers and Boxes
2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
SECTOR C: CHEMICALS AND ALLIED PRODUCTS	
2873-2879 (excluding 2874)	Agricultural Chemicals
2812-2819	Industrial Inorganic Chemicals
2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances; and Biological Products, Except Diagnostic Substances
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
2861-2869	Industrial Organic Chemicals
2891-2899	Miscellaneous Chemical Products
3952 (limited to list of inks and paints)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
2911	Petroleum Refining
SECTOR D: PETROLEUM REFINING AND RELATED INDUSTRIES Asphalt Paving Mixtures and Blocks, Primary SIC code 2951, Covered by 1200-A General Permit	
2951 (co-located SIC code only), 2952	Asphalt Paving and Roofing Materials
2992, 2999	Miscellaneous Products of Petroleum and Coal
SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS Ready-Mixed Concrete, Primary SIC code 3273, Covered by 1200-A General Permit	
3251-3259	Structural Clay Products
3261-3269	Pottery and Related Products
3271-3275 (3273 co-located SIC code only)	Concrete, Gypsum and Plaster Products
3211	Flat Glass
3221, 3229	Glass and Glassware, Pressed or Blown
3231	Glass Products Made of Purchased Glass
3241	Hydraulic Cement
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
SECTOR F: PRIMARY METALS	
3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
3321-3325	Iron and Steel Foundries
3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals
3363-3369	Nonferrous Foundries (Castings)
3331-3339	Primary Smelting and Refining of Nonferrous Metals
3341	Secondary Smelting and Refining of Nonferrous Metals
3398, 3399	Miscellaneous Primary Metal Products
SECTOR G: METAL MINING (ORE MINING AND DRESSING)	
1021	Copper Ore and Mining Dressing Facilities
1011	Iron Ores
1021	Copper Ores

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
1031	Lead and Zinc Ores
1041, 1044	Gold and Silver Ores
1061	Ferroalloy Ores, Except Vanadium
1081	Metal Mining Services
1094, 1099	Miscellaneous Metal Ores
SECTOR H: COAL MINES AND COAL MINING-RELATED FACILITIES	
1221-1241	Coal Mines and Coal Mining-Related Facilities
SECTOR I: OIL AND GAS EXTRACTION AND REFINING	
1311	Crude Petroleum and Natural Gas
1321	Natural Gas Liquids
1381-1389	Oil and Gas Field Services
SECTOR J: MINERAL MINING AND DRESSING- Discharges Covered by 1200-A General Permit	
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	
HZ	Hazardous Waste Treatment, Storage, or Disposal Facilities: • Hazardous waste storage • Hazardous waste disposal • Hazardous waste facilities operating under interim status • Hazardous waste facilities operating under a permit under Subtitle C of RCRA HZ is the Activity Code for this Sector. It potentially applies to any facility regardless of SIC, in addition to these specifically related to hazardous waste: • SIC 4953 Refuse Systems (hazardous waste treatment and disposal)
SECTOR L: LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS	
LF	All Landfill, Land Application Sites and Open Dumps
LF	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60
SECTOR M: MOTOR VEHICLE PARTS, USED	
5015	Automobile Salvage Yards
SECTOR N: SCRAP AND WASTE MATERIALS	
5093	Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling
5093	Source-separated Recycling Facility

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES	
SE	Steam Electric Generating Facilities, including coal handling sites: • steam electric power generation using coal, including coal handling areas • steam electric power generation using natural gas • steam electric power generation using oil • steam electric power generation using nuclear energy • steam electric power generation using any other fuel to produce a steam source • coal pile discharge (includes effluent limitations established by 40 CFR 423) • dual fuel co-generation (i.e., steam generation using fossil fuel to augment a heat-capture generation system) SE is the Activity Code for this Sector. It may apply to any facility SIC Code, in addition to these specifically related to steam electric generation: • SIC 4911 Electric Services (fossil fuel power generation, nuclear electric power generation & other electric power generation)
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING	
4011, 4013	Railroad Transportation
4111-4173	Local and Highway Passenger Transportation
4212-4215	Trucking and Courier Services, Except Air
4226, 4231	Special Warehousing and Storage, Not Otherwise Classified, Terminal and Joint Terminal Maintenance Facilities for Motor Freight Transportation
4311	United States Postal Service
5171	Petroleum Bulk Stations and Terminals
SECTOR Q: WATER TRANSPORTATION	
4412-4499	Water Transportation Facilities
SECTOR R: SHIP AND BOAT BUILDING AND REPAIRING YARDS	
3731, 3732	Ship and Boat Building or Repairing Yards
SECTOR S: AIR TRANSPORTATION FACILITIES	
4512-4581	Air Transportation Facilities
SECTOR T: TREATMENT WORKS	

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
TW	Treatment Works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403.
SECTOR U: FOOD AND KINDRED PRODUCTS	
2041-2048	Grain Mill Products
2074-2079	Fats and Oils Products
2011-2015	Meat Products
2021-2026	Dairy Products
2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties
2051-2053	Bakery Products
2061-2068	Sugar and Confectionery Products
2082-2087	Beverages
2091-2099	Miscellaneous Food Preparations and Kindred Products
2111-2141	Tobacco Products
SECTOR V: TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING; LEATHER AND LEATHER PRODUCTS	
2211-2299	Textile Mill Products
2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
3131-3199	Leather and Leather Products (note: see Sector Z1 for Leather Tanning and Finishing)
SECTOR W: FURNITURE AND FIXTURES	
2434	Wood Kitchen Cabinet and countertop Manufacturing
2511-2519	Household Furniture
2521, 2522	Office Furniture
2531	Public Building and Related Furniture
2541, 2542	Partitions, Shelving, Lockers, and Office and Store Fixtures
2591, 2599	Miscellaneous Furniture and Fixtures
SECTOR X: PRINTING AND PUBLISHING	

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
2711-2796	Printing, Publishing, and Allied Industries
SECTOR Y: RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISCELLANEOUS MANUFACTURING INDUSTRIES	
3011	Tires and Inner Tubes
3021	Rubber and Plastics Footwear
3052, 3053	Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting
3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
3081-3089	Miscellaneous Plastics Products
3931	Musical Instruments
3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods
3951-3955 (except 3952 – see Sector C)	Pens, Pencils, and Other Artists' Materials
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
3991-3999	Miscellaneous Manufacturing Industries
SECTOR Z: LEATHER TANNING AND FINISHING	
3111	Leather Tanning and Finishing
SECTOR AA: FABRICATED METAL PRODUCTS	
3411-3499 (except 3479)	Fabricated Metal Products, and Coating, Engraving, and Allied Services
3911-3915	Jewelry, Silverware, and Plated Ware
3479	Fabricated Metal Coating and Engraving
SECTOR AB: TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY	
3511-3537	Engines and Turbines, Farm and Garden Machinery and Equipment, Construction, Mining and Materials Handling Machinery and Equipment
3541-3549	Metalworking Machinery and Equipment
3552-3559	Special Industry Machinery, Except Metalworking Machinery
3561-3569	General Industrial Machinery and Equipment
3581-3599	Refrigeration and Service Industry Machinery, Miscellaneous Industrial and Commercial Machinery and Equipment
3711-3716	Motor Vehicles and Motor Vehicle Equipment
3721-3751 (except 3731, 3732)	Aircraft and Parts, Ship and Boat Building and Repairing, Railroad Equipment, Motorcycles, Bicycles and Parts

Table E-1. Sectors of Industrial Activity with Description

SIC Code or Activity Code	Activity Represented
3761-3799	Guided Missiles and Space Vehicles and Parts, Miscellaneous Transportation Equipment
SECTOR AC: ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC AND OPTICAL GOODS ***No Sector-specific requirements***	
3571-3579	Computer and Office Equipment
3612-3699	Electronic and Other Electrical Equipment and Components, Except Computer Equipment
3812-3829	Measuring, Analyzing, Optical and Controlling Instruments
3841-3861	Photographic, Medical and Optical Goods
3873	Watches and Clocks

Sector A – Timber Products
Additional Technology-Based Effluent Limits

E.A.1 *Good Housekeeping*. In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to limit the discharge of wood debris, minimize the leachate generated from decaying wood materials, and minimize the generation of dust.

E.A.2 Additional SWPCP Requirements

E.A.2.1 *Drainage Area Site Map*. Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.

E.A.2.2 *Inventory of Exposed Materials*. Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, document in your SWPCP the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with stormwater discharge.

E.A.2.3 *Description of Stormwater Management Controls*. Document measures implemented to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If your facility performs wood surface protection and preservation activities, address the specific control measures, including any BMPs, for these activities.

E.A.3 Additional Inspection Requirements.

E.A.3.1. If your facility is a wood preserving facility under SIC 2491, inspect processing areas, transport areas, and treated wood storage areas monthly to assess the usefulness of practices to minimize the deposit of treatment chemicals on unprotected soils and in areas that will come in contact with stormwater discharges.

E.A.4 Sector-Specific Benchmarks

Table E.A-1 identifies benchmarks that apply to the specific subsectors of Sector A. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.A-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
General Sawmills and Planing Mills (SIC code 2421)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	Statewide benchmark
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L
Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood, and Structural Wood; Wood Pallets and Skids; Wood Containers, not elsewhere classified; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC code 2426, 2429, 2431-2439 (except 2434), 2441, 2448, 2449, 2451, 2452, 2493, and 2499)	Chemical Oxygen Demand (COD)	120.0 mg/L
	Total Suspended Solids (TSS)	Statewide benchmark
Log Storage and Handling (SIC code 2411)	Total Suspended Solids (TSS)	Statewide benchmark
Wood Preserving (SIC code 2491)	Total Arsenic freshwater	0.34 mg/L
	Total Arsenic saltwater	0.069 mg/L
	Total copper freshwater	Statewide benchmark
	Total copper saltwater	0.025 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector B – Paper and Allied Products

E.B.1 Sector-Specific Benchmarks

Table E.B-1 identifies benchmarks that apply to the specific subsectors of Sector B. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.B-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Paperboard Mills (SIC code 2631)	Chemical Oxygen Demand (COD)	120 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector C – Chemical and Allied Products Manufacturing, and Refining

E.C.1 Sector-Specific Benchmarks

Table E.C-1 identifies benchmarks that apply to the specific subsectors of Sector C. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.C-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Agricultural Chemicals (SIC codes 2873-2879, excluding 2874)	Nitrate plus Nitrite Nitrogen	10 mg/L
	Phosphorus	2.0 mg/L
	Total lead freshwater	Statewide benchmark
	Total lead saltwater	1.10 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L
Industrial Inorganic Chemicals (SIC codes 2812-2819)	Total Aluminum	1.10 mg/L
	Nitrate plus Nitrite Nitrogen	10 mg/L
Soaps, Detergents, Cosmetics, and Perfumes (SIC codes 2841-2844)	Nitrate plus Nitrite Nitrogen	10 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L
Plastics, Synthetics, and Resins (SIC codes 2821-2824)	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector D – Petroleum Refining and Related Industries

E.D.1 Limitation of Coverage

Asphalt Paving Mixtures and Blocks, Primary SIC code 2951, must apply for coverage under the 1200-A Industrial Stormwater General Permit.

Table E.D-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Asphalt Paving and Roofing Materials (SIC codes 2951, 2952) **co-located SIC codes only**	Total Suspended Solids (TSS)	Statewide benchmark

E.D.2 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.D-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.D-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from asphalt emulsion facilities. **co-located SIC code only.**	Total Suspended Solids (TSS)	23.0 mg/L, daily maximum
		15.0 mg/L, 30-day avg.
	pH	6.0 - 9.0 s.u.
	Oil and Grease	15.0 mg/L, daily maximum
		10 mg/L, 30-day avg.

[1]Monitor semi-annually

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products

E.E.1 Limitations of coverage

Ready-Mixed Concrete, primary SIC code 3273, must apply for coverage under the 1200-A General Permit.

E.E.2 Additional Technology-Based Effluent Limits

E.E.2.1 *Good Housekeeping Measures*. With good housekeeping, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in stormwater from paved portions of the site that are exposed to stormwater. Consider sweeping regularly or using other equivalent measures to minimize the presence of these materials. Indicate in your SWPCP the frequency of sweeping or equivalent measures. Determine the frequency based on the amount of industrial activity occurring in the area and the frequency of precipitation, but it must be performed at least once a week if cement, aggregate, kiln dust, fly ash, or settled dust are being handled or processed. You must also prevent the exposure of fine granular solids (cement, fly ash, kiln dust, etc.) to stormwater, where practicable, by storing these materials in enclosed silos, hoppers, or buildings, or under other covering.

E.E.3 Additional SWPCP Requirements

E.E.3.1 *Drainage Area Site Map*. Document in the SWPCP the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.

E.E.3.1 *Discharge Testing*. For facilities producing ready-mix concrete, concrete block, brick, or similar products, include in the non-stormwater discharge testing a description of measures that ensure that process wastewaters resulting from washing trucks, mixers, transport buckets, forms, or other equipment are discharged in accordance with NPDES wastewater permit requirements or are recycled.

E.E.4 Sector-Specific Benchmarks

Table E.E-1 identifies benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.E-1

Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Clay Product Manufacturers (SIC codes 3251-3259, 3261-3269)	Total Aluminum	1.10 mg/L
Concrete and Gypsum Manufacturers (SIC codes 3271-3275) **3273: co-located SIC code only.**	Total Suspended Solids (TSS)	Statewide benchmark

E.E.5 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.E-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.E-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from material storage piles at cement manufacturing facilities (SIC code 3241)	Total Suspended Solids (TSS)	50 mg/L, daily maximum
	pH	6.0 - 9.0 s.u.

[1]Monitor semi-annually

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector F – Primary Metal

E.F.1 Additional Technology-Based Effluent Limits

E.F.1.1 *Good Housekeeping Measures*. As part of your good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and, where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

E.F.2 Additional SWPCP Requirements

E.F.2.1 *Drainage Area Site Map*. Identify in the SWPCP where any of the following activities may be exposed to precipitation or stormwater: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants to waters of the state.

E.F.2.2 *Inventory of Exposed Material*. Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or discharge, areas where deposition of particulate matter from process air emissions or losses during material-handling activities are possible.

E.F.3 Additional Inspection Requirements

As part of conducting your monthly inspections address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

E.F.4 Sector-Specific Benchmarks

Table E.F-1 identifies benchmarks that apply to the specific subsectors of Sector F. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.F-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC codes 3312-3317)	Total Aluminum	1.10 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L
Iron and Steel Foundries (SIC codes 3321-3325)	Total Aluminum	1.10 mg/L
	Total Suspended Solids (TSS)	Statewide benchmark
	Total copper freshwater	Statewide benchmark
	Total copper saltwater	0.025 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L
Rolling, Drawing, Extruding of Nonferrous Metals, Nonferrous Foundries (SIC codes 3351-3357 and 3363-3369)	Total copper freshwater	Statewide benchmark
	Total copper saltwater	0.025 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector G – Metal Mining

E.G.1 Covered Stormwater Discharges

The requirements in Sector G apply to stormwater discharges associated with industrial activity from Metal Mining facilities, including mines abandoned on Federal lands, as identified by the SIC Codes specified under types of industrial sources required to obtain coverage, Table 1. Coverage is required for metal mining facilities that discharge stormwater contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation.

E.G.1.1 *Covered Discharges from Inactive Facilities.* All stormwater discharges.

E.G.1.2 *Covered Discharges from Active and Temporarily Inactive Facilities*. Only the stormwater discharges from the following areas are covered:

- Waste rock and overburden piles if composed entirely of stormwater and not combined with mine drainage;
- Topsoil piles;
- Offsite haul and access roads;
- Onsite haul and access roads constructed of waste rock, overburden or spent ore if composed entirely of stormwater and not combining with mine drainage;
- Onsite haul and access roads not constructed of waste rock, overburden or spent ore except if mine drainage is used for dust control;
- Discharges from tailings dams or dikes when not constructed of waste rock or tailings and no process fluids are present;
- Discharges from tailings dams or dikes when constructed of waste rock or tailings and no process fluids are present, if composed entirely of stormwater and not combining with mine drainage;
- Concentration building if no contact with material piles;
- Mill site if no contact with material piles;
- Office or administrative building and housing if mixed with stormwater from industrial area;
- Chemical storage area;
- Docking facility if no excessive contact with waste product that would otherwise constitute mine drainage;
- Explosive storage;
- Fuel storage;
- Vehicle and equipment maintenance area and building;
- Parking areas (if necessary);
- Power plant;
- Truck wash areas if no excessive contact with waste product that would otherwise constitute mine drainage;
- Unreclaimed, disturbed areas outside of active mining area;
- Reclaimed areas released from reclamation requirements prior to December 17, 1990;
- Partially or inadequately reclaimed areas or areas not released from reclamation requirements.

E.G.1.3 *Covered Discharges from Earth-Disturbing Activities Conducted Prior to Active Mining Activities*. All stormwater discharges.

E.G.1.4 *Covered Discharges from Facilities Undergoing Reclamation*. All stormwater discharges.

E.G.2 Limitations on Coverage

E.G.2.1 *Prohibition of Stormwater Discharges.* Stormwater discharges not authorized by this permit: discharges from active metal mining facilities that are subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).
Note: Stormwater discharge from these sources are subject to 40 CFR Part 440 if they are mixed with other discharges subject to Part 440. In this case, they are not eligible for coverage under this permit. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless they: (1) drain naturally (or are intentionally diverted) to a point source; and (2) combine with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440. Operators bear the initial responsibility for determining if they are eligible for coverage under this permit, or must seek coverage under another NPDES permit.

E.G.2.2 *Prohibition of Non-Stormwater Discharges*. Not authorized by this permit: adit drainage, and contaminated springs or seeps discharging from waste rock dumps that do not directly result from precipitation events.

E.G.3 Definitions

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

E.G.3.1 *Mining operation* – For this permit, mining operations are grouped into two distinct categories, with distinct technology based effluent limits and requirements applicable to each: a) earth-disturbing activities conducted prior to active mining activities); and b) active mining activities, which includes reclamation. “Mining operations” can occur at both inactive mining facilities and temporarily inactive mining facilities.

E.G.3.2 *Earth-disturbing activities conducted prior to active mining activities* – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:
a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and
b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads. Earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining are considered to be “construction” and have additional technology based effluent limits in E.G.4.2.

E.G.3.3 *Active mining activities* – Activities related to the extraction, removal or recovery, and benefication of metal ore from the earth; removal of overburden and waste rock to expose mineable minerals; and site reclamation and closure activities. All such activities occur within the "active mining area." Reclamation involves activities undertaken, in compliance with applicable mined land reclamation requirements, to return the land to an appropriate post-mining contour and land use in order to meet applicable federal and state reclamation requirements. In addition, once earth-disturbing activities conducted prior to active mining activities have ceased and all related requirements in E.G.4 have been met, and a well-delineated "active mining area" has been established, all activities (including any clearing, grading, and excavation) that occur within the active mining area are "active mining activities."

E.G.3.4 *Active mining area* – A place where work or other activity related to the extraction, removal or recovery of metal ore is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.
Note: Earth-disturbing activities described in the definition in E.G.3.2 that occur on areas outside the active mining area (e.g., for expansion of the mine into undeveloped territory) are considered "earth-disturbing conducted prior to active mining activities", and must comply with the requirements in E.G.4

E.G.3.5 *Inactive metal mining facility* – A site or portion of a site where metal mining and/or milling occurred in the past but there are no active mining activities occurring as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable state or federal agency. An inactive metal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

E.G.3.6 *Temporarily inactive metal mining facility* – A site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

E.G.4 Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities Stormwater discharges from earth-disturbing activities conducted prior to active mining activities (defined in E.G.3.3) are covered under this permit. For such earth-disturbing activities, permit registrants do not need to comply the technology-based effluent limits or Schedule B, monitoring or inspection frequency in Schedule B or E.G.5, E.G.7 or E.G.8. Authorized discharges from areas where earth-disturbing activities have ceased and stabilization as specified in E.G.4.1.9 or E.G.4.2.11, where appropriate, has been completed (stabilization is not required for areas where active mining activities will occur), are no longer subject to E.G.4 requirements. At such time, authorized discharges become subject to all other applicable requirements in the permit, including the technology-based effluent limits or Schedule B, monitoring or inspection frequency in Schedule B and Sector E.G.5, E.G.7 and E.G.8.

E.G.4.1 *Technology-Based Effluent Limits Applicable to All Earth-Disturbing Activities Conducted Prior to Active Mining Activities*. The following technology-based effluent limits apply to authorized discharges from all earth-disturbing activities conducted prior to active mining activities defined in E.G.3. These limits supersede the technology-based limits listed in Schedule A.1.

E.G.4.1.1 *Erosion and sediment control installation requirements*.

- By the time construction activities commence, install and make operational downgradient sediment controls, unless this timeframe is infeasible. If infeasible you must install and make such controls operational as soon as practicable or as soon as site conditions permit.
- All other stormwater controls described in the SWPCP must be installed and made operational as soon as conditions on each portion of the site allows.

E.G.4.1.2 *Erosion and sediment control maintenance requirements*. You must:

- Ensure that all erosion and sediment controls remain in effective operating condition.
- Wherever you determine that a stormwater control needs maintenance to continue operating effectively, initiate efforts to fix the problem immediately after its discovery, and complete such work by the end of the next work day.
- When a stormwater controls must be replaced or significantly repaired, complete the work within 7 days, unless infeasible. If 7 days is infeasible, you must complete the installation or repair as soon as practicable.

E.G.4.1.3 *Perimeter controls*. You must:

- Install sediment controls along those perimeter areas of your disturbed area that will receive stormwater, except where site conditions prevent the use of such controls (in which case, maximize their installation to the extent practicable).
- Remove sediment before it accumulates to one-half of the above-ground height of any perimeter control.

E.G.4.1.4 *Sediment track-out*. For construction vehicles and equipment exiting the site directly onto paved roads, you must:

- Install sediment controls along those perimeter areas of your disturbed area that will receive stormwater, except where site conditions prevent the use of such controls (in which case, maximize their installation to the extent practicable).
- Remove sediment before it accumulates to one-half of the above-ground height of any perimeter control.
- Note: DEQ recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have implemented sediment removal practices. Such "staining" is not a violation of E.G.4.1.4.

E.G.4.1.5 *Soil or sediment stockpiles*. You must:

- Minimize erosion of stockpiles from stormwater and wind via temporary cover, if feasible.
- Prevent up-slope stormwater flows from causing erosion of stockpiles (e.g., by diverting flows around the stockpile).
- Minimize sediment from stormwater that runs off of stockpiles, using sediment controls (e.g., a sediment barrier or downslope sediment control).

E.G.4.1.6 *Sediment basins*. If you intend to install a sediment basin to treat stormwater from your earth-disturbing activities, you must:

- Provide storage for either (1) the 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained.
- Prevent erosion of (1) basin embankments using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet points of the basin using erosion controls and velocity dissipation devices.

E.G.4.1.7 *Minimize dust*. You must minimize the generation of dust through the appropriate application of water or other dust suppression techniques that minimize pollutants being discharged into surface waters.

E.G.4.1.8 *Restrictions on use of treatment chemicals*. If you intend to use sediment treatment chemicals at your site, you are subject to the following minimum requirements:

- Use conventional erosion and sediment controls prior to and after application of chemicals;
- Select chemicals suited to soil type, and expected turbidity, pH, flow rate;
- Minimize the discharge risk from stored chemicals;
- Comply with state/local requirements;
- Use chemicals in accordance with good engineering practices and specifications of chemical supplier;
- Ensure proper training;
- Provide proper SWPCP documentation.

If you plan to use cationic treatment chemicals, you are ineligible for coverage under this permit, unless you notify your applicable DEQ regional office or agent in advance and receive authorization under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

E.G.4.1.9 *Site stabilization requirements for earth-disturbing activities performed for purposes of mine site preparation as defined in E.G.3.2(a) (i.e., not applicable to construction of staging areas for structures and access roads as defined in E.G.3.2(b)).* You must comply with the following stabilization requirements except where the intended function of the site accounts for such disturbed earth (e.g., the earth disturbances will become actively mined, or the controls implemented at the active mining area effectively control the disturbance) (although you are encouraged to do so within the active mining area, where appropriate):

- *Temporary stabilization of disturbed areas*. Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in E.G.3.2(a)) have temporarily ceased, but in no case more than 14 days after such activities have temporarily ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities performed for purposes of mine site preparation has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where earth-disturbing activities performed for purposes of mine site preparation have permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until active mining activities commence.
- *Final stabilization of disturbed areas*. Stabilization measures must be initiated immediately where earth-disturbing activities performed for purposes of mine site preparation (as defined in E.G.3.2(a)), have permanently ceased but in no case more than 7 days after the earth-disturbing activities have permanently ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing

conditions, where initiating perennial vegetative stabilization measures is not possible within 7 days after earth-disturbing activities have permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

E.G.4.2 *Additional Technology-Based Effluent Limits Applicable Only to the Construction of Staging Areas for Structures and Access Roads*. The following technology-based effluent limits apply to authorized discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads, as defined in E.G.3.2(b). These limits supersede the technology-based limits listed in Schedule B and E.G.5 of this sector. These limits do not apply to earth-disturbing activities performed for purposes of mine site preparation (as defined in E.G.3.2(a)).

E.G.4.2.1 *Area of disturbance*. You must minimize the amount of soil exposed during construction activities.

E.G.4.2.2 *Erosion and sediment control design requirements*. You must:

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from earth-disturbing activities. Account for the following factors in designing your erosion and sediment controls:
  - The expected amount, frequency, intensity and duration of precipitation;
  - The nature of stormwater discharge and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
  - The range of soil particle sizes expected to be present on the site.
- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.
- If any stormwater flow becomes or will be channelized at your site, you must design erosion and sediment controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- If you install stormwater conveyance channels, they must be designed to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. In addition, you must minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

E.G.4.2.3 *Natural Buffers*. For any stormwater discharges from earth-disturbing activities within 50 feet of a waters of the state, you must comply with one of the following compliance alternatives:

1. Maintain a 50-foot undisturbed natural buffer between earth-disturbing activities and the waters of the state; or
2. Provide and maintain less than 50 feet of an undisturbed natural buffer zone and supplement by installing erosion and sediment controls that achieve a modeled or calculated sediment load reduction equivalent to a undisturbed natural buffer zone; or

3. If infeasible to provide and maintain an undisturbed natural buffer zone of any size, implement erosion and sediment controls that achieve a modeled or calculated sediment load reduction equivalent to a 50-foot undisturbed natural buffer zone. Ensure all discharges are treated by control measures prior to entering the natural buffer.
4. Delineate and clearly mark off all natural buffers.

There are exceptions when buffer requirements do not apply:

- The natural buffer has already been eliminated by preexisting development disturbances;
- The disturbance is for a water-dependent structure or earth-disturbing approved under a CWA section 404 permit.

E.G.4.2.4 *Soil or sediment stockpiles*. In addition to the requirements in E.G.4.1.5, you must locate any piles outside of any natural buffers established under E.G.4.2.3.

E.G.4.2.5 *Sediment basins*. In addition to the requirements in E.G.4.1.6, you must locate sediment basins outside of any surface waters and any natural buffers established under E.G.4.2.3, and you must utilize outlet structures that withdraw water from the surface, unless infeasible.

E.G.4.2.6 *Native topsoil preservation*. You must preserve native topsoil removed during clearing, grading, or excavation, unless infeasible. Store topsoil in a manner that will maximize its use in reclamation or final vegetative stabilization (e.g., by keeping the topsoil stabilized with seed or similar measures). This requirement does not apply if the intended function of the disturbed area dictates that topsoil be disturbed or removed.

E.G.4.2.7 *Steep slopes*. You must minimize the disturbance of steep slopes. The permit does not prevent or prohibit disturbance on steep slopes.

Depending on site conditions and needs, disturbance on steep slopes may be necessary (e.g., a road cut in mountainous terrain; for grading steep slopes prior to erecting the mine office). Where steep slope disturbances are necessary, you can minimize the disturbances to steep slopes through the implementation of a number of standard erosion and sediment control practices, such as by phasing disturbances in these areas and using stabilization practices specifically for steep grades.

E.G.4.2.8 *Soil compaction*. Where final vegetative stabilization will occur or where infiltration practices will be installed, you must either restrict vehicle/ equipment use in these areas to avoid soil compaction or use soil conditioning techniques to support vegetative growth. Minimizing soil compaction is not required where compacted soil is integral to the functionality of the site.

E.G.4.2.9 *Dewatering Practices*. You are prohibited from discharging ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults or other similar points of accumulation, unless such waters are first effectively managed by appropriate controls (e.g., sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, or filtration systems).

Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

You must also meet the following requirements for dewatering activities:

- Discharge requirements:
  - No discharging visible floating solids or foam;
  - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);

- Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the state be considered part of the treatment area;
- Implement velocity dissipation devices at all points where dewatering water is discharged;
- Haul backwash water away for disposal or return it to the beginning of the treatment process; and
- Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturers' specifications.

- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in E.G.4.1.8.

E.G.4.2.10 *Pollution prevention requirements*.

- Prohibited discharges:
  - Turbid discharge or discharge of sediment;
  - Wastewater from washout of concrete;
  - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other materials;
  - Wastewater from wheel wash;
  - Fuels, oils, or other pollutants used for operation and maintenance of vehicles or equipment;
  - Soaps, solvents, or detergents used in vehicle or equipment washing;
  - Toxic or hazardous substances from a spill or other release.
  - Design and location requirements: Minimize the discharge of pollutants from pollutant sources by:
- *Minimizing exposure*;
  - Using secondary containment, spill kits, or other equivalent measures;
  - Locating pollution sources away from surface waters, storm sewer inlets, and drainageways;
  - Cleaning up spills immediately (do not clean by hosing area down).
- *Pollution prevention requirements for wash waters*: Minimize the discharge of pollutants from equipment and vehicle washing and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- *Pollution prevention requirements for the storage, handling, and disposal of construction products, materials, and wastes*: Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to stormwater. Minimization of exposure is not required in cases where the exposure to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

E.G.4.2.11 *Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in E.G.3.2(b) (i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in E.G.3.2(a)).* You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of

construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;
- If using vegetative measures, by no later than 14 days after initiating stabilization:
  - Seed or plant the area, and provide temporary cover to protect the planted area;
  - Once established, vegetation must be uniform (evenly distributed without large bare areas) perennial vegetation, which provides 70 percent or more coverage based on density of native vegetation.
- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:
  - Install or apply all non-vegetative measures;
  - Cover all areas of exposed soil.

  Note: For the purposes of this permit, DEQ will consider any of the following types of activities to constitute the initiation of stabilization: 1. Prepping the soil for vegetative or non-vegetative stabilization; 2. Applying mulch or other non-vegetative product to the exposed area; 3. Seeding or planting the exposed area; 4. Starting any of the activities in #1 – 3 on a portion of the area to be stabilized, but not on the entire area; and 5. Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization.

Exceptions:

- Arid, semi-arid or drought-stricken areas:
  - Within 14 days of stopping construction work in an area, install any necessary non-vegetative stabilization measures;
  - Initiate vegetative stabilization as soon as conditions on the site allow;
  - Document the schedule that will be followed for initiating and completing vegetative stabilization;
  - Cover planted or seeded area with bio or photo degradable erosion controls designed to prevent erosion without active maintenance.
- Sites affected by severe storm events or other unforeseen circumstances:
  - Initiate vegetative stabilization as soon conditions on the site allow;
  - Document the schedule that will be followed for initiating and completing vegetative stabilization;
  - Add a suitable interim measures (such as mulch or bark) are in place if 70 percent coverage of vegetation is expected to expand.

E.G.4.3 *Water Quality-Based Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.* The following water quality-based limits apply to earth-disturbing activities conducted prior to active mining activities defined in E.G.3.2(a) and E.G.3.2(b), in addition to the water quality-based standards in Schedule A.3.

Stricter requirements apply if your site will discharge to an impaired waters that are listed for turbidity or sedimentation or have an EPA-approved TMDL for sedimentation or turbidity:

- More rapid stabilization of exposed areas: Complete initial stabilization activities within 7 days of stopping earth-disturbing work.

- More frequent site inspections: Once every 7 days and within 24 hours of a storm event of 0.25 inches or greater.

E.G.4.4 *Inspection Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.* The following requirements supersede the inspection requirements in Schedule B and E.G.7 for earth-disturbing activities conducted prior to active mining activities defined in E.G.3.2(a) and E.G.3.2(b).

E.G.4.4.1 *Inspection frequency*

- At least once every 7 calendar days, or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Note:

- Inspections only required during working hours;
- Inspections not required during unsafe conditions; and
- If you choose to inspect once every 14 days, you must have a method for measuring rainfall amount on site (either rain gauge or representative weather station)

Note: To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day.
Note: You are required to specify in your SWPCP which schedule you will be following.
Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

E.G.4.4.2 *Reductions in inspection frequency*.

- Stabilized areas: You may reduce the frequency of inspections to once per month in any area of your site where stabilization has occurred pursuant to E.G.4.1.9 or E.G.4.2.11.
- Arid, semi-arid, and drought stricken areas: If earth-disturbing activities are occurring during the seasonally dry period or during a period in which drought is predicted to occur, you may reduce inspections to once per month and within 24 hours of a 0.25 inch storm event.
- Frozen conditions: You may temporarily suspend or reduce inspections to once per month until thawing conditions occur if frozen conditions are continuous and disturbed areas have been stabilized. For extreme conditions in remote areas, e.g., where transit to the site is perilous/restricted or temperatures are routinely below freezing, you may suspend inspections until the conditions are conducive to safe access, and more frequent inspections can resume.

E.G.4.4.3 *Areas to be inspected*. You must at a minimum inspect the all of the following areas:

- Disturbed areas;

- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;
- Areas where stormwater flows;
- Points of discharge.

E.G.4.4.4 *What to check for during inspections*. At a minimum you must check:

- Whether all stormwater controls are installed, operational and working as intended;
- Whether any new or modified stormwater controls are needed;
- For conditions that could lead to a spill or leak;
- For visual signs of erosion/sedimentation at points of discharge.
- If a discharge is occurring, check:
- The quality and characteristics of the discharge;
- Whether controls are operating effectively.

E.G.4.4.5 *Inspection report*. Within 24 hours of an inspection, complete a report that includes:

- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);
- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

E.G.5 Technology-Based Effluent Limits for Active Mining Activities

Note: These requirements do not apply for any discharges from earth-disturbing activities conducted prior to active mining as defined in E.G.3.2(a) or E.G.3.2(b).

E.G.5.1 *Employee training*. (See also Schedule A.1.j) Conduct employee training at least annually at active and temporarily inactive facilities.

E.G.5.2 *Stormwater controls.* Apart from the control measures you implement to meet Schedule A technology-based effluent limits, where necessary to minimize pollutant discharges in stormwater, implement the following control measures at your site. The potential pollutants identified in E.G.6.3 shall determine the priority and appropriateness of the control measures selected. For mines subject to dust control requirements under DEQ or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Schedule A.1.f.
Stormwater diversions: Divert stormwater away from potential pollutant sources through implementation of control measures such as the following, where determined to be feasible including: interceptor or diversion controls (e.g., dikes, swales, curbs, berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.
Capping: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.
Treatment: If treatment of stormwater (e.g., chemical or physical systems, oil - water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater discharge is encouraged, where

feasible. Treated stormwater may be discharged as a stormwater source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

E.G.5.3 *Discharge testing.* Test or evaluate all off-site discharge points covered under this permit for the presence of specific mining-related but unauthorized non-stormwater discharges such as seeps or adit discharges, or discharges subject to effluent limitations guidelines (40 CFR Part 440), mine drainage or process water. Alternatively (if applicable), you may keep a certification with your SWPCP consistent with E.G.6.6.

E.G.6 Additional SWPCP Requirements for Mining Operations

Note: The requirements in E.G.6 are not applicable to inactive metal mining facilities. Some requirements may be already a requirement under Schedule A.10.

E.G.6.1 *Nature of industrial activities.* Briefly document in your SWPCP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities.

E.G.6.2 *Site map.* Document in your SWPCP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater discharge point within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit; outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage (where water leaves mine) or other process water; tailings piles and ponds (including proposed ones); heap leach pads; off-site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

E.G.6.3 *Potential pollutant sources*. For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. Consider these factors: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in ore type being mined, update your SWPCP with this information.

E.G.6.4 *Documentation of control measures.* Document all control measures that you implement consistent with E.G.5.2. If control measures are implemented or planned but are not listed in E.G.5.2 (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPCP. If you are in compliance with dust control requirements under state or county air quality permits, you must include (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.

E.G.6.5 *Employee training.* All employee training(s) must be documented in the SWPCP.

E.G.6.6 *Certification of permit coverage for commingled non-stormwater discharges*. If you are able, consistent with E.G.5.3 above, to certify that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, retain

such certification with your SWPCP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

E.G.7 Additional Inspection Requirements

Except for earth-disturbing activities conducted prior to active mining activities as defined in E.G.3.2(a) and E.G.3.2(b), which are subject to E.G.4.4, inspect sites at least monthly unless adverse weather conditions make the site inaccessible. See E.G.8.4 for inspection requirements for inactive and unstaffed sites.

E.G.8 Additional Inspection Requirements for Inactive Operations

Once every three years an annual inspection must be performed by a Registered Professional Engineer.

E.G.9 Monitoring and Reporting Requirements. (See also Schedule B)

Note: There are no monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

E.G.9.1 Benchmark Monitoring for Active Copper Ore Mining and Dressing Facilities. Table E.G-1 identifies benchmarks that apply to active copper ore mining and dressing facilities. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.G-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Active Copper Ore Mining and Dressing Facilities (SIC code 1021)	Nitrate plus Nitrite Nitrogen	10 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Total Suspended Solids (TSS)	Statewide benchmark

E.G.9.2 *Benchmark Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities*. For discharges from waste rock and overburden piles, perform benchmark monitoring once in the first year for the parameters listed in Table E.G-2, and twice annually in all subsequent years of coverage under this permit for any parameters for which the benchmark has been exceeded. You are also required to conduct analytic monitoring for the parameters listed in Table E.G-3 in accordance with the requirements in E.G.8.3. DEQ may also notify you that you must perform additional monitoring to accurately characterize the quality and quantity of pollutants discharged from your waste rock and overburden piles.

Table E.G-2

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099)	Turbidity	50 NTU
	pH	Statewide benchmark
	Total Antimony	9.0 mg/L
	Total Arsenic freshwater	0.34 mg/L
	Total Arsenic saltwater	0.069 mg/L
	Total Beryllium	0.13 mg/L
	Total Cadmium freshwater	See Table 10
	Total Cadmium saltwater	0.040 mg/L
	Total copper freshwater	Statewide benchmark
	Total copper saltwater	0.025 mg/L
	Total lead freshwater	Statewide benchmark
	Total lead saltwater	1.10 mg/L
	Total Mercury freshwater	0.0024 mg/L
	Total Mercury saltwater	0.0021 mg/L
	Total Nickel freshwater	See Table 10
	Total Nickel saltwater	0.074 mg/L
	Total Selenium freshwater	0.013 mg/L
	Total Selenium saltwater	0.29 mg/L
	Total Silver freshwater	See Table 10
	Total Silver saltwater	0.0019
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L

E.G.9.3 *Additional Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities*. In addition to the monitoring required in E.G.8.2 for discharges from waste rock and overburden piles, you must also conduct monitoring for additional parameters based on the type of ore you mine at your site. The schedule for monitoring is the same as E.G.9.2: once the first year for all parameters in Table E.G.3 (except radium and uranium) and twice annually in all subsequent years of coverage for any parameters

monitoring results have exceeded the benchmarks. Where a parameter in Table E.G-3 is the same as a pollutant you are required to monitor for in Table E.G-2 (i.e., for all of the metals), you must use the corresponding benchmark in Table E.G-2 and you may use any monitoring results conducted for E.G.8.2 to satisfy the monitoring requirement for that parameter for E.G.8.3. For radium and uranium, which do not have corresponding benchmarks in Table E.G-2, there are no applicable benchmarks. The frequency of monitoring for radium and uranium is quarterly for the first four quarters after which no monitoring is required.

Table E.G-3 Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles

Supplemental Requirements			
Type of Ore Mined	**Pollutants of Concern**		
	Total Suspended Solids (TSS)	**pH**	**Metals, Total**
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper, Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper, Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)
Platinum Ore			Cadmium (H), Copper, Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper, Lead (H), Zinc (H)
Molybdenum	X	X	Arsenic, Cadmium (H), Copper, Lead (H), Mercury, Zinc (H)
Uranium, Radium, and Vanadium Ore	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

Note: An "X" indicated for TSS and/or pH means that you are required to monitor for those parameters. (H) indicates that hardness must also be measured when this pollutant is measured.

E.G.9.4 *Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirements for Monthly Visual Assessments and Routine Facility Inspections*. As a Sector G facility, if you are seeking to exercise a monitoring or inspection waiver, you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Schedule B.9.a.iv of the permit. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the monitoring and inspection requirements; and
- DEQ retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Table E.G-4 Applicability of the Permit to Stormwater Discharge From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation

Discharge/Source of Discharge	Note/Comment
Piles	
Waste rock/overburden	If composed entirely of stormwater and not combining with mine drainage. See note below.
Topsoil	--
Roads constructed of waste rock or spent ore	
Onsite haul roads	If composed entirely of stormwater and not combining with mine drainage. See note below.
Offsite haul and access roads	--
Roads not constructed of waste rock or spent ore	
Onsite haul roads	Except if mine drainage is used for dust control
Offsite haul and access roads	--
Milling/concentrating	
Discharge from tailings dams and dikes when constructed of waste rock/tailings	Except if process fluids are present and only if composed entirely of stormwater and not combining with mine drainage. See Note below.
Discharge from tailings dams/dikes when not constructed of waste rock and tailings	Except if process fluids are present
Concentration building	If stormwater only and no contact with piles
Mill site	If stormwater only and no contact with piles
Ancillary areas	
Office and administrative building and housing	If mixed with stormwater from the industrial area
Chemical storage area	--
Docking facility	Except if excessive contact with waste product that would otherwise constitute mine drainage
Explosive storage	--
Fuel storage (oil tanks/coal piles)	--
Vehicle and equipment maintenance area/building	--
Parking areas	But coverage unnecessary if only employee and visitor-type parking
Power plant	
Truck wash area	Except when excessive contact with waste product that would otherwise constitute mine drainage
Reclamation-related areas	
Any disturbed area (unreclaimed)	Only if not in active mining area
Reclaimed areas released from reclamation requirements prior to Dec. 17, 1990	--
Partially/inadequately reclaimed areas or areas not released from reclamation requirements	--

Note: Stormwater discharge from these sources are subject to the NPDES program for stormwater unless mixed with discharges subject to 40 CFR Part 440 that are regulated by another permit prior to mixing. Non-stormwater discharges from these sources are subject to NPDES permitting and may be subject to the effluent limitation guidelines under 40 CFR Part 440. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless: (1) it drains naturally (or is intentionally diverted) to a point source; and (2) combines with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, as well as meeting other eligibility criteria contained in Part 1.1 of the permit. Operators bear the initial responsibility for determining the applicable technology-based standard for such discharges.

E.G.10. Termination of Permit Coverage

E.G.10.1 *Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.* A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in E.G.3.3.

E.G.10.2 *Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.* A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater discharge that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector H – Coal Mines and Coal Mining-Related Facilities

E.H.1 Definitions

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

E.H.1.1 *Mining operations* - For this permit, mining operations are grouped into two distinct categories, with distinct effluent limits and requirements applicable to each: a) earth-disturbing activities conducted prior to active mining activities); and b) active mining activities, which includes reclamation. "Mining operations" can occur at both inactive mining facilities and temporarily inactive mining facilities.

E.H.1.2 *Earth-disturbing activities conducted prior to active mining activities* – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:
a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and
b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads. Earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining are considered to be "construction" and have additional technology based effluent limits in E.H.2.2.

E.H.1.3 *Active mining activities* – Activities related to the extraction, removal or recovery, and preparation of coal; removal of overburden and waste rock to expose mineable minerals; and site reclamation and closure activities. All such activities occur within the "active mining area." Reclamation involves activities undertaken, in compliance with applicable mined land reclamation requirements, to return the land to an appropriate post-mining contour and land use in order to meet applicable federal and state reclamation requirements. In addition, once earth-disturbing activities conducted prior to active mining activities have ceased and all related requirements in E.H.2 have been met, and a well-delineated "active mining area" has been established, all activities (including any clearing, grading, and excavation) that occur within the active mining area are "active mining activities."

E.H.1.4 *Active mining area* – A place where work or other activity related to the extraction, removal or recovery of coal is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.
Note: Earth-disturbing activities described in the definition in E.H.1.2 that occur on areas outside the active mining area (e.g., for expansion of the mine into undeveloped territory) are considered "earth-disturbing conducted prior to active mining activities", and must comply with the requirements in E.H.2.

E.H.1.5 *Inactive coal mining facility* – A site or portion of a site where coal mining and/or milling occurred in the past but there are no active mining operations occurring as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable state or federal agency. An inactive coal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the

extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

E.H.1.6 *Temporarily inactive coal mining facility* – A site or portion of a site where coal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable state or federal agency.

E.H.2 Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities Stormwater discharges from earth-disturbing activities conducted prior to active mining activities (defined in E.H.1.2) are covered under this permit. For such earth-disturbing activities, you must comply with all applicable requirements in technology-based effluent limits in E.H.3 and Schedule A, the inspection and monitoring requirements in Schedule B and in E.H.5 and E.H.6 Authorized discharges from areas where earth-disturbing activities have ceased and stabilization as specified in E.H.2.1.9 or E.H.2.2.11, where appropriate, has been completed (stabilization is not required for areas where active mining activities will occur), are no longer subject to the E.H.2 requirements. At such time, authorized discharges become subject to all other applicable requirements in the permit, including the technology based effluent limits in limits in E.H.3 and Schedule A, the inspection and monitoring requirements in Schedule B and in E.H.5 and E.H.6.

E.H.2.1 *Technology-Based Effluent Limits Applicable to All Earth-Disturbing Activities Conducted Prior to Active Mining Activities*. The following technology-based effluent limits apply to authorized discharges from all earth-disturbing activities conducted prior to active mining activities defined in E.H.1.2(a) and E.H.1.2(b). These limits supersede the technology-based effluent limits listed in Schedule A.1.

E.H.2.1.1 *Erosion and sediment control installation requirements*.

- By the time construction activities commence, install and make operational downgradient sediment controls, unless this timeframe is infeasible. If infeasible you must install and make such controls operational as soon as practicable or as soon as site conditions permit.
- All other stormwater controls described in the SWPCP must be installed and made operational as soon as conditions on each portion of the site allows.

E.H.2.1.2 *Erosion and sediment control maintenance requirements*. You must:

- Ensure that all erosion and sediment controls remain in effective operating condition.
- Wherever you determine that a stormwater control needs maintenance to continue operating effectively, initiate efforts to fix the problem immediately after its discovery, and complete such work by the end of the next work day.
- When a stormwater control must be replaced or significantly repaired, complete the work within 7 days, unless infeasible. If 7 days is infeasible, you must complete the installation or repair as soon as practicable.

E.H.2.1.3 *Perimeter controls*. You must:

- Install sediment controls along those perimeter areas of your disturbed area that will receive stormwater, except where site conditions prevent the use of such controls (in which case, maximize their installation to the extent practicable).
- Remove sediment before it accumulates to one-half of the above-ground height of any perimeter control.

E.H.2.1.4 *Sediment track-out*. For construction vehicles and equipment exiting the site directly onto paved roads, you must:

- Use appropriate stabilization techniques to minimize sediment track-out from vehicles and equipment prior to exit;
- Use additional controls to remove sediment from vehicle and equipment tires prior to exit, where necessary;
- Remove sediment that is tracked out onto paved roads by end of the work day.

Note: DEQ recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have implemented sediment removal practices. Such "staining" is not a violation of E.H.2.1.4.

E.H.2.1.5 *Soil or sediment stockpiles*. You must:

- Minimize erosion of stockpiles from stormwater and wind via temporary cover, if feasible.
- Prevent up-slope stormwater flows from causing erosion of stockpiles (e.g., by diverting flows around the stockpile).
- Minimize sediment from stormwater that runs off of stockpiles, using sediment controls (e.g., a sediment barrier or downslope sediment control).

E.H.2.1.6 *Sediment basins*. If you intend to install a sediment basin to treat stormwater from your earth-disturbing activities, you must:

- Provide storage for either (1) the 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained.
- Prevent erosion of (1) basin embankments using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet points of the basin using erosion controls and velocity dissipation devices.

E.H.2.1.7 *Minimize dust*. You must minimize the generation of dust through the appropriate application of water or other dust suppression techniques that minimize pollutants being discharged into surface waters.

E.H.2.1.8 *Restrictions on use of treatment chemicals*. If you intend to use sediment treatment chemicals at your site, you are subject to the following minimum requirements:

- Use conventional erosion and sediment controls prior to and after application of chemicals;
- Select chemicals suited to soil type, and expected turbidity, pH, flow rate;
- Minimize the discharge risk from stored chemicals;
- Comply with state/local requirements;
- Use chemicals in accordance with good engineering practices and specifications of chemical supplier;
- Ensure proper training;
- Provide proper SWPCP documentation.

If you plan to use cationic treatment chemicals, you are ineligible for coverage under this permit, unless you notify your applicable DEQ regional office or agent in advance and the DEQ regional office or agent authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

E.H.2.1.9 *Site stabilization requirements for earth-disturbing activities performed for purposes of mine site preparation as defined in E.H.1.2(a) (i.e., not applicable to construction*

of staging areas for structures and access roads as defined in E.H.1.2(b)). You must comply with the following stabilization requirements except where the intended function of the site accounts for such disturbed earth (e.g., the earth disturbances will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- *Temporary stabilization of disturbed areas*. Stabilization measures must be initiated immediately in portions of the site where earth-disturbing activities performed for purposes of mine site preparation (as defined in E.H.1.2(a)) have temporarily ceased, but in no case more than 14 days after such activities have temporarily ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after earth-disturbing activities performed for purposes of mine site preparation has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where earth-disturbing activities performed for purposes of mine site preparation have permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until active mining activities commence.
- *Final stabilization of disturbed areas.* Stabilization measures must be initiated immediately where earth-disturbing activities performed for purposes of mine site preparation (as defined in E.H.1.2(a)) have permanently ceased, but in no case more than 7 days after the earth-disturbing activities have permanently ceased. In arid, semi-arid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 7 days after earth-disturbing activities have permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

E.H.2.2 *Additional Technology-Based Effluent Limits Applicable Only to the Construction of Staging Areas for Structures and Access Roads*. The following technology-based effluent limits apply to authorized discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads, as defined in E.H.1.2(b). These limits supersede the technology-based limits listed in Schedule A and E.H.3. These limits do not apply to earth-disturbing activities performed for purposes of mine site preparation (as defined in E.H.1.2(a)).

E.H.2.2.1 *Area of disturbance*. You must minimize the amount of soil exposed during construction activities.

E.H.2.2.2 *Erosion and sediment control design requirements*. You must:

- Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants from construction activities. Account for the following factors in designing your erosion and sediment controls:
  - The expected amount, frequency, intensity and duration of precipitation;

- The nature of stormwater discharge and run-on at the site, including factors such as impervious surfaces, slopes and site drainage features;
- The range of soil particle sizes expected to be present on the site.

- Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater infiltration, including any natural buffers, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.
- If any stormwater flow becomes or will be channelized at your site, you must design erosion and sediment controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.
- If you install stormwater conveyance channels, they must be designed to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. In addition, you must minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

E.H.2.2.3 *Natural Buffers*. For any stormwater discharges from earth-disturbing activities within 50 feet of a waters of the state, you must comply with one of the following compliance alternatives:

1. Maintain a 50-foot undisturbed natural buffer between earth-disturbing activities and the waters of the state; or
2. Provide and maintain less than 50 feet of an undisturbed natural buffer zone and supplement by installing erosion and sediment controls that achieve a modeled or calculated sediment load reduction equivalent to a undisturbed natural buffer zone; or
3. If infeasible to provide and maintain an undisturbed natural buffer zone of any size, implement erosion and sediment controls that achieve a modeled or calculated sediment load reduction equivalent to a 50-foot undisturbed natural buffer zone. Ensure all discharges are treated by control measures prior to entering the natural buffer.
4. There are exceptions when buffer requirements do not apply:

- The natural buffer has already been eliminated by preexisting development disturbances;
- The disturbance is for a water-dependent structure or earth-disturbing approved under a CWA section 404 permit.

E.H.2.2.4 *Soil or sediment stockpiles*. In addition to the requirements in E.H.2.1.5, you must locate any piles outside of any natural buffers established under E.H.2.2.3.

E.H.2.2.5 *Sediment basins*. In addition to the requirements in E.H.2.1.6, you must locate sediment basins outside of any surface waters and any natural buffers established under E.H.2.2.3, and you must utilize outlet structures that withdraw water from the surface, unless infeasible.

E.H.2.2.6 *Native topsoil preservation*. You must preserve native topsoil removed during clearing, grading, or excavation, unless infeasible. Store topsoil in a manner that will maximize its use in reclamation or final vegetative stabilization (e.g., by keeping the

topsoil stabilized with seed or similar measures). This requirement does not apply if the intended function of the disturbed area dictates that topsoil be disturbed or removed.

E.H.2.2.7 *Steep slopes*. You must minimize the disturbance of steep slopes. The permit does not prevent or prohibit disturbance on steep slopes.

Depending on site conditions and needs, disturbance on steep slopes may be necessary (e.g., a road cut in mountainous terrain; for grading steep slopes prior to erecting the mine office). Where steep slope disturbances are necessary, you can minimize the disturbances to steep slopes through the implementation of a number of standard erosion and sediment control practices, such as by phasing disturbances in these areas and using stabilization practices specifically for steep grades.

E.H.2.2.8 *Soil compaction*. Where final vegetative stabilization will occur or where infiltration practices will be installed, you must either restrict vehicle/ equipment use in these areas to avoid soil compaction or use soil conditioning techniques to support vegetative growth. Minimizing soil compaction is not required where compacted soil is integral to the functionality of the site.

E.H.2.2.9 *Dewatering Practices*. You are prohibited from discharging ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults or other similar points of accumulation, unless such waters are first effectively managed by appropriate controls (e.g., sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, or filtration systems). Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

You must also meet the following requirements for dewatering activities:

- Discharge requirements:
  - No discharging visible floating solids or foam;
  - Remove oil, grease and other pollutants from dewatering water via an oil-water separator or suitable filtration device (such as a cartridge filter);
  - Utilize vegetated upland areas of the site, to the extent feasible, to infiltrate dewatering water before discharge. In no case shall waters of the state be considered part of the treatment area;
  - Implement velocity dissipation devices at all points where dewatering water is discharged;
  - Haul backwash water away for disposal or return it to the beginning of the treatment process; and
  - Clean or replace the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturers' specifications.
- Treatment chemical restrictions: If you use polymers, flocculants or other chemicals to treat dewatering water, you must comply with the requirements in E.H.2.1.8.

E.H.2.2.10 *Pollution prevention requirements*.

- Prohibited discharges:
  - Turbid discharge or discharge of sediment;
  - Wastewater from washout of concrete;

- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other materials;
- Wastewater from wheel wash;
- Fuels, oils, or other pollutants used for operation and maintenance of vehicles or equipment;
- Soaps, solvents, or detergents used in vehicle or equipment washing;
- Toxic or hazardous substances from a spill or other release.
- Design and location requirements: Minimize the discharge of pollutants from pollutant sources by:

- Design and location requirements: Minimize the discharge of pollutants from pollutant sources by:
  - Minimizing exposure;
  - Using secondary containment, spill kits, or other equivalent measures;
  - Locating pollution sources away from surface waters, storm sewer inlets, and drainageways;
  - Cleaning up spills immediately (do not clean by hosing area down).
- Pollution prevention requirements for wash waters: Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- Pollution prevention requirements for the storage, handling, and disposal of construction products, materials, and wastes: Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to stormwater. Minimization of exposure is not required in cases where the exposure to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

E.H.2.2.11 *Site Stabilization requirements for the construction of staging areas for structures and access roads as defined in E.H.1.2(b) (i.e., not applicable to earth-disturbing activities performed for purposes of mine site preparation as defined in E.H.1.2(a)).* You must comply with the following stabilization requirements, except where the intended function of the site accounts for such disturbed earth (e.g., the area of construction will become actively mined, or the controls implemented at the active mining area effectively control the disturbance):

- By no later than the end of the next work day after construction work in an area has stopped permanently or temporarily ("temporarily" means the land will be idle for a period of 14 days or more but earth-disturbing activities will resume in the future), immediately initiate stabilization measures;
- If using vegetative measures, by no later than 14 days after initiating stabilization:
  - Seed or plant the area, and provide temporary cover to protect the planted area;
  - Once established, vegetation must be uniform (evenly distributed without large bare areas) perennial vegetation, which provides 70 percent or more coverage based on density of native vegetation.
- If using non-vegetative stabilization, by no later than 14 days after initiating stabilization:

- Install or apply all non-vegetative measures;
- Cover all areas of exposed soil.

Note: For the purposes of this permit, DEQ will consider any of the following types of activities to constitute the initiation of stabilization: 1. Prepping the soil for vegetative or non-vegetative stabilization; 2. Applying mulch or other non-vegetative product to the exposed area; 3. Seeding or planting the exposed area; 4. Starting any of the activities in #1 – 3 on a portion of the area to be stabilized, but not on the entire area; and 5. Finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization.

Exceptions:

- Arid, semi-arid or drought-stricken areas:
  - Within 14 days of stopping construction work in an area, install any necessary non-vegetative stabilization measures;
  - Initiate vegetative stabilization as soon as conditions on the site allow;
  - Document the schedule that will be followed for initiating and completing vegetative stabilization;
  - Cover planted or seeded area with bio or photo degradable erosion controls designed to prevent erosion without active maintenance.
- Sites affected by severe storm events or other unforeseen circumstances:
  - Initiate vegetative stabilization as soon conditions on the site allow;
  - Document the schedule that will be followed for initiating and completing vegetative stabilization;
  - Add a suitable interim measures (such as mulch or bark) are in place if 70 percent coverage of vegetation is expected to expand.

E.H.2.3 *Water Quality-Based Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.*

The following water quality-based limits apply to earth-disturbing activities conducted prior to active mining activities defined in E.H.1.2(a) and E.H.1.2(b), in addition to the water quality standards in Schedule A.3.

Stricter requirements apply if your site will discharge to an impaired waters that are listed for turbidity or sedimentation or have an EPA-approved TMDL for sedimentation or turbidity:

- More rapid stabilization of exposed areas: Complete initial stabilization activities within 7 days of stopping earth-disturbing work.
- More frequent site inspections: Once every 7 days and within 24 hours of a storm event of 0.25 inches or greater.

E.H.2.4 *Inspection Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.*

The following requirements supersede the inspections requirements in Schedule B and E.H.7 of the permit for earth-disturbing activities conducted prior to active mining activities defined in E.H.1.2(a) and E.H.1.2(b).

E.H.2.4.1 *Inspection Frequency*

- At least once every 7 calendar days, or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.
  - Note:
  - Inspections only required during working hours;

- Inspections not required during unsafe conditions; and
- If you choose to inspect once every 14 days, you must have a method for measuring rainfall amount on site (either rain gauge or representative weather station)

Note: To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that.

Note: You are required to specify in your SWPCP which schedule you will be following.

Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly in and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

E.H.2.4.2 *Reductions in Inspection Frequency*

- Stabilized areas: You may reduce the frequency of inspections to once per month in any area of your site where stabilization has occurred pursuant to E.H.2.1.9 or E.H.2.2.11.
- Arid, semi-arid, and drought stricken areas: If earth-disturbing activities are occurring during the seasonally dry period or during a period in which drought is predicted to occur, you may reduce inspections to once per month and within 24 hours of a 0.25 inch storm event.
- Frozen conditions: You may temporarily suspend or reduce inspections to once per month until thawing conditions occur if frozen conditions are continuous and disturbed areas have been stabilized. For extreme conditions in remote areas, e.g., where transit to the site is perilous/restricted or temperatures are routinely below freezing, you may suspend inspections until the conditions are conducive to safe access, and more frequent inspections can resume.

E.H.2.4.3 *Areas to be Inspected*. You must at a minimum inspect the following areas:

- Disturbed areas;
- Stormwater controls and pollution prevention measures;
- Locations where stabilization measures have been implemented;
- Material, waste, borrow, or equipment storage and maintenance areas;
- Areas where stormwater flows;
- Points of discharge.

E.H.2.4.4 *What to Check for During Inspections*. At a minimum you must check:

- Whether all stormwater controls are installed, operational, and working as intended;
- Whether any new or modified stormwater controls are needed;
- For conditions that could lead to a spill or leak;
- For visual signs of erosion/sedimentation at points of discharge.

If a discharge is occurring:

- The quality and characteristics of the discharge;
- Whether controls are operating effectively.

E.H.2.4.5 *Inspection Report*. Within 24 hours of an inspection, complete a report that includes:

- Inspection date;
- Name and title of inspector(s);
- Summary of inspection findings;
- Rainfall amount that triggered the inspection (if applicable);
- If it was unsafe to inspect a portion of the site, include documentation of the reason and the location(s);
- Each inspection report must be signed;
- Keep a current copy of all reports at the site or at an easily accessible location.

E.H.2.5 *Cessation of Requirements Applicable to Earth-Disturbing Activities Conducted Prior to Active Mining Activities.* The requirements in E.H.2 no longer apply for any earth-disturbing activities conducted prior to active mining activities as defined in E.H.1.2(a) or E.H.1.2(b) where:

1. Earth-disturbing activities have ceased; and
2. Stabilization has been met consistent with E.H.2.1.9 or E.H.2.2.11 (not required for areas where active mining activities will occur).

E.H.3 Technology-Based Effluent Limits for Active Mining Activities

Note: These requirements do not apply for any discharges from earth-disturbing activities conducted prior to active mining as defined in E.H.1.2(a) or E.H.1.2(b).

E.H.3.1 *Good Housekeeping Measures.* As part of your good housekeeping program, in order to minimize discharges of pollutants in stormwater, implement control measures such as the following, where determined to be feasible including: using sweepers and covered storage; watering haul roads to minimize dust generation; and conserving vegetation to minimize erosion. For mines subject to dust control requirements under state or county air quality permits, provided the requirements are equivalent, compliance with such air permit dust requirements shall constitute compliance with the dust control effluent limit in Schedule A.1.f.

E.H.3.2 *Preventive Maintenance.* Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.

E.H.4 Additional SWPCP Requirements for Mining Operations

Note: The requirements in E.H.6 are not applicable to inactive coal mining facilities. Some requirements may be already a requirement under Schedule A.10.

E.H.4.1 *Other Applicable Regulations.* Most active coal mining-related areas (SIC Codes 1221-1241) are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). OSM has granted authority to most coal-producing states to implement SMCRA through State SMCRA regulations. All SMCRA requirements regarding control of stormwater-related pollutant discharges must be addressed and then documented with the SWPCP (directly or by reference).

E.H.4.2 *Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; inactive mines and related areas; acidic spoil, refuse, or unreclaimed disturbed areas; and liquid storage tanks containing pollutants such as caustics, hydraulic fluids, and lubricants.

E.H.4.3 *Potential Pollutant Sources.* Document in your SWPCP the following sources and activities that have potential pollutants associated with them: truck traffic on haul roads and resulting generation of sediment subject to discharge and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid, or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil.

E.H.4.4 If you are in compliance with dust control requirements under state or county air quality permits, you must include (or summarize, as necessary) what the state or county air quality permit dust control requirements are and how you've achieved compliance with them.

E.H.5 Additional Inspection Requirements

E.H.5.1 *Inspections of Active Mining-Related Areas.* Except for earth-disturbing activities conducted prior to active mining activities as defined in E.H.1.2(a) and E.H.1.2(b), which are subject to E.H.2.4, perform routine inspections of active mining areas covered by this permit, corresponding with the inspections as performed by SMCRA inspectors, of all mining-related areas required by SMCRA. Also maintain the records of the SMCRA authority representative. See E.H.8.1 for inspection requirements for inactive and unstaffed sties.

E.H.5.2 *Sediment and Erosion Control.* As indicated in E.H.4.1, SMCRA requirements regarding sediment and erosion control measures must be complied with for those areas subject to SMCRA authority, including inspection requirements.

E.H.5.3 *Routine Site Inspections.* Your inspection program must include inspections for pollutants entering the drainage system from activities located on or near coal mining-related areas. Among the areas to be inspected are haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas.

E.H.6 Sector-Specific Benchmarks

Table E.H-1 identifies benchmarks that apply to the specific subsectors of Sector H. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.
Note: There are no monitoring and reporting or impaired waters monitoring requirements for inactive and unstaffed sites.

Table E.H-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Coal Mines and Related Areas (SIC codes 1221-1241)	Total Aluminum	1.10 mg/L
	Total Suspended Solids (TSS)	Statewide benchmark

E.H.6.1 *Inactive and Unstaffed Sites – Conditional Exemption from No Exposure Requirements for Monthly Visual Assessments and Routine Facility Inspections*. As a Sector H facility, if you are seeking to exercise a monitoring or inspection waiver, you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Schedule B.9.a.iv of the permit. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the monitoring and inspection requirements; and
- DEQ retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if your facility is inactive and unstaffed, you are waived from the requirement to conduct routine facility inspections, monthly visual assessments, and benchmark and impaired waters monitoring. You are encouraged to inspect your site more frequently where you have reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

E.H.7 Termination of Permit Coverage

E.H.7.1 *Termination of Permit Coverage for Sites Reclaimed After December 17, 1990.* A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed.

E.H.7.2 *Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990.* A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to exceedance of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector I – Oil and Gas Extraction

E.I.1 Additional Technology-Based Effluent Limits

E.I.1.1 *Vegetative Controls.* Implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Consider the following (or equivalent measures): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.

E.I.2 Additional SWPCP Requirement

E.I.2.1 *Drainage Area Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: Reportable Quantity (RQ) releases; locations used for the treatment, storage, or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirements for "No Discharge" in accordance with 40 CFR 435.32; and the structural controls to achieve compliance with the "No Discharge" requirements.

E.I.2.2 *Potential Pollutant Sources.* Also document in your SWPCP the following sources and activities that have potential pollutants associated with them: chemical, cement, mud, or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities. In addition, include information about the reportable quantity (RQ) release that triggered the permit application requirements: the nature of the release (e.g., spill of oil from a drum storage area), amount of oil or hazardous substance released, amount of substance recovered, date of the release, cause of the release (e.g., poor handling techniques and lack of containment in the area), areas affected by the release (i.e., land and water), procedure to clean up release, actions or procedures implemented to prevent or improve response to a release, and remaining potential contamination of stormwater from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).

E.I.2.3 *Erosion and Sedimentation Control.* Unless covered by the NPDES Construction Stormwater 1200-C General Permit, the additional documentation requirements for sediment and erosion controls for well drillings and sand/shale mining areas include the following:

E.I.2.3.1 *Site Description.* Also include a description in your SWPCP of the nature of the exploration activity, estimates of the total area of site and area disturbed due to exploration activity, an estimate of runoff coefficient of the site, a site drainage map, including approximate slopes, and the names of all receiving waters.

E.I.2.3.2 *Vegetative Controls.* Document vegetative practices used in the SWPCP.

E.I.3 Additional Inspection Requirements.

All erosion and sediment controls must be inspected either: 1) every 7 days; or 2) once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities

E.K.1 Definitions

K.1.1 *Contaminated stormwater* - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in E.K.1.4. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

K.1.2 *Drained free liquids* - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

K.1.3 *Landfill* - an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

K1.4 *Landfill wastewater* - as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact wash water from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

K.1.5 *Leachate* - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

K.1.6 *Non-contaminated stormwater* - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in E.K.1.4. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

E.K.2 Sector-Specific Benchmarks

Table E.K-1 identifies benchmarks that apply to the specific subsectors of Sector K. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.K-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
ALL - Industrial Activity Code "HZ" Benchmarks only applicable to discharges not subject to effluent limitations in 40 CFR Part 445 Subpart A.	Ammonia	2.14 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Total Arsenic freshwater	0.34 mg/L
	Total Arsenic saltwater	0.069 mg/L
	Total Cadmium freshwater	See Table 10
	Total Cadmium saltwater	0.04 mg/L
	Total Cyanide freshwater	0.022 mg/ L
	Total Cyanide saltwater	0.001 mg/L
	E. coli	406 organisms/100 mL
	Total Mercury freshwater	0.0024 mg/L
	Total Mercury saltwater	0.0021 mg/L
	Total Selenium freshwater	0.013 mg/L
	Total Selenium saltwater	0.29 mg/L
	Total Silver freshwater	See Table 10
	Total Silver saltwater	0.0019 mg/L

E.K.3 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.K-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.K-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart A.	Biochemical Oxygen Demand (BOD_5)	220 mg/L, daily maximum
		56 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum

Table E.K-2[1]

Industrial Activity	Parameter	Effluent Limit
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.042 mg/L, daily maximum
		0.019 mg/L, monthly avg. maximum
	Aniline	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Benzoic Acid	0.119 mg/L, daily maximum
		0.073 mg/L, monthly avg. maximum
	Naphthalene	0.059 mg/L, daily maximum
		0.022 mg/L, monthly avg. maximum
	p-Cresol	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Phenol	0.048 mg/L, daily maximum
		0.029 mg/L, monthly avg. maximum
	Pyridine	0.072 mg/L, daily maximum
		0.025 mg/L, monthly avg. maximum
	Total Arsenic	1.1 mg/L, daily maximum
		0.54 mg/L, monthly avg. maximum
	Total Chromium	1.1 mg/L, daily maximum
		0.46 mg/L, monthly avg. maximum
	Total Zinc	0.535 mg/L, daily maximum
		0.296 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor semi-annually. As set forth at 40 CFR Part 445 Subpart A, these numeric limitations apply to contaminated stormwater discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the following facilities:

(a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector L – Landfills, Land Application Sites, and Open Dumps

E.L.1 Definitions

E.L.1.1 *Contaminated stormwater* - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

E.L.1.2 *Drained free liquids* - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

E.L.1.3 *Landfill wastewater* - as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

E.L.1.4 *Leachate* - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

E.L.1.5 *Non-contaminated stormwater* - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

E.L.2 Additional Technology-Based Effluent Limits

E.L.2.1 *Preventive Maintenance Program.* As part of your preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.

E.L.2.2 *Erosion and Sedimentation Control*. Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

E.L.2.3 *Unauthorized Discharge Test Certification*. The discharge test and certification must also be conducted for the presence of leachate and vehicle washwater.

E.L.3 Additional SWPCP Requirements

E.L.3.1 *Drainage Area Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred,

locations of any known leachate springs or other areas where uncontrolled leachate may commingle with discharge, and leachate collection and handling systems.

E.L.3.2 *Summary of Potential Pollutant Sources.* Document in your SWPCP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

E.L.4 Additional Inspection Requirements

E.L.4.1 *Inspections of Active Sites.* Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

E.L.4.2 *Inspections of Inactive Sites.* Inspect inactive landfills, open dumps, and land application sites at least monthly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

E.L.5 Additional Post-Authorization Documentation Requirements

E.L.5.1 *Recordkeeping and Internal Reporting*. Keep records with your SWPCP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

E.L.6 Sector-Specific Benchmarks

Table E.L-1 identifies benchmarks that apply to the specific subsectors of Sector L. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.L-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration[1]
All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60 (Industrial Activity Code "LF")	Total Suspended Solids (TSS)	Statewide benchmark
	E. coli	406 organisms/100 mL

[1]Benchmark monitoring required only for discharges not subject to effluent limitations in 40 CFR Part 445 Subpart B (see Table L-2 below).

E.L.7. Effluent Limitations Based on Effluent Limitations Guidelines

Table E.L-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.L-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from non-hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart B.	Biochemical Oxygen Demand (BOD_5)	140 mg/L, daily maximum
		37 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.033 mg/L, daily maximum
		0.016 mg/L monthly avg. maximum
	Benzoic Acid	0.12 mg/L, daily maximum
		0.071 mg/L, monthly avg. maximum
	p-Cresol	0.025 mg/L, daily maximum
		0.014 mg/L, monthly avg. maximum
	Phenol	0.026 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Total Zinc	0.20 mg/L, daily maximum
		0.11 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor semi-annually. As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:

(a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector M – Motor Vehicle Parts, Used

E.M.1 Additional Technology-Based Effluent Limits

E.M.1.1 *Spill and Leak Prevention Procedures.* Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as feasible), or employ some other equivalent means to prevent spills and leaks.

E.M.1.2 *Employee Training.* If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

E.M.1.3 *Management of Discharge.* Consider the following management practices: berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

E.M.2 Additional SWPCP Requirements

E.M.2.1 *Drainage Area Site Map.* Identify locations used for dismantling, storage, and maintenance of used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or stormwater: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.

E.M.2.2 *Potential Pollutant Sources.* Assess the potential for the following to contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.

E.M.3 Additional Inspection Requirements

Immediately (or as soon thereafter as feasible) inspect vehicles arriving at the site for leaks. Inspect monthly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect monthly for signs of leakage all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

E.M.4 Sector-Specific Benchmarks

Table E.M-1 identifies benchmarks that apply to the specific subsectors of Sector M. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.M-1

Subsector (You may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Automobile Salvage Yards (SIC code 5015)	Total Aluminum	1.10 mg/L
	Total Suspended Solids (TSS)	Total Suspended Solids (TSS)
	Total lead freshwater	Statewide benchmark
	Total lead saltwater	1.10 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector N – Scrap and Waste Materials

E.N.1 Additional Technology-Based Effluent Limits

E.N.1.1 *Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials).* Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily non-industrial and residential sources.

E.N.1.1.1 *Inbound Recyclable and Waste Material Control Program.* Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some control measure options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; (b) establish procedures to minimize the potential of any residual fluids from coming into contact with precipitation or stormwater; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in E.N.3.1.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

E.N.1.1.2 *Scrap and Waste Material Stockpiles and Storage (Outdoor).* Minimize contact of stormwater discharge with stockpiled materials, processed materials, and nonrecyclable wastes. Following are some control measure options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; (d) silt fencing; and (e) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).

E.N.1.1.3 *Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage).* Minimize contact of stormwater with residual cutting fluids by: (a) storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or (b) establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater discharge from these areas can be discharged, provided that any discharge is first collected and treated by an oil and water separator or its equivalent. You must regularly maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.

E.N.1.1.4 *Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage).* Minimize stormwater discharge contact of residual liquids and particulate matter from materials stored indoors or under cover. Following are some control measure options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other processing areas to discharge to the storm sewer system; and (c) disconnecting or sealing off all floor drains connected to the storm sewer system.

E.N.1.1.5 *Scrap and Recyclable Waste Processing Areas.* Minimize stormwater discharge from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with stormwater (i.e., through good housekeeping, preventive maintenance, etc.). Following are some control measure options: (a) regularly inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; (d) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (e) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (f) oil and water separators or sumps; (g) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (h) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); (i) catch basin filters or sand filters.

E.N.1.1.6 *Scrap Lead-Acid Battery Program.* Properly handle, store, and dispose of scrap lead-acid batteries. Following are some control measure options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or stormwater; and (e) provide employee training for the management of scrap batteries.

E.N.1.1.7 *Spill Prevention and Response Procedures*. (See also Schedule A.1.h) Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

E.N.1.1.8 *Supplier Notification Program.* As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

E.N.1.2 *Waste Recycling Facilities* (Liquid Recyclable Materials).

E.N.1.2.1 *Waste Material Storage (Indoor).* Minimize or eliminate contact between residual liquids from waste materials stored indoors and from stormwater. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and

Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some control measure options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system; (c) appropriate containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage must be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.

E.N.1.2.2 *Waste Material Storage (Outdoor).* Minimize stormwater discharge contact between stored residual liquids. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some control measure options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures; (c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.

E.N.1.2.3 *Trucks and Rail Car Waste Transfer Areas.* Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two control measure options: (a) containment and diversionary structures to minimize contact with precipitation, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.

E.N.1.3 *Recycling Facilities (Source-Separated Materials).* The following identifies considerations for facilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

E.N.1.3.1 *Inbound Recyclable Material Control.* Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some control measure options: (a) providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.

E.N.1.3.2 *Outdoor Storage.* Minimize exposure of recyclables to stormwater. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some control measure options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert stormwater away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day’s volume of recyclable material indoors.

E.N.1.3.3 *Indoor Storage and Material Processing.* Minimize the release of pollutants from indoor storage and processing areas. Following are some control measure options (a) schedule routine good housekeeping measures for all storage and processing areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.

E.N.1.3.4 *Vehicle and Equipment Maintenance.* Following are some control measure options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert stormwater from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

E.N.2 Additional SWPCP Requirements

E.N.2.1 *Drainage Area Site Map.* Document in your SWPCP the locations of any of the following activities or sources that may be exposed to precipitation or stormwater: scrap and waste material storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

E.N.2.2 *Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities.* If you are subject to E.N.1.1.3, your SWPCP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

E.N.3 Sector-Specific Benchmarks

Table E.N-1 identifies benchmarks that apply to the specific subsectors of Sector N. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.N-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling (SIC code 5093)	Chemical Oxygen Demand (COD)	120 mg/L
	Total Aluminum	1.10 mg/L
	Total Suspended Solids (TSS)	Statewide benchmark
	Total copper freshwater	Statewide benchmark
	Total copper saltwater	0.025 mg/L
	Total lead freshwater	Statewide benchmark
	Total lead saltwater	1.10 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector O – Steam Electric Generating Facilities.

E.O.1 Additional Technology-Based Effluent Limits.

E.Q.1.1 *Good Housekeeping Measures.* You must implement the following good housekeeping measures in addition to requirements in Schedule A.1 of the permit:

E.O.1.1.1 *Fugitive Dust Emissions.* Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

E.O.1.1.2. *Delivery Vehicles.* Minimize contamination of stormwater discharge from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

E.O.1.1.3 *Fuel Oil Unloading Areas.* Minimize contamination of precipitation or stormwater from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

E.O.1.1.4 *Chemical Loading and Unloading.* Minimize contamination of precipitation or stormwater from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

E.O.1.1.5 *Miscellaneous Loading and Unloading Areas.* Minimize contamination of precipitation or stormwater from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

E.O.1.1.6 *Liquid Storage Tanks*. Minimize contamination of stormwater from above-ground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

E.O.1.1.7 *Large Bulk Fuel Storage Tanks.* Minimize contamination of stormwater from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

E.O.1.1.8 *Spill Reduction Measures.* Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

E.O.1.1.9 *Oil-Bearing Equipment in Switchyards.* Minimize contamination of stormwater from oil-bearing equipment in switchyard areas. Consider using level grades and

gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

E.O.1.1.10 *Residue-Hauling Vehicles.* Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

E.O.1.1.11 *Ash Loading Areas.* Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

E.O.1.1.12 *Areas Adjacent to Disposal Ponds or Landfills.* Minimize contamination of stormwater from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

E.O.1.1.13 *Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites.* Minimize the potential for contamination stormwater from these areas.

E.O.2 Additional SWPCP Requirements

E.O.2.1 *Drainage Area Site Map.* Document in your SWPCP the locations of any of the following activities or sources that may be exposed to precipitation or stormwater: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

E.O.3 Additional Inspection Requirements

E.O.3.1 *Inspection.* Inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

E.O.4 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.O-1 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.O-1[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from coal storage piles at Steam Electric Generating Facilities	TSS	50 mg/l[2]
	pH	6.0 min - 9.0 max

[1] Monitor semi-annually.

[2] If your facility is designed, constructed, and operated to treat the volume of coal pile discharge that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile discharge from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector P – Land Transportation and Warehousing.

E.P.1 Additional Technology-Based Effluent Limits

E.P.1.1 *Good Housekeeping Measures.* In addition to the Good Housekeeping requirements in Schedule A.1 of the permit, you must do the following:

E.P.1.1.1 *Vehicle and Equipment Storage Areas.* Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance. Consider the following (or other equivalent measures): use of drip pans under vehicles/equipment, indoor storage of vehicles and equipment, installation of berms or dikes, use of absorbents, roofing or covering storage areas, and cleaning pavement surfaces to remove oil and grease.

E.P.1.1.2 *Fueling Areas.* Minimize contamination of stormwater discharge from fueling areas. Consider the following (or other equivalent measures): Covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater.

E.P.1.1.3 *Material Storage Areas.* Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.). Consider the following (or other equivalent measures): storing the materials indoors; installing berms/dikes around the areas; minimizing stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater.

E.P.1.1.4 *Vehicle and Equipment Cleaning Areas.* Minimize contamination of stormwater discharge from all areas used for vehicle/equipment cleaning. Consider the following (or other equivalent measures): performing all cleaning operations indoors; covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the stormwater drainage system); treating and/or recycling collected washwater, or other equivalent measures.

E.P.1.1.5 *Vehicle and Equipment Maintenance Areas.* Minimize contamination of stormwater discharge from all areas used for vehicle/equipment maintenance. Consider the following (or other equivalent measures): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater, minimizing run on/runoff of stormwater to maintenance areas.

E.P.1.1.6 *Locomotive Sanding (Loading Sand for Traction) Areas.* Consider the following (or other equivalent measures): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.

E.P.1.2 *Employee Training.* Address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

E.P.2 Additional SWPCP Requirements

E.P.2.1 *Drainage Area Site Map.* Identify in the SWPCP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/stormwater: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

E.P.2.2 *Potential Pollutant Sources.* Assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas. Describe these activities in the SWPCP.

E.P.2.3 *Description of Good Housekeeping Measures.* You must document in your SWPCP the good housekeeping measures you implement consistent with E.P.1.

E.P.2.4 *Vehicle and Equipment Wash Water Requirements.* If wash water is handled in a manner that does not involve separate NPDES permitting (e.g., hauled offsite), describe the disposal method and include all pertinent information (e.g., frequency, volume, destination, etc.) in your SWPCP. Discharges of vehicle and equipment wash water, including tank cleaning operations, are not authorized by this permit for this sector.

E.P.3 Additional Inspection Requirements Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector Q – Water Transportation

E.Q.1 Additional Technology-Based Effluent Limits

E.Q.1.1 *Good Housekeeping Measures.* You must implement the following good housekeeping measures in addition to requirements in Schedule A.1 of the permit:

E.Q.1.1.1 *Pressure Washing Area.* If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. Collect or contain the discharges from the pressure washing area so that they are not commingled with stormwater discharges authorized by this permit.

E.Q.1.1.2 *Blasting and Painting Area.* Minimize the potential for spent abrasives, paint chips, and overspray to discharge into receiving waters or the storm sewer systems. Consider containing all blasting and painting activities or use other measures to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

E.Q.1.1.3 *Material Storage Areas.* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or stormwater from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

E.Q.1.1.4 *Engine Maintenance and Repair Areas.* Minimize the contamination of precipitation or stormwater from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater collected from the maintenance area.

E.Q.1.1.5 *Material Handling Area.* Minimize the contamination of precipitation or stormwater from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater to material handling areas.

E.Q.1.1.6 *Drydock Activities.* Routinely maintain and clean the drydock to minimize pollutants in stormwater. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding and making absorbent materials and oil containment booms readily available to clean up or contain any spills.

E.Q.1.2 *Employee Training.* At a minimum, address the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel

wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

E.Q.1.3 *Preventive Maintenance.* As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

E.Q.2 Additional SWPCP Requirements

E.Q.2.1 *Drainage Area Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

E.Q.2.2 *Summary of Potential Pollutant Sources.* Document in the SWPCP the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting.)

E.Q.3 Additional Inspection Requirements

Inspect pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

E.Q.4 Sector-Specific Benchmarks

Table E.Q-1 identifies benchmarks that apply to the specific subsectors of Sector Q. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.Q-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Water Transportation Facilities (SIC 4412-4499)	Total Aluminum	1.10 mg/L
	Total lead freshwater	Statewide benchmark
	Total lead saltwater	1.10 mg/L
	Total zinc freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector R – Ship and Boat Building and Repair Yards

E.R.1 Additional Technology-Based Effluent Limits

E.R.1.1 *Good Housekeeping Measures.*

E.R.1.1.1 *Pressure Washing Area.* If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.

E.R.1.1.2 *Blasting and Painting Area.* Minimize the potential for spent abrasives, paint chips, and overspray to discharging into the receiving water or the storm sewer systems. Consider containing all blasting and painting activities, or use other measures to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

E.R.1.1.3 *Material Storage Areas.* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or stormwater from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

E.R.1.1.4 *Engine Maintenance and Repair Areas.* Minimize the contamination of precipitation or stormwater from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater collected from the maintenance area.

E.R.1.1.5 *Material Handling Area.* Minimize the contamination of precipitation or stormwater from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas.

E.R.1.1.6 *Drydock Activities.* Routinely maintain and clean the drydock to minimize pollutants in stormwater. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding, and having absorbent materials and oil containment booms readily available to clean up and contain any spills.

E.R.1.2 *Employee Training.* As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

E.R.1.3 *Preventive Maintenance.* As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

E.R.2 Additional SWPCP Requirements

E.R.2.1 *Drainage Area Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

E.R.2.2 *Potential Pollutant Sources.* Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

E.R.2.3 *Documentation of Good Housekeeping Measures.* Document in your SWPCP any good housekeeping measures implemented to meet the effluent limits in E.R.1.1.

E.R.2.3.1 *Blasting and Painting Areas.* Document in the SWPCP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

E.R.2.3.2 *Storage Areas.* Specify in your SWPCP which materials are stored indoors, and consider containment or enclosure for those stored outdoors.

E.R.3 Additional Inspection Requirements

Include the following in all monthly inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector S – Air Transportation

E.S.1 Limitation on Coverage

E.S.1.1 *Limitations on Coverage.* This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.
Note: the term "deicing" in this permit will generally be used to mean both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made otherwise.

E.S.2 Multiple Operators at Air Transportation Facilities

Air transportation facilities often have more than one operator who could discharge stormwater associated with industrial activity. Operators include the airport authority and airport tenants, including air passenger or cargo companies, fixed based operators, and other parties who routinely perform industrial activities on airport property.
The airport authority and tenants of the airport are encouraged to work in partnership in the development of the SWPCP. Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity. An airport tenant may obtain authorization under this permit and develop a SWPCP for discharges from his/her own areas of the airport.

E.S.3 Additional Technology-Based Effluent Limits

E.S.3.1 *Good Housekeeping Measures.*

E.S.3.1.1 *Aircraft, Ground Vehicle and Equipment Maintenance Areas*. Minimize the contamination of stormwater from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater from the maintenance area and providing treatment or recycling.

E.S.3.1.2 *Aircraft, Ground Vehicle and Equipment Cleaning Areas*. Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater from cleaning areas.

E.S.3.1.3 *Aircraft, Ground Vehicle and Equipment Storage Areas*. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

E.S.3.1.4 *Material Storage Areas*. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A," etc.). Minimize contamination of stormwater from these areas. Consider the following control measures (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

E.S.3.1.5 *Airport Fuel System and Fueling Areas*. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater.

E.S.3.1.6 *Source Reduction*. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

E.S.3.1.6.1 *Runway Deicing Operation*: To minimize the discharge of pollutants in stormwater from runway deicing operations, implement source reduction control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup; heating sand; and product substitution. Chemical options to replace pavement deicers (urea or glycol) include (list not exclusive): potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

E.S.3.1.6.2 *Aircraft Deicing Operations*. Minimize the discharge of pollutants in stormwater from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Determine whether alternatives to glycol and whether containment measures for applied chemicals are feasible. Implement control measures for reducing deicing fluid such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems where feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations. The evaluations and determinations required by this Part should be carried out by the personnel most familiar with the

particular aircraft and flight operations and related systems in question (versus an outside entity such as the airport authority.

E.S.3.1.7 *Management of Stormwater*. Minimize the discharge of pollutants in stormwater from deicing chemicals. To minimize discharges of pollutants in stormwater from aircraft deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): installing a centralized deicing pad to recover deicing fluid following application; plug-and-pump (PnP); using vacuum/collection trucks (glycol recovery vehicles); storing contaminated stormwater/deicing fluids in tanks; recycling collected deicing fluid where feasible; releasing controlled amounts to a publicly owned treatment works; separation of contaminated snow; conveying contaminated stormwater into an impoundment for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing stormwater into vegetative swales or other infiltration measures. To minimize discharges of pollutants in stormwater from runway deicing, implement runoff management control measures such as the following, where determined to be feasible and that accommodate considerations of safety, space, operational constraints, and flight considerations (list not exclusive): mechanical systems (snow plows, brushes); conveying contaminated stormwater into swales and/or a stormwater impoundment; and pollution prevention practices such as ice detection systems, and airfield prewetting.

E.S.3.1.8 When applying deicing fluids during non-precipitation events (also referred to as "clear ice deicing"), implement control measures to prevent unauthorized discharge of pollutants (dry-weather discharges of pollutants would need coverage under an NPDES wastewater permit), or to minimize the discharge of pollutants from deicing fluids in later stormwater discharges, implement control measures such as the following, where determined to be feasible and that accommodate considerations safety, space, operational constraints, and flight considerations (list not exclusive): recovering deicing fluids; preventing the fluids from entering storm sewers or other stormwater discharge conveyances (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains); releasing controlled amounts to a publicly owned treatment works Used deicing fluid should be recycled whenever practicable.

E.S.3.2 *Deicing Season.* You must determine the seasonal timeframe (e.g., December- February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH.

E.S.4 Additional SWPCP Requirements

E.S.4.1 *Drainage Area Site Map*. Document in the SWPCP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/stormwater: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment

maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

E.S.4.2 *Potential Pollutant Sources.* In your inventory of exposed materials, describe in your SWPCP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Safety Data Sheets [SDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPCPs.

E.S.4.3 *Vehicle and Equipment Washwater Requirements.* Attach to or reference in your SWPCP, a copy of the NPDES permit issued for vehicle/equipment washwater, if applicable. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPCP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPCP.

E.S.4.4 *Documentation of Control Measures Used for Management of Stormwater:* Document in your SWPCP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

E.S.5 Sector-Specific Benchmarks

At a minimum conduct facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. DEQ may specifically require you to increase inspection frequencies.

E.S.6 Sector-Specific Benchmarks

Table E.S-1 identifies benchmarks that apply to the specific subsectors of Sector S. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, unless a facility has an Individual NPDES Permit for de-icing activities.

Table E.S-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities, use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor these parameters at discharge points that collect stormwater from areas where deicing activities occur (SIC 4512-4581) and when deicing activities are occurring	Biochemical Oxygen Demand (BOD_5)	30 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Ammonia	2.14 mg/L
	pH	Statewide benchmark

E.S.7 Effluent Limitations Based on Effluent Limitations Guidelines and New Source Performance Standards

E.S.7.1 *Airfield Pavement Deicing*. For both existing and new "primary airports" (as defined at 40 CFR 449.2) with 1,000 or more annual non-propeller aircraft departures that discharge stormwater from airfield pavement deicing activities, there shall be no discharge of airfield pavement deicers containing urea. To comply with this limitation, such airports must do one of the following: (1) certify annually on the annual report that you do not use pavement deicers containing urea, or (2) meet the effluent limitation in Table E.S-2.

E.S.7.2 *Aircraft Deicing*. Airports that are both "primary airports" (as defined at 40 CFR 449.2) and new sources ("new airports") with 1,000 or more annual non-propeller aircraft departures must meet the applicable requirements for aircraft deicing at 40 CFR 449.11(a). Discharges of the collected aircraft deicing fluid directly to waters of the state are not eligible for coverage under this permit.

E.S.7.3 Monitoring, Reporting and Recordkeeping. For new and existing airports subject to the effluent limitations in E.S.7.1 or E.S.7.2 of this permit, you must comply with the applicable monitoring, reporting and recordkeeping requirements outlined in 40 CFR 449.20.

Table E.S-2[1]

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Effluent Limitation
Discharge containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Ammonia as Nitrogen	14.7 mg/L. daily maximum

[1]Monitor semi-annually.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector T – Treatment Works

E.T.1 Additional Technology-Based Effluent Limits

E.T.1.1 *Control Measures.* In addition to the other control measures, consider the following: routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).

E.T.1.2 *Employee Training.* At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

E.T.2 Additional SWPCP Requirements

E.T.2.1 *Site Map*. Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.

E.T.2.2 *Potential Pollutant Sources*. Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.

E.T.2.3 *Wastewater and Washwater Requirements.* If wastewater and/or vehicle and equipment wash-water is not covered by another NPDES permit but is handled in another manner (e.g., hauled offsite, retained onsite), the disposal method must be described and all pertinent information (e.g., frequency, volume, destination) must be included in your SWPCP. Discharges of vehicle and equipment washwater, including tank cleaning operations, are not authorized by this permit for this sector.

E.T.3 Additional Inspection Requirements

Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station.

E.T.4 Sector-Specific Benchmarks

Table E.T.1

Subsector (You may be subject to requirements for more than one Sector / Subsector)	Parameter	Benchmark Monitoring Concentration
Treatment Works	E. coli	406 organisms/100 mL

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector U – Food and Kindred Products

E.U.1 Additional Technology-Based Limitations

E.U.1.1 *Employee Training*. Address pest control in your employee training program.

E.U.2 Additional SWPCP Requirements

E.U.2.1 *Drainage Area Site Map.* Document in your SWPCP the locations of the following activities if they are exposed to stormwater: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

E.U.2.2 *Potential Pollutant Sources.* Document in your SWPCP, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

E.U.3 Additional Inspection Requirements

Inspect on a monthly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

E.U.4 Sector-Specific Benchmarks

Table E.U-1 identifies benchmarks that apply to the specific subsectors of Sector U. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.U-1

Subsector (You may be subject to requirements for more than one Sector / Subsector)	Parameter	Benchmark Monitoring Concentration
Grain Mill Products (SIC codes 2041-2048)	Total Suspended Solids (TSS)	Statewide benchmark
Fats and Oils Products (SIC 2074-2079)	Total Suspended Solids (TSS)	Statewide benchmark
	Biochemical Oxygen Demand (BOD_5)	30 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Nitrate plus Nitrite Nitrogen	10 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector V – Textile Mills, Apparel, and Other Fabric Products

E.V.1 Additional Technology-Based Limitations

E.V.1.1 *Good Housekeeping Measures.*

E.V.1.1.1 *Material Storage Areas.* Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Minimize contamination of the stormwater from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with stormwater. Collect and dispose of washwater from these cleanings properly.

E.V.1.1.2 *Material Handling Areas.* Minimize contamination of stormwater from material handling operations and areas. Consider the following (or their equivalents): use of spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals, dyes, or wastewater.

E.V.1.1.3 *Fueling Areas.* Minimize contamination of stormwater from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing run-on of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater collected from the fueling area.

E.V.1.1.4 *Above-Ground Storage Tank Area.* Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regular cleanup of these areas; including measures for tanks, piping and valves explicitly in your SPCC program; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

E.V.1.2 *Employee Training.* As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

E.V.2 Additional SWPCP Requirements

E.V.2.1 *Potential Pollutant Sources. Document in your SWPCP the following additional sources* and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing, drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

E.V.2.2 *Description of Good Housekeeping Measures for Material Storage Areas.* Document in the SWPCP your containment area or enclosure for materials stored outdoors.

E.V.3 Additional Inspection Requirements

Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector W – Furniture and Fixtures

E.W.1 Additional Technology-Based Limitations

E.W.1.1 *Drainage Area Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: material storage (including tanks or other vessels used for liquid or waste storage) areas; outdoor material processing areas; areas where wastes are treated, stored, or disposed of; access roads; and rail spurs.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector X – Printing and Publishing

E.X.1 Additional Technology-Based Effluent Limits

E.X.1.1 *Good Housekeeping Measures*.

E.X.1.1.1 *Material Storage Areas.* Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the stormwater from such storage areas. Also, consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

E.X.1.1.2 *Material Handling Area.* Minimize contamination of stormwater from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials). Consider the following (or their equivalents): using spill and overflow protection, covering fueling areas, and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

E.X.1.1.3 *Fueling Areas.* Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater collected from the fueling area.

E.X.1.1.4 *Above Ground Storage Tank Area.* Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regularly cleaning these areas, explicitly addressing tanks, piping and valves in the SPCC program, minimizing stormwater runoff from adjacent areas, restricting access to the area, inserting filters in adjacent catch basins, providing absorbent booms in unbermed fueling areas, using dry cleanup methods, and permanently sealing drains within critical areas that may discharge to a storm drain.

E.X.1.2 *Employee Training.* As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

E.X.2 Additional SWPCP Requirements

E.X.2.1 *Description of Good Housekeeping Measures for Material Storage Areas.* In connection with E.X.1.1.1, describe in the SWPCP the containment area or enclosure for materials stored outdoors.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries

E.Y.1 Additional Technology-Based Effluent Limits

E.Y.1.1 *Controls for Rubber Manufacturers.* Minimize the discharge of zinc in your stormwater discharges. Following are some general control measure options to consider: using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize "puffing" losses when the container is opened, and using automatic dispensing and weighing equipment.

E.Y.1.1.1 *Zinc Bags.* Ensure proper handling and storage of zinc bags at your facility. Following are some control measure options: employee training on the handling and storage of zinc bags, indoor storage of zinc bags, cleanup of zinc spills without washing the zinc into the storm drain, and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

E.Y.1.1.2 *Dumpsters.* Minimize discharges of zinc from dumpsters through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering the dumpster; moving the dumpster indoors; and providing a lining for the dumpster.

E.Y.1.1.3 *Dust Collectors and Baghouses.* Minimize contributions of zinc to stormwater from dust collectors and baghouses. Replace or repair, as appropriate, improperly operating dust collectors and baghouses.

E.Y.1.1.4 *Grinding Operations.* Minimize contamination of stormwater as a result of dust generation from rubber grinding operations. Where determined to be feasible, install a dust collection system.

E.Y.1.1.5 *Zinc Stearate Coating Operations.* Minimize the potential for stormwater contamination from drips and spills of zinc stearate slurry that may be released to the storm drain. Where determined to be feasible, use alternative compounds to zinc stearate.

E.Y.1.2 *Controls for Plastic Products Manufacturers.* Minimize the discharge of plastic resin pellets in your stormwater discharges through implementation of control measures such as the following, where determined to be feasible (list not exclusive): minimizing spills; cleaning up of spills promptly and thoroughly; sweeping thoroughly; pellet capturing; employee education; and disposal precautions.

E.Y.2 Additional SWPCP Requirements

E.Y.2.1 *Potential Pollutant Sources for Rubber Manufacturers.* Document in your SWPCP the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater.

E.Y.3 Sector-Specific Benchmarks

Table E.Y-1 identifies benchmarks that apply to the specific subsectors of Sector Y. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.Y-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Rubber Products Manufacturing (SIC codes 3011, 3021, 3052, 3053, 3061, 3069)	Total zinc Freshwater	Statewide benchmark
	Total zinc Saltwater	0.46 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector Z – Leather Tanning and Finishing

E.Z.1 Additional Technology-Based Effluent Limits

E.Z.1.1 *Good Housekeeping Measures.*

E.Z.1.1.1 *Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products.* Minimize contamination of stormwater from pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings). Store or protect indoors with polyethylene wrapping, tarpaulins, roofed storage, etc. where practicable. Place materials on an impermeable surface and enclose or put berms (or equivalent measures) around the area to prevent stormwater run-on and runoff where practicable.

E.Z.1.1.2 *Material Storage Areas.* Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials) minimize contact of such materials with stormwater.

E.Z.1.1.3 *Buffing and Shaving Areas.* Minimize contamination of stormwater discharge with leather dust from buffing and shaving areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): implementing dust collection enclosures; implementing preventive inspection and maintenance programs; or other appropriate preventive measures.

E.Z.1.1.4 *Receiving, Unloading, and Storage Areas.* Minimize contamination of stormwater discharge from receiving, unloading, and storage areas. If these areas are exposed, implement control measures such as the following, where determined to be feasible (list not exclusive): covering all hides and chemical supplies; diverting drainage to the process sewer; or grade berming or curbing the area to prevent stormwater discharge.

E.Z.1.1.5 *Outdoor Storage of Contaminated Equipment*. Minimize contact of stormwater with contaminated equipment through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.

E.Z.1.1.6 *Waste Management.* Minimize contamination of stormwater discharge from waste storage areas through implementation of control measures such as the following, where determined to be feasible (list not exclusive): covering dumpsters; moving waste management activities indoors; covering waste piles with temporary covering material such as tarpaulins or polyethylene; and minimizing stormwater discharge by enclosing the area or building berms around the area.

E.Z.2 Additional SWPCP Requirements

E.Z.2.1 *Drainage Area Site Map.* Identify in your SWPCP where any of the following may be exposed to precipitation or stormwater: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations.

E.Z.2.2 *Potential Pollutant Sources.* Document in your SWPCP the following sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings.

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector AA – Fabricated Metal Products

E.AA.1 Additional Technology-Based Effluent Limits

E.AA.1.1 *Good Housekeeping Measures.*

E.AA.1.1.1 *Raw Steel Handling Storage.* Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

E.AA.1.1.2 *Paints and Painting Equipment.* Minimize exposure of paint and painting equipment to stormwater.

E.AA.1.2 *Spill Prevention and Response Procedures.* Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed

E.AA.1.2.1 *Metal Fabricating Areas.* Maintain clean, dry, orderly conditions in these areas. Consider using dry clean-up techniques.

E.AA.1.2.2 *Storage Areas for Raw Metal.* Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials through implementation of control measures such as the following, where determined to be feasible (list not exclusive): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

E.AA.2.2.3 *Metal Working Fluid Storage Areas.* Minimize the potential for stormwater contamination from storage areas for metal working fluids.

E.AA.1.2.4 *Cleaners and Rinse Water.* Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible.

E.AA.1.2.5 *Lubricating Oil and Hydraulic Fluid Operations.* Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. Use monitoring equipment or other devices to detect and control leaks and overflows where feasible. Install perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures where feasible.

E.AA.1.2.6 *Chemical Storage Areas.* Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.

E.AA.1.3 *Spills and Leaks.* In your spill prevention and response procedures, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

E.AA.2 Additional SWPCP Requirements

E.AA.2.1 *Drainage Area Site Map.* Document in your SWPCP where any of the following may be exposed to precipitation or stormwater: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

E.AA.2.2 *Potential Pollutant Sources.* Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

E.AA.3 Additional Inspection Requirements

E.AA.3.1 *Inspections.* At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, and vehicle fueling and maintenance areas. Also, inspect areas associated with the storage of raw metals, spent solvents and chemicals storage areas, outdoor paint areas, and drainage from roof. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

E.AA.4 Sector-Specific Benchmarks

Table E.AA-1 identifies benchmarks that apply to the specific subsectors of Sector AA. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.AA-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Aluminum	1.10 mg/L
	Nitrate plus Nitrite Nitrogen	10 mg/L
	Total zinc Freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L
Fabricated Metal coating and Engraving (SIC 3479)	Nitrate plus Nitrite Nitrogen	10 mg/L
	Total zinc Freshwater	Statewide benchmark
	Total zinc saltwater	0.46 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity
Sector AB – Transportation Equipment, Industrial or Commercial Machinery

E.AB.1 Additional SWPCP Requirements

E.AB.1.1 *Drainage Area Site Map.* Identify in your SWPCP where any of the following may be exposed to precipitation or stormwater: vents and stacks from metal processing and similar operations.

SCHEDULE F
NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

A1. Duty to Comply with Permit

The permittee must comply with all conditions of this permit. Failure to comply with any permit condition is a violation of Oregon Revised Statutes (ORS) 468B.025 and the federal Clean Water Act and is grounds for an enforcement action. Failure to comply is also grounds for DEQ to terminate, modify and reissue, revoke, or deny renewal of a permit.

A2. Penalties for Water Pollution and Permit Condition Violations

The permit is enforceable by DEQ or EPA, and in some circumstances also by third-parties under the citizen suit provisions of 33 USC § 1365. DEQ enforcement is generally based on provisions of state statutes and Environmental Quality Commission (EQC) rules, and EPA enforcement is generally based on provisions of federal statutes and EPA regulations.

ORS 468.140 allows DEQ to impose civil penalties up to $25,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution in the second degree, is a Class A misdemeanor and is punishable by a fine of up to $25,000, imprisonment for not more than one year, or both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, unlawful water pollution in the first degree is a Class B felony and is punishable by a fine of up to $250,000, imprisonment for not more than 10 years, or both.

The Clean Water Act provides that any person who violates permit condition, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation.

The Clean Water Act provides that any person who *negligently* violates any condition, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both.

In the case of a second or subsequent conviction for a *negligent* violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both.

In the case of a second or subsequent conviction for a *knowing* violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

Any person who *knowingly* violates section any permit condition, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both.

In the case of a second or subsequent conviction for a *knowing* endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both.

An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

Any person may be assessed an administrative penalty by the Administrator for violating any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act.

Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000.

Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

A3. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit. In addition, upon request of DEQ, the permittee must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

A4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

DEQ may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

A5. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute.
b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts.
c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

d. The permittee is identified as a Designated Management Agency or allocated a wasteload under a total maximum daily load (TMDL).

e. New information or regulations.
f. Modification of compliance schedules.
g. Requirements of permit reopener conditions
h. Correction of technical mistakes made in determining permit conditions.
i. Determination that the permitted activity endangers human health or the environment.
j. Other causes as specified in 40 CFR §§ 122.62, 122.64, and 124.5.
k. For communities with combined sewer overflows (CSOs):
   (1) To comply with any state or federal law regulation for CSOs that is adopted or promulgated subsequent to the effective date of this permit.
   (2) If new information that was not available at the time of permit issuance indicates that CSO controls imposed under this permit have failed to ensure attainment of water quality standards, including protection of designated uses.
   (3) Resulting from implementation of the permittee's long-term control plan and/or permit conditions related to CSOs.

The filing of a request by the permittee for a permit modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

A6. Toxic Pollutants
The permittee must comply with any applicable effluent standards or prohibitions established under Oregon Administrative Rule (OAR) 340-041-0033 and section 307(a) of the federal Clean Water Act for toxic pollutants, and with standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act, within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

A7. Property Rights and Other Legal Requirements
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, or authorize any injury to persons or property or invasion of any other private rights, or any infringement of federal, tribal, state, or local laws or regulations.

A8. Permit References
Except for effluent standards or prohibitions established under section 307(a) of the federal Clean Water Act and OAR 340-041-0033 for toxic pollutants, and standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

A9. Permit Fees
The permittee must pay the fees required by OAR.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

B1. Proper Operation and Maintenance
The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve

compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

B2. Need to Halt or Reduce Activity Not a Defense

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B3. Bypass of Treatment Facilities

a. Definitions
   (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs b and c of this section.
   (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.
   (1) Bypass is prohibited and DEQ may take enforcement action against a permittee for bypass unless:
      i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventative maintenance; and
      iii. The permittee submitted notices and requests as required under General Condition B3.c.
   (2) DEQ may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, if DEQ determines that it will meet the three conditions listed above in General Condition B3.b.(1).

c. Notice and request for bypass.
   (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, a written notice must be submitted to DEQ at least ten days before the date of the bypass.
   (2) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required in General Condition D5.

B4. Upset

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of General Condition B4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   (1) An upset occurred and that the permittee can identify the causes(s) of the upset;
   (2) The permitted facility was at the time being properly operated;
   (3) The permittee submitted notice of the upset as required in General Condition D5, hereof (24-hour notice); and
   (4) The permittee complied with any remedial measures required under General Condition A3 hereof.

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

B5. Treatment of Single Operational Upset

For purposes of this permit, a single operational upset that leads to simultaneous violations of more than one pollutant parameter will be treated as a single violation. A single operational upset is an exceptional incident that causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one federal Clean Water Act effluent discharge pollutant parameter. A single operational upset does not include federal Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational upset is a violation.

B6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definition. "Overflow" means any spill, release or diversion of sewage including:
   (1) An overflow that results in a discharge to waters of the state; and
   (2) An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral), even if that overflow does not reach waters of the state.

b. Reporting required. All overflows must be reported orally to DEQ within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D5.

B7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs that threatens public health, the permittee must take such steps as are necessary to alert the public, health agencies and other affected entities (for example, public water systems) about the extent and nature of the discharge in accordance with the notification procedures developed under General Condition B8.

Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

B8. Emergency Response and Public Notification Plan

The permittee must develop and implement an emergency response and public notification plan that identifies measures to protect public health from overflows, bypasses, or upsets that may endanger public health. At a minimum the plan must include mechanisms to:

a. Ensure that the permittee is aware (to the greatest extent possible) of such events;
b. Ensure notification of appropriate personnel and ensure that they are immediately dispatched for investigation and response;
c. Ensure immediate notification to the public, health agencies, and other affected public entities (including public water systems). The overflow response plan must identify the public health and other officials who will receive immediate notification;
d. Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained;
e. Provide emergency operations; and
f. Ensure that DEQ is notified of the public notification steps taken.

B9. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering waters of the state, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

C1. Representative Sampling

Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit, and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of DEQ. Samples must be collected in accordance with requirements in 40 CFR part 122.21 and 40 CFR part 403 Appendix E.

C2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

C3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503 unless other test procedures have been specified in this permit.

For monitoring of recycled water with no discharge to waters of the state, monitoring must be conducted according to test procedures approved under 40 CFR part 136 or as specified in the most

recent edition of Standard Methods for the Examination of Water and Wastewater unless other test procedures have been specified in this permit or approved in writing by DEQ.

C4. Penalties for Tampering

The federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit may, upon conviction, be punished by a fine of not more than $10,000 per violation, imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both.

C5. Reporting of Monitoring Results

Monitoring results must be summarized each month on a Discharge Monitoring Report form approved by DEQ. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

C6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503, or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (for example, total residual chlorine), only the average daily value must be recorded unless otherwise specified in this permit.

C7. Averaging of Measurements

Calculations for all limitations that require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

C8. Retention of Records

Records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities must be retained for a period of at least 5 years (or longer as required by 40 CFR part 503). Records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit must be retained for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of DEQ at any time.

C9. Records Contents

Records of monitoring information must include:

a. The date, exact place, time, and methods of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

C10. Inspection and Entry

The permittee must allow DEQ or EPA upon the presentation of credentials to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

C11. Confidentiality of Information

Any information relating to this permit that is submitted to or obtained by DEQ is available to the public unless classified as confidential by the Director of DEQ under ORS 468.095. The permittee may request that information be classified as confidential if it is a trade secret as defined by that statute. The name and address of the permittee, permit applications, permits, effluent data, and information required by NPDES application forms under 40 CFR § 122.21 are not classified as confidential [40 CFR § 122.7(b)].

SECTION D. REPORTING REQUIREMENTS

D1. Planned Changes

The permittee must comply with OAR 340-052, "Review of Plans and Specifications" and 40 CFR § 122.41(l)(1). Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers may be commenced until the plans and specifications are submitted to and approved by DEQ. The permittee must give notice to DEQ as soon as possible of any planned physical alternations or additions to the permitted facility.

D2. Anticipated Noncompliance

The permittee must give advance notice to DEQ of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

D3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and EQC rules. No permit may be transferred to a third party without prior written approval from DEQ. DEQ may require modification, revocation, and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under 40 CFR § 122.61. The permittee must notify DEQ when a transfer of property interest takes place.

D4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

D5. Twenty-Four Hour Reporting

The permittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally (by telephone) to the DEQ regional office or Oregon Emergency Response System (1-800-452-0311) as specified below within 24 hours from the time the permittee becomes aware of the circumstances.

a. Overflows.
   (1) Oral Reporting within 24 hours.
      i. For overflows other than basement backups, the following information must be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311. For basement backups, this information should be reported directly to the DEQ regional office.
         (a) The location of the overflow;
         (b) The receiving water (if there is one);
         (c) An estimate of the volume of the overflow;
         (d) A description of the sewer system component from which the release occurred (for example, manhole, constructed overflow pipe, crack in pipe); and
         (e) The estimated date and time when the overflow began and stopped or will be stopped.
      ii. The following information must be reported to the DEQ regional office within 24 hours, or during normal business hours, whichever is earlier:
         (a) The OERS incident number (if applicable); and
         (b) A brief description of the event.
   (2) Written reporting postmarked within 5 days.
      i. The following information must be provided in writing to the DEQ regional office within 5 days of the time the permittee becomes aware of the overflow:
         (a) The OERS incident number (if applicable);
         (b) The cause or suspected cause of the overflow;
         (c) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
         (d) Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps; and
         (e) For storm-related overflows, the rainfall intensity (inches/hour) and duration of the storm associated with the overflow.

      DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

b. Other instances of noncompliance.
   (1) The following instances of noncompliance must be reported:
      i. Any unanticipated bypass that exceeds any effluent limitation in this permit;
      ii. Any upset that exceeds any effluent limitation in this permit;
      iii. Violation of maximum daily discharge limitation for any of the pollutants listed by DEQ in this permit; and
      iv. Any noncompliance that may endanger human health or the environment.
   (2) During normal business hours, the DEQ regional office must be called. Outside of normal business hours, DEQ must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

(3) A written submission must be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission must contain:
   i. A description of the noncompliance and its cause;
   ii. The period of noncompliance, including exact dates and times;
   iii. The estimated time noncompliance is expected to continue if it has not been corrected;
   iv. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
   v. Public notification steps taken, pursuant to General Condition B**7.**

(4) DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

D6. Other Noncompliance
The permittee must report all instances of noncompliance not reported under General Condition D4 or D5 at the time monitoring reports are submitted. The reports must contain:
a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected; and
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

D7. Duty to Provide Information
The permittee must furnish to DEQ within a reasonable time any information that DEQ may request to determine compliance with the permit or to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee must also furnish to DEQ, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it has failed to submit any relevant facts or has submitted incorrect information in a permit application or any report to DEQ, it must promptly submit such facts or information.

D8. Signatory Requirements
All applications, reports or information submitted to DEQ must be signed and certified in accordance with 40 CFR § 122.22.

D9. Falsification of Information
Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed $125,000 per violation and up to 5 years in prison per ORS chapter 161. Additionally, according to 40 CFR § 122.41(k)(2), any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or non-compliance will, upon conviction, be punished by a federal civil penalty not to exceed $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

D10. Changes to Indirect Dischargers

The permittee must provide adequate notice to DEQ of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the federal Clean Water Act if it were directly discharging those pollutants and;

b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For the purposes of this paragraph, adequate notice must include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

SECTION E. DEFINITIONS

E1. *BOD* or BOD_5 means five-day biochemical oxygen demand.
E2. *CBOD* or $CBOD_5$ means five-day carbonaceous biochemical oxygen demand.
E3. *TSS* means total suspended solids.
E4. *Bacteria* means but is not limited to fecal coliform bacteria, total coliform bacteria, *Escherichia coli* (*E. coli*) bacteria, and *Enterococcus* bacteria.
E5. *FC* means fecal coliform bacteria.
E6. *Total residual chlorine* means combined chlorine forms plus free residual chlorine
E7. *Technology based permit effluent limitations* means technology-based treatment requirements as defined in 40 CFR § 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
E8. *mg/l* means milligrams per liter.
E9. *µg/l* means microgram per liter.
E10. *kg* means kilograms.
E11. m^3/d means cubic meters per day.
E12. *MGD* means million gallons per day.
E13. *Average monthly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
E14. *Average weekly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
E15. *Daily discharge* as defined at 40 CFR § 122.2 means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge must be calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge must be calculated as the average measurement of the pollutant over the day.
E16. *24-hour composite sample* means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
E17. *Grab sample* means an individual discrete sample collected over a period of time not to exceed 15 minutes.
E18. *Quarter* means January through March, April through June, July through September, or October through December.
E19. *Month* means calendar month.

E20. *Week* means a calendar week of Sunday through Saturday.
E21. *POTW* means a publicly-owned treatment works.

APPENDIX A: BASIN-SPECIFIC pH CONCENTRATIONS

pH Basin-Specific Criteria (OAR 340-041-0101 through 340-041-0350) Impairment Monitoring Concentrations and Water Quality-based Effluent Limit

Basin or Water Body	OAR	Water	Criteria Range
General	**340-041-0021(1)(a)**	Marine	7.0 to 8.5
General	**340-041-0021(1)(b)**	Estuarine and fresh waters	See basin-specific criteria
Columbia River	**340-041-0104(1)**	Main stem Columbia River (mouth to river mile 309):	7.0 to 8.5
Snake River	**340-041-0124(1)**	Main stem Snake River (river miles 260 to 335)	7.0 to 9.0
Deschutes Basin	**340-041-0135(1)(a)**	All other basin streams (except Cascade lakes)	6.5 to 8.5
	340-041-0135(1)(b)	Cascade lakes above 3,000 feet altitude	6.0 to 8.5
Goose and Summer Lakes Basin	**340-041-0145(1)(a)**	Goose Lake	7.5 to 9.5
	340-041-0145(1)(b)	All other basin waters	7.0 to 9.0
Grande Ronde Basin	**340-041-0156(1)**	All basin streams (other than main stem Snake River)	6.5 to 9.0
Hood Basin	**340-041-0165(1)(a)**	Hood River Basin streams (except main stem Columbia River and Cascade lakes)	6.5 to 8.5
	340-041-0165(1)(b)	Cascade lakes above 3,000 feet altitude	6.0 to 8.5
John Day Basin	**340-041-0175(1)**	All basin streams (other than the main stem Colombia River)	6.5 to 9.0
Klamath Basin	**340-041-0185(1)(a)**	Fresh waters except Cascade lakes	6.5 to 9.0
	340-041-0185(1)(b)	Cascade lakes above 5,000 feet altitude	6.0 to 8.5
Malheur Lake Basin	**340-041-0195(1)**	All	7.0 to 9.0
Malheur River Basin	**340-041-0207(1)**	All	7.0 to 9.0
Mid Coast Basin	**340-041-0225(1)(a)**	Marine waters	7.0 to 8.5

Basin or Water Body	OAR	Water	Criteria Range
	340-041-0225(1)(b)	Estuarine and fresh waters	6.5 to 8.5
North Coast Basin	**340-041-0235(1)(a)**	Marine waters	7.0 to 8.5
	340-041-0235(1)(b)	Estuarine and fresh waters	6.5 to 8.5
Owyhee Basin	**340-041-0256(1)**	All	7.0 to 9.0
Powder/Burnt Basins	**340-041-0265(1)**	All basin streams (other than main stem Snake River)	6.5 to 9.0
Rogue Basin	**340-041-0275(1)(a)**	Marine waters	7.0 to 8.5
	340-041-0275(1)(b)	Estuarine and fresh waters (except Cascade lakes)	6.5 to 8.5
	340-041-0275(1)(c)	Cascade lakes above 3,000 feet altitude	6.0 to 8.5
Sandy Basin	**340-041-0290(1)(a)**	All basin waters (except main stem Columbia River and Cascade lakes)	6.5 to 8.5
	340-041-0290(1)(b)	Cascade lakes above 3,000 feet altitude	6.0 to 8.5
South Coast Basin	**340-041-0305(1)(a)**	Estuarine and fresh waters	6.5 to 8.5
	340-041-0305(1)(b)	Marine waters	7.0 to 8.5
Umatilla Basin	**340-041-0315(1)**	All basin streams (other than main stem Columbia River)	6.5 to 9.0
Umpqua Basin	**340-041-0326(1)(a)**	Marine waters	7.0 to 8.5
	340-041-0326(1)(b)	Estuarine and fresh waters (except Cascade lakes)	6.5 to 8.5
	340-041-0326(1)(c)	Cascade lakes above 3,000 feet altitude	6.0 to 8.5
Walla Walla Basin	**340-041-0336**	All	6.5 to 9.0
Willamette Basin	**340-041-0345(1)(a)**	All basin waters (except main stem Columbia River and Cascade lakes)	6.5 to 8.5
	340-041-0345(1)(b)	Cascade lakes above 3,000 feet altitude	6.0 to 8.5

APPENDIX B

INTERNAL SWPCP FORMS:

TIER 1 REPORT FORM
MONTHLY INPSECTION FORM
COMPREHENSIVE SITE EVALUATION/INSPECTION SWPCP REVIEW CHECKLIST
COMPREHENSIVE SITE EVALUATION/INSPECTION – BMP REVIEW
ACTION ITEM AND PLAN REVISION FORM
EMPLOYEE TRAINING FORM
LIST OF SIGNIFICANT SPILLS OR LEAKS FORM

State of Oregon
Department of
Environmental
Quality

Department of Environmental Quality
Industrial Stormwater Permits
Tier I Report Form

Instructions: Fill out this form if stormwater sampling results show an exceedance of any statewide benchmark(s), sector specific benchmark(s), or reference concentration(s) for impairment pollutants identified in the permit assignment letter. If you need additional space to answer the questions below, please attach additional sheet(s). The form must be filled out within 30 days of receiving analytical results. If no changes to the SWPCP are required, please retain this form onsite.

Date Form Prepared: _____

Facility Name: _____ File Number #: _____

County: _____ SIC Code(s): _____

Prepared By: _____ Phone Number: _____

E-mail Address: _____

Form is being filled out in response to:

☐ Statewide Benchmark Exceedance (list analyte(s)):

☐ Sector Specific Benchmark Exceedance (list analytes(s)):

☐ Impairment Pollutant Reference Concentration Exceedance (list analyte(s)):

Date Sampling Occurred: _____

Date Lab Results Received: _____

Describe the result(s) of the investigation of the elevated pollutant levels:

Describe the corrective action(s) you will take to address the benchmark exceedence(s):

Date corrective action(s) completed or expected to be completed: _____

Are SWPCP revisions necessary? ☐ Yes ☐ No
If "Yes", please describe revisions below:

Please submit the revised pages of the SWPCP to DEQ or Agent, including a schedule for implementing the control measures.

Monthly Inspection Form

Inspection of stormwater controls, best manufacturing practices (BMPs) and prevention activities (e.g. storm water drains, culverts, ditches, good housekeeping, preventive maintenance, soil erosion, spill prevention and response practices, etc.).

Date: _____

Inspector(s): _____

_____

Area(s) Inspected:

Catch Basins _____
Aboveground Tank _____
Paved Areas _____
Parking Areas _____
Detention Pond _____
Treatment System _____
Vegetated Swale _____
Culvert _____

Results and Findings of Inspection:

_____

_____

_____

_____

_____

_____

_____

Steps taken to correct problems (Please include implementation dates for corrective actions.):

_____

_____

_____

_____

_____

_____

_____

Signature(s):

_____

_____

_____

File this form with the Stormwater Pollution Control Plan (SWPCP).

Comprehensive Site Evaluation Inspection
SWPCP Review Checklist

Date: **Reviewer(s):**

Topic	Up-To-Date & Implemented Yes/No/NA	Comment
Section 1.0 – Introduction		
Objective		
General Information		
Stormwater Pollution Control Team		
Section 2.0 – Site Description		
Industrial Activities		
Potential Contributing Pollutants		
Control Measures		
Impervious Surface Estimate		
Receiving Waters		
Stormwater Drainage		
Section 3.0 – Procedures and Schedules		
Narrative Technology-Based Effluent Limits		
Spill Prevention and Emergency Response Procedures		
Preventative Maintenance Procedures		
Employee Education Schedule		
Section 4.0 – Monitoring		
Section 5.0 – Reporting and Recordkeeping Requirements		
Reporting Monitoring Data		
Record Keeping Procedures		
APPENDIX A		
APPENDIX B		
APPENDIX C		
APPENDIX D		
APPENDIX E		
APPENDIX F		
APPENDIX G		
APPENDIX H		
APPENDIX I		
APPENDIX J		
APPENDIX K		
APPENDIX L		
APPENDIX M		

Summarize actions needed as a result of the SWPCP Review:

Signature(s):

File this form with the Stormwater Pollution Control Plan (SWPCP).

Comprehensive Site Evaluation Inspection
Best Management Practices Review

Inspect to evaluate effectiveness of best manufacturing practices (e.g. good housekeeping, preventive maintenance, sediment and erosion control, spill prevention and response, etc.). Inspect drainage structures and areas where materials are exposed to storm water (e.g. idle equipment storage; outdoor finished product storage; oil products handling, transfer and storage areas; haul roads and parking lots; etc.). Identify any additional potential pollutants.

Date: _____ **Inspector(s):** _____

Areas/Practices to Evaluate	**Evaluate Best Management Practices (BMPs)**				**Explanation**
	Effective	**Needs Improvement**	**Not Implemented**	**Need New or Additional BMP**	
Stormwater Management					
Housekeeping					
Preventative Maintenance					
Spill Prevention and Response					

Summarize actions to be taken:

_____

_____

_____

Action Item and Plan Revision Form

Document action items. Examples of action items include: SWPCP review, SPCC plan review, annual employee training, semi-annual inspection of BMPs (e.g. good housekeeping, preventive maintenance, sediment and erosion control, spill prevention and response practices), annual BMP compliance evaluation, record keeping and reporting of spills and leaks, visual inspections or analytical monitoring of storm water (if requested by DEQ) and implementation of additional BMPs.

Action Item	Date Performed	Name of Person Performing Action Item	SWPCP Revision?	If "Yes," Describe SWPCP Revision	Date of SWPCP Revision
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		
			Yes ☐ No ☐		

File this form with the Stormwater Pollution Control Plan (SWPCP).

Employee Training Form

Training should be conducted on an annual basis. Training topics should include best management practices (e.g. good housekeeping, preventive maintenance, sediment and erosion control, spill prevention and response), materials handling and storage, storm water monitoring procedures (if requested by DEQ), record keeping and reporting requirements, etc. Training methods include posting of materials (e.g. instructions, notices, procedures, etc.), providing written guidance (e.g. employee handbook), providing on the job training, demonstrations, drills, etc. and holding routine employee meetings or training sessions.

Date	Training Topic(s)	Training Method	Employees Trained

File this form with the Stormwater Pollution Control Plan (SWPCP).

List of Significant Spills or Leaks Form

Use this form to document significant spills or leaks of toxic or hazardous pollutants that have occurred within the three years preceding the effective date of the current General Permit to the present. Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of their reportable quantities.

Description							Clean Up / Response		
Date	Spill or Leak?	Location (as indicated on site map)	Type of Material	Quantity	Source	Reason	Amount of Material Recovered	Material No Longer Exposed to Storm Water?	Preventive Measures Taken

File this form with the Stormwater Pollution Control Plan (SWPCP).

APPENDIX C

LABORATORY ANALYTICAL REPORTS

APPENDIX D

TIER 1 REPORTS/TIER 2 DOCUMENTS

APPENDIX E

SPCC PLAN

Spill Prevention, Control and Countermeasure Plan

McFarlane's Bark, Incorporated
13345 SE Johnson Road
Milwaukie, Clackamas County, Oregon 97222

Prepared by:
Kathleen McFarlane and Dan McFarlane

TABLE OF CONTENTS

INTRODUCTION

The Spill Prevention, Control and Countermeasure Plan (SPCC) is an integral part of Safety Policies. Kept within Our Company Policy Handbook, these Handbooks are easily available for employee perusal at any time through the work day. Company Policy handbooks are located in Employee lunch rooms, Shop Library and Sales Office Libraries.

The (SPCC) rule is intended to help prevent a discharge of oil into navigable waters or adjoining shorelines. This rule, Title 40 of the Code of Federal Regulations (CFR), Part 112 (Oil Pollution Prevention), is part of the United States Environmental Protection Agency's oil spill prevention program and was published under the authority of Section 311(j)(1)(C) of the Federal Water Pollution Control Act (Clean Water Act) in 1974. A facility is covered by the SPCC rule if it has an aggregate aboveground oil storage capacity greater than 1,320 U.S. gallons (including all individual containers that are 55 gallons of greater in capacity) or a completely buried storage capacity greater than 42,000 U.S. gallons and there is a reasonable expectation of an oil discharge into or upon navigable waters of the U.S. or adjoining shorelines. Tributaries to streams might otherwise be considered navigable waters such as small streams and even arroyos. Oil of any type and in any form is covered under the rule, including: petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes.

Location

- A 15000 gallon above ground double wall diesel tank is located on the SE side of property.
- A 500 gallon waste oil tank and waste filter receptacles with secondary containment is located at the NE side of the building.
- A 27' storage trailer with oils and grease that contains 3 - 275 gallon oil tanks 1 – 100 gallon gas tank, 7 to 9 - 55 gallon barrels that consist of gear oils 50-50 mix antifreeze fuel additive windshield fluids along with other smaller containers is located at the NE side of the building.
- Bulk fluid dispensing station is located inside the shop building between the 2 shop bay doors on the NE side of the building
- Small parts washer and oil filter crusher are located inside the building along the south side of the South shop bay on the NE side of the building.

Spill kits are located at the company fueling station, oil storage trailer, and scale house. Each highway truck is also equipped with its own spill kit. Spill response procedures are place-carded at all spill kits:

Spill Clean Up and Control of Hazardous Materials

Spill kits are located at the company fueling station, oil holding tank, scale house and maintenance building. Preventative maintenance is performed to reduce vehicle oil and, or grease leakage on site. Spill response procedures are place-carded at all spill kits:

SPILL CLEANUP
Block off area with cones and caution tape if necessary
Place pads directly on spill
Block off catch basin(s) (if in close proximity)
If mini-booms are necessary to prevent spill from spreading:
Anchor mini-booms with brick or stone
Link booms together using built in connectors
When joining 2 or more mini-booms, overlap slightly

SWALE CLEANUP
Place mini-booms on angle to flow of water
Anchor with stones or heavy object
Place pads on spill area

Hazardous materials are substances that are either, flammable or combustible, explosive, toxic, noxious, corrosive, oxidizable, an irritant or radioactive. All hazardous materials are stored, handled and disposed of by our trained personnel. There are particular receptacles for clean up, recycling and removal.

There is no accumulation of flammable and combustible waste materials or residues so as not to contribute to a fire emergency.

- Fuel Tank ~ This is a non smoking area. There is no welding performed near this area.
- Oil Trailer ~ This is a non smoking area. There is no welding performed near this area.
- Shop ~ Waste Oil Station
- Oil Trailer ~Oil Spill Containment Kit
- Fuel Tank ~ Containment Rag Can
- Shop ~ Dirty Oil Rag Can
- Scale house ~ Oil Spill Containment Kit

All equipment and vehicles that are of size and shape to be able to fit into the building are maintained indoors when ever feasible with the exception of wash down and disabled equipment and vehicles. Catch basins receiving wash down affluent are to be protected by catch basin insert bags or equivalent and skimmed if necessary. Materials such as oil and grease are to considered combustible, be disposed of off site and though appropriate means. Any hazardous materials used in vehicle maintenance are to be stored under cover and in proper containers that are clearly marked, before removal to appropriate facilities. Preventative maintenance is performed to reduce vehicle oil and, or grease leakage on site.

Fluids used and removed during vehicle maintenance are transferred to the holding tank and disposed of using approved methods. The company uses a certified recycler to dispose of waste fluids. Currently the company is using Safety Kleen.

Training

Spill policy and training is incorporated into the company's annual and at time of hire Emergency Action Plan training.

Employee Education Schedule

The training program informs personnel, at all levels of responsibility, of the components and goals of the SPCC; including how and why tasks are to be conducted. For the general facility population, the training is combined with SWPCP and other safety and operational training. General training includes housekeeping information identified as a BMP.

It includes:

- Stormwater management;
- Spill response;
- BMPs; and
- Reporting and record keeping requirements. (See attachment A for Environmental Services Journal.

Training is conducted by posting materials, providing a copy of the SPCC for review, at time of hire within the orientation process, on-the-job training, and/or routine employee meetings. Records of this training are documented. The Hazard Communication Program, Emergency Action Plan, Storm Water Pollution Control, Spill Prevention, Control and Countermeasure Safety Training. The Signature form for this training is filed into employee's Human Resource department folder. Employees are trained within 30 days of hire. Additional on-the-job training may be necessary for some team members depending on their responsibilities.

Site Controls

The company fuel tank is designed to contain a maximum volume spill from reaching storm water. The waste oil tank and filter receptacles are under roof and have a secondary containment that is sized to contain a maximum volume spill from reaching storm water.

Any spillage is removed and disposed of appropriately before contact with surface water as per the company SPCC plan. All equipment and vehicles that are of size and shape to be able to fit into the building are maintained indoors when ever feasible with the exception of wash down and disabled equipment and vehicles. Catch basins receiving wash down affluent are to be protected by catch basin insert bags or equivalent and skimmed if necessary. Materials such as oil and grease are to be considered combustible, and be disposed of off site and through appropriate means. Any hazardous materials used in vehicle maintenance are to be stored under cover and in proper containers that are clearly marked, before removal to appropriate facilities.

Proper Handling and Storage Procedures For Prevention Measures

Housekeeping procedures must be followed and storage in the appropriate location of the following items must be adhered to:

- Fuel Tank ~ Eastern side of property ~ This self-contained, above ground fuel tank is located on site for the use of company vehicles only. Fuel is transferred to the company fuel tank from a commercial fuel delivery vehicle. Fueling of company vehicles occurs at the fueling station when practical. Safe practices are followed when fuel is dispensed. Regular maintenance is scheduled for all equipment to keep equipment operating safely.
- Used motor oil is stored in a 500 gallon above ground tank with secondary containment which is serviced on a regular basis.
- Oil Trailer ~ At North bay entry. To remain locked when not in use. Oil storage tanks stored in the oil trailer are kept clean and tightly sealed. Flammable liquids are kept in closed containers when not in use. The capacity of this trailer is approximately: 1500 gallons. Quantities kept on hand is approximately 1200 gallons
- All solvent wastes and flammable liquids are kept in fire resistant and covered containers.
- Fire extinguishers are checked for charge annually and stored strategically throughout the building and property.

- NO SMOKING signs are posted and enforced. Designated smoking area is on East side of building outside.
- Quarterly Safety Committee property walk around; keeps more eyes on all equipment and their scrutiny of the fuel tank and oil storage trailer is part of their walk around every quarter.

Normal Daily Oil Throughput

Fuel usage approximately 350 gallons per day
Waste oil generated approximately 5 gallons per day

Record Keeping and Internal Reporting Procedures

Records of inspections, maintenance, repair, education activities, sampling and flow data shall be kept in a log of activities. Spills and leaks of significant materials that impact will be journalized in the Environmental Services journal. Entries involving spills are to include the date and time of spill, the substance spilled, the activity relating to the event, detailed explanations of the clean up disposal procedures and recommendations for future avoidance of similar circumstances in the form of an Action Plan, by review at the monthly Safety Committee meeting if necessary. All other entries are to include the data and time, type of activity, repair, education and person directly responsible for the activity.

Procedure For Cleanup of Fuel and Other Liquid Hazardous Materials

Spills or leaks can happen on or off site. Examples are: Customer vehicle, loader, truck out on delivery, etc.

1. Upon first knowledge of a spill or leak, Employee is to take action to assert clean up operations. This may mean that this Employee is initially busy doing the clean up. If the Employee is not trained for cleanups, then they must contact the Maintenance Department by radio or phone to notify of the accident and request aid in the cleanup.
2. After the cleanup is in process, the Employee is to notify their Supervisor of the spill, leak, vehicle type, whom might be responsible and how cleanup is being remedied. NOTE: If cleanup can be made with a few oil rags, reporting to Supervisor is not necessary.
3. Spill Prediction and Clean Up Scenario: If an end dump customer's truck broke a hydraulic line in our Yard Debris Recycling area. Our prediction of flow would be toward the nearest catch basin; usually in a westerly direction.

NOTE: Only trained and authorized personnel shall be permitted to operate powered industrial trucks, track hoes, dozers and loaders. These persons must successfully complete a Loader and Forklift operating training course.

- The Emergency action Plan would go into effect. "Word~of~Mouth" notification of emergency by radio and cell phones.
- The area would be evacuated by coning.
- The Scoop Loader Operator and two employees designated to the area of the spill would facilitate quickly to block the direction of flow.
- Use of oil sock booms, in a circle around the spill; using as many as needed.
- The Unit Loader on site would bring up as many cubic yards of Coarse Compo-Stuff to block the spill from going Westerly and Southerly. The east side of the property is higher elevation and the flow is not likely to go that direction. Nor is the flow likely to go in a northern direction as the low point on the property lies at the western side of property.
- The flow into our catch basins will direct the flow into the concrete pond and be maintained on site.
- Oil soak pads will be used on the surface water of the concrete pond if necessary.
- The enclosed blockade of Coarse Compo-Stuff around the spill absorbs into the Compost.
- With dilution methodology the diesel would go through a bio remediation process. If the compost is severely saturated, some of the compost would be taken to the Hillsboro Landfill or other designated facility via a haz mat truck.

- The Supervisor is to contact the Sales Office Supervisor. The Sales Office Supervisor will record the information on the Environmental Services Journal and notify the General Manager of the incident by e-mail.

Evacuation

An evacuation may be ordered by any department Supervisor or Manager. If a Supervisor is unavailable, the Employee may confer with their department Monitor. It is understood that if the Employee feels their life is in danger they may evacuate immediately, using the word-of-mouth communication and notification to fellow employees. It is not recommended that Employees evacuate while an earthquake is in progress. Please see section on earthquakes.

Evacuation Map

Posted at Scale house, Sales Office Notice Board and Employee Notice Board in the Shop.

Evacuation Monitors, ~ Fire Wardens and Assembly Area

The employee schedule is kept on a clip board at the Dispatch desk. Each Supervisor is to submit a copy of their Employee's work schedule any time there is a change to it. It is imperative that this schedule is correct and current. This list posted at Scale house, Sales Office Notice Board and Employee Notice Board in the shop.

Department Monitor Responsibilities:

1. Assist disabled persons out of their department.
2. Direct any non employees in your department to Company assembly area or off of the premises.
3. Assist any non-English speaking persons to the assembly area.
4. Take radio, NEXTEL and roll call chart with you.
5. Do "roll call" at the assembly area of employees and check off names as each employee checks in.
6. Supervisors or Lead workers must indicate to the Assembly Point Lead Monitor which employees are in the field or otherwise not in the building at the time of evacuation; this is to be noted on the roster by the Monitor.
7. Identify missing persons. After 10 minutes at the assembly site, review stats with the other Monitors. Use radios and cell phones for this purpose. If person is still missing; discuss the whereabouts of the missing person with the fellow employees. Where seen last? What time? Which job were they performing?
8. Phone for emergency rescue assistance.
9. Do not go back into unsafe building or plant areas.

Recovery

If the Corporate Officers decide that the Company has received considerable damages, they will create an informational document consisting of what the various items of information may be shared and disclosed for public knowledge. From this directive the Manager of the Bookkeeping department will contact our insurance companies to report any structural, equipment and medical issues and assist financially in the resurrection of the business. The General Manager will contact the County, DEQ and Metro. Production Manger would aid in the restoration of all government compliance requirements of the production facility along with bringing product production back to normal operations. The Sales Department will inform the client base of any changes that may affect them, Metro hotline, etc. The Public Relations Manager will field local news reporters and create any public announcements or press releases that are necessary. All other department Managers and Supervisors will contact their employees and stakeholders and provide the information the Corporate Officers have given them. Company wide participation to help restore the work environment to its pre-emergency condition is expected. Whatever is necessary and directed by the ownership and management of the Company, including physical restoration and reconstruction of the offices, equipment and buildings. The Company Safety Committee will be instrumental in evaluating all levels of incidents and personnel injuries resulting from emergency situations.

Date of Last Revision: 8/6/12 KMcF – Date of Inseption of SPCC Plan

Appendix I

McFarlane's Bark, Inc.

ENVIRONMENTAL SERVICES

Operation Compliance and Concern Journal

INSTRUCTIONS:

Record Most Recent Incident on Top. Print only current page upon recording of each incident for placement in front office library binder. Copy: Dan and Kathleen on correspondence

File Location: Bookkeep/Environmental Services

DATE, TIME & TEMPURATURE Areas to Consider: POSSIBLE CONCERNS: DUST, ODOR, NOISE, SPILL OR LEAK TYPE OF MATERIAL QUANTITY SOURCE AMOUNT OF MATERIAL RECOVERED IS MATERIAL EXPOSED TO STORM WATER? PREVENTIVE MEASURES TAKEN ACTION PLAN

9/29/17 7:30am		Duane, thank you for contacting me. What location did the odor come from? Example: Costco, town center, Webster and Lake road? (Where was the caller located) What type of odor was it? And what time was it observed? Ongoing...? I will have our crew perform wind velocity tests more often this weekend. Production Manager and I cannot locate the concern .....not present in my one o'clock HazCom walk yesterday, no odiferous loads coming in, no operation at composting area until later this morning. Please forward your callers to me so that I can get needed information. I am in on Sunday; out of town through Saturday. Previous arrangements with Metro were to forward the caller to me, can you do that from now on? As much more information is needed. Thank you, Kathleen McFarlane **From:** Duane Altig <Duane.Altig@oregonmetro.gov>**Date:** September 28, 2017 at 7:26:47 AM PDT Kathleen - Early this morning (0715) I received an odor complaint about your site. The complainant stated that the odor was unbearable and was a 7 on a scale of 1 to 10. Is there any activity currently happening? Receiving of large commercial loads? Please be sure to document this complaint as required and please respond to this email with your findings. Thank you, Kathleen.
5/8/17		Hi Will, I have enclosed within this correspondence, information from a Scalehouse and Sales Operator whom expressed her concern of odors near Costco's NE area. I questioned Diana on the area of the odor around the 29th of April and she stated that it was the east and north area. Is one of the swales around the COSTCO property having trouble draining Thank you, Kathleen McFarlane
4/26/17		From: Diana Yes ma'am will do. I don't remember any odor outside normal odors… Different day side note, on Monday (4/24) I was at Costco, then stopped in our office for something, at Costco I smelled something yucky and thought maybe it was our yard. So when I stopped in I made sure to smell around and whatever it was that I smelled from Costco and it wasn't our yard. Our yard smelled like normal odors that are acceptable. Whatever was floating around Costco was …. Yuckier, and odors we wouldn't of taken. I wonder if there is something else in the area that could cause the yucky odors? Maybe there is construction at a swampy site that would smell that bad at Costco? It smelled stagnant and rancid like swamp drying up. Diana
4/25/17		From Kathleen To: Diana Peters, Fontaine Arney, Ickconna King, Julie Ryals, Kenny Holt, Lindy Rummell, Lori Barnett, Max Hawkins, Robin Konick, Sylvetta Maynard, Tina Castner, Tod Gustafson, Ann McFarlane, Dan McFarlane, Maureen Draves, Sheila Gariepy, Shelby Strong Dear Crew, See the e-mail below from Will Ennis of Metro. Just a reminder to reroute odiferous loads to Metro South or the recycling center North of the Vancouver Yard. Compliance with Metro is important; easy slogan: "When in doubt – Re-route". Thank you, Kathleen McFarlane
4/22/17	3:00pm	From Will Ennis, Metro. "I received a report of strong compost malodors near the Clackamas Promenade this past Saturday, April 22, around 3 o'clock. Are you aware of anything that occurred that day operationally that may be responsible for the malodors? Was the facility receiving waste from your Vancouver site? Response: 4/25/17 by Kathleen: "Hi Will, I worked that day and recall it being steady but not overly busy. It rained now and then by late morning and into the afternoon. Rain should keep odors down, however if an odiferous load of grass were allowed to come in then that could cause an issue. We did not receive any loads from Vancouver yard on Friday or Saturday and I do not recall it being windy, nor did I receive a call of concern. I will record your concern in our Environmental Services Journal and I will also send a copy of this correspondence to our Scalehouse Operators; as a reminder to reroute odiferous loads to Metro South. Thank you for letting me know".

		Dear Crew, See the e-mail below from Will Ennis of Metro. Just a reminder to reroute odiferous loads to Metro South or the recycling center North of the Vancouver Yard. Compliance with Metro is important; easy slogan: "When in doubt – Re-route"
8/25/16	4:00pm	Bianca came in stating that the dust back out by the scalehouse was excessive. This started around 12:15pm, around when grinder was operating back by the compost. No water was being directed towards the grinder shoot. Along with no water being sprayed on the ground. Kenny, scalehouse lead, agreed to above statement. Production was asked prior to grinding to be sure that we are being proactive on Watering. No response or action was given.
11/20/14	3:30pm	To address the issues of the 2:30pm visit: Screen modifications to the CEC Screen It were installed on 11/20/14. The installation of dust skirting up to the end of the fines conveyor belt and included the overburden conveyor belt. Other precautions for dust caused by operation of the CEC Screen It are that if there are windy conditions that show the dust particles blowing away from the CEC area; that the Production Department Operators will shut the equipment down immediately.
11/20/14	2:32pm	Kathleen, Dan: During an inspection of McFarlane's Bark on November 19, 2014, I observed dust generated by the facility's screening operation blowing onto the neighboring property to the west. I observed the dust throughout the lot in this area and on vehicles parked in the lot. I issued the facility a field notice of violation for failure to control dust generated at the facility from settling on neighboring properties. I will re-inspect the facility for compliance next week. McFarlane's must maintain compliance with its dust mitigation procedures for 90 days beyond the date of the re-inspection to avoid additional enforcement action related to this matter. I have reviewed the facility operating plan. The plan describes dust mitigation procedures including the wetting of roadways, the use of a mister on the grinder, the use of sprinklers and the recent installation of a tree screen on the west and north sides of the site. The plan does not include procedures to control dust generated during the screening of finished compost. Please revise the operating plan to include procedures to address dust and windblown debris generated by the screening operation. Please provide a copy of the revised plan to Metro by 5:00 p.m. December 4, 2014. Please contact me if you have questions about this matter. Will William Ennis Metro Solid Waste Compliance & Cleanup 503-797-1667 will.ennis@oregonmetro.gov
9/5/13		Dwayne from Metro came by for an inspection and found that road dust was moving too far out Johnson Road from our gravel south road. We have been given a warning and the next occurrence will be a $monetary fine$. KMcF
6/10/13		DEQ inspection by Stephanie Rawson found that odiferous conditions were present from standing leachate, incoming feedstocks, turning of composting pile with anaerobic conditions and the ponds odors. Warning stated that operations are not sufficient for controlling and minimizing odors. We are required to correct. KMcF
6/3/13 4:25pm		We had a visit from Dwayne of Metro today they had a few concerns. One was dust from the slabs when vehicles were moving. I talked to Caz, Antonio and Salvador about keeping the slabs wet and not waiting for them to get dry. He also made a comment about the fine loads that we are accepting from our Vancouver yard saying that they were very pungent and that we might have to turn those types of smelly loads away if we continue to receive odor complaints. KMcF

5/10/13 9:20am Kathleen Received phone call from Stephanie Rawson of DEQ regarding "Obnoxious odors have gotten worse with the nice weather and the dust". Sent copy of below e-mail to: Pat, Maureen, Dan, Ann and Shannon.

From: Steven Klein [mailto:sklein@kiddermathews.com]
Sent: Friday, May 10, 2013 9:17 AM
To: RAWSON Stephanie
Cc: Will Ennis; RAWSON Stephanie; Andrea Schonblom
Subject: RE: Oregon DEQ: Complaint Response: McFarlane's

Stephanie

Well the weather is warmer and the obnoxious odor coming from McFarlane's has picked up substantially. We are also noticing more dust in the air with the prolonged dry weather. Will you please tell me what steps DEQ has planned to deal with the obnoxious odors and the health risk and nuisance posed by dust leaving their site.
We look forward to your earliest response.
Thank you, Steven

Steven Klein
Senior Vice President
KIDDER MATHEWS
One SW Columbia St., Suite 950, Portland, OR 97258
T 503.221.2260 **I** **F** 503.221.2277 **I** **C** 503.318.0916
sklein@kiddermathews.com **I** kiddermathews.com

12/5/12 6:00 pm
Hello Kathleen,
Thanks again for taking the time to discuss your neighbor's concerns about dust and odors generated from your compost operations.
As we discussed, please take any necessary action to ensure your operations are not depositing dust offsite. Use additional water or misters to improve dust prevention measures or as you mentioned, if the winds are not in your favor you may need to cease the dust generating operations temporarily.
As we both know compost operations are not odor free. However, compost facilities are required to take necessary measures to control and minimize odors to the greatest extent possible. Please evaluate your operations and make any necessary improvements for controlling and minimizing odors.
DEQ appreciates your attention to these matters and your continued efforts to comply with your compost permit and the compost performance standards.

Stephanie Rawson | Solid Waste Compliance
Oregon DEQ | Northwest Region
2020 SW 4th Ave., Ste. 400, Portland, OR 97201
☎503.229.5562 | rawson.stephanie@deq.state.or.us

12/5/12 4:00pm Manager from Kidder Matthews (property management firm to buildings on our south and west flanks) phoned and informed Stephanie Rawson of DEQ that "the odor and dust from McFarlane's has been intolerable over the last several months". I informed Stephanie that the "odiferous conditions" are heaviest between the months of May – October. That when a packer truck with grass is unloading the "whiff" of odor is "wafting", and already in the atmosphere; immediately upon us even before the entire load is off loaded. I also mentioned that Recology had brought in many load of grass that they were unable to handle for processing. I speculated that Recology had trouble with processing the grass or leaves and this influx of additional feedstocks certainly could have increased the odiferous conditions here. {Note to Managers: 81 loads of up to 70 yards in each load from June – December - rarely there have been apples in thierloads}
Stephanie said, "If you feel it best for your business to refuse the Recology fines then you should do that, because Recology wouldn't be penalized, McFarlane's would be".
Stephanie suggests that we, "Look at our operation and make sure that there's not a lot of standing water and keep up with housekeeping".

Stephanie says that "this phone call and the follow up e-mail are an official first warning. The off site dust is non compliant; and there must not be any dust projected from our site. The First situation is a warning; Second is a penalty; Third could mean closure". I informed Stephanie that the dust might be better controlled with more often hosing down of our roadways.
Stephanie said, "Best to put on a proactive schedule of hosing down or putting up more misters". Additionally if a windy day; if dust leaves our site; it is a violation. We must do everything in our power to control the odor and dust in order to maintain compliance according to our performance agreement".
Suggestions by Kathleen:

1. Ask Recology to add 50% carbon to their high nitrogen loads
2. Sweeping and shoveling of Johnson Road the First and Last Wednesday of EVERY month.

11/13/12 9:35am American Medical Response Employee, Eric Dodge, 503-572-5122 phoned 911 and a fire truck from Engine # 4, followed Tim Lowry or one of our Company trucks into the Milwaukie yard. Kathleen McFarlane

OPERATING PLAN

McFarlane's Bark, Inc.

Solid Waste Disposal Permit # 1442

www.mcfarlanesbark.com

Site Location Address:

13345 SE Johnson Road

Milwaukie, Oregon 97222

503-659-4240

Date of Last Revision: 8/16/14 K.McFarlane, 3/5/14 K. McFarlane, 10/1/13 Add 7.7, July 2013/K.McFarlane

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Appendices

BACK GROUND:

McFarlane's Bark, Inc. is a yard debris recycling, wood bi-products, and landscape material wholesale and retail business. Since moving to the current site in 1972, McFarlane's has produced and sold compost, soil, mixes, bark and wood bi-products. Other landscape products have been added as market incentives increased. Throughout our years in business, significant efforts have been initiated to mitigate impacts resulting from activities on site.

As a Commercial Composter in the Portland Metropolitan area since 1965 it is the desire of McFarlane's Bark, Inc. to persevere in our obligation to produce safe, uniform and superior products.

We are proud of our products in that they perpetuate an ever increasing value to our customer.

FACILITY INFORMATION

1. Site Legal Description: Tax Lot numbers: 00202-00400-00402-00802-00803. Section 05 Township 25 Range 2E.
2. Site Description: Approximately 6 acres. The parcel is rectangular, with a rectangular section in size of 50 feet by 200 feet that is cut out on the SE corner; this area is an easement road.
3. Site Statistics
    - Total Site Area = 272,250 square feet
    - Paved Area = 168,896 square feet
    - Roof Area = 8,288 square feet

4. Location: North side of Highway 224 aka The Milwaukie Expressway. At the dead end and furthermost north end of SE Johnson Road off of Highway 224, 13345 SE Johnson Road, Milwaukie, Oregon 97222, USA

5. Zoning: I-2 Light Industrial

6. Licenses and Permits:
    - Clackamas County Alarm Permit
    - State of Oregon Construction Contractors License
    - DEQ Solid Waste Disposal Site Permit: Yard Debris Composting Facility
    - Regional Metro Service District Government issued Solid Waste Facility License for Yard Debris Composting
    - Oregon Bureau of Labor and Industries Operation of Power Driven Machinery / Equipment
    - Oregon Department of Agriculture E-Scales License
    - City of Portland Business License
    - City of Vancouver Business License
    - State of Washington Master License for Foreign Profit Corporation

7. Hours:
    a. April – September
        i. Monday – Saturday: 7:00 a.m. – 6:00 p.m.
        ii. Sunday: 8:00 a.m. – 5:00 p.m.

b. October, November and March
    i. Monday – Saturday: 8:00 a.m. – 5:00 p.m.
    ii. Sunday: 9:00 a.m. – 4:00 p.m.
c. December, January and February
    i. Closed Sundays
d. December, January and February
    i. Monday – Saturday: 8:00 a.m. – 5:00 p.m.

8. Outdoor Lighting:
    i. City street halogen pole lamp at N.E. side of property at employee parking area.
    ii. Entry light above south entry doors of building.
    iii. Halogen pole lamp at NE side of building above the shop bay doorway of building.

9. Sewer and Water:
    a. City Fire Hydrant at east side of property in the employee parking lot.
    b. Private fire hydrants are located approximately every 200 feet along the North, West and South perimeters of the property in the 4 foot wide cement planters.
    c. Located at:
    - Scale house
    - Loading Area 1 on the SW corner of the building
    - North road at mid point near Plant Number One
    - North road at the North electrical building
    - North road adjacent to composting aerated slab
    - South property line, ½ way down, next to neighbors building (behind finished Compo-Stuff)
    - At pond western electrical building
    - Southwest corner near the dirt and rock bins
    d. Three hot and cold faucets and sinks inside office building.
    e. Three toilets and one outdoor facility

10. Products and Services:
    - Yard Debris and Wood Recycling
    - Bark Products
    - Compo-Stuff Products
    - Planting Mixes
    - Rock Products
    - Cedar Chips
    - Fresh Sawdust
    - Garden Center
    a. Bagged mixes amendments
    b. Tools
    c. Other garden center related products

11. Traffic Flow: Best attempts are made to keep traffic flow of McFarlane vehicles, vendor vehicles and Customer vehicles; at 5 mph or less. Traffic flow signage is prominently displayed,

indicating direction to loading and recycling in the three queuing lanes on the property. Commercial yard debris vehicles, regular customer yard debris and product pickup at Loading Area 1. Loading Area 2 sign is for line up of area 2 products and for commercial client flat rate recycling. During surge and peak times, we supply additional yard staffing for directional assistance, traffic control and will perform flat rate dumping to speed up the process of recycling. We also utilize the additional staffing to inspect incoming yard debris and wood waste for contamination control. Due to scale inspections, repair, maintenance and closure, McFarlane's will exorcise, an "at will" option to flat rate or charge by the ton to all customers at any given time.

12. Customer Base:
    a. *Retail, Commercial Discount and Wholesale Pricing*
    b. General Public
    c. Solid Waste Collection Companies
    d. Landscape Design and Maintenance
    e. Nursery Growers
    f. Commercial Businesses
    g. Public Works
    h. Public Schools
    i. Contribution Accounts
        i. Churches
        ii. Environmental Associations
        iii. Private and Public Schools
        iv. Girl and Boy Scouts

1.PRODUCTION

a. Compo-Stuff, Planting Mixes and Bark dust Product are produced on site with the use of screening plants, grinders and heavy equipment. Material Handling Activities of these finished compost and bark products are loaded and unloaded off of semi and delivery dump trucks. Use of raw material and finished product and the conveyance of material on site to customer locations throughout the Pacific Northwest is performed daily.

b. Off Road Diesel Fuel is delivered to the Company fuel tank from a commercial fuel delivery vehicle using approved procedures. Fueling of company vehicles occurs at the fueling station when practical, by our on site above ground off road diesel fuel tank. Used oil is removed during vehicle maintenance and is transferred to a recycling holding tank and disposed of using approved methods.

c. Litter Control: The entry, landscape areas and yard operation areas are cleaned and picked up of garbage by yard personnel daily. Garbage recycling bins are picked up by Clackamas Refuse Company local waste hauling company, twice weekly. Street sweeper, Scoop Operator and yard loader will maintain the SE Johnson Road up to the Highway 224 traffic light a couple of times weekly.

d. Fire Prevention: There is an 8" loop system that has 8 private hydrants attached.

- Periodic recirculation of water on the brush piles is also helpful in fire protection
- Inside the processing plant, machinery is washed as needed, to prevent any dust fires
- Machinery that is being repaired is wet down as needed.
- A hot spot in the pile will appear to be smoky.
- Add water if necessary

Steam can be misinterpreted as a "hot spot", although, it is policy that Employees are to inform a Manager or Lead if they notice a "hot spot". If a hot spot is noted in any pile it is completely eradicated by:

1. Digging it out
2. Driving over it
3. Grinding the product
4. Refinishing the product

e. Noise levels are kept within acceptable range for light industrial zoning; 90db. Noise range levels have been tested by our Loss Prevention Specialist Don Binzer, of SAIF. In addition, OSHA Required - Annual Hearing Screening is performed by a contracted health facility and coordinated by our Human Resources Manager.

2. COMPOSTING OPERATIONS

A. General Procedures

1. When customers phone for rates our Sales staff encourages the client to cover their load to better secure it from blowing out on the way to our facilities.
2. Incoming vehicles are viewed by Sales staff and charged by the cubic yard or weighed in on the scale. If weighed the price per ton is calibrated and calculated at the time of exit.
3. Each incoming load is checked for possible non organics or unacceptable materials, i.e. hazardous waste, glass, plastics and metals. Customer is asked to take away unacceptable materials to the nearest recycling facility.
4. Payment forms accepted are Cash, Check, Visa, Discover or Mastercard. Commercial account customers may choose to be charged by the yard or the ton when the scales are open.
5. Customer is directed to unload in specific areas. The Wood or Yard Debris unloading locations are on specified areas on the concrete and may change with weather conditions or shape of the feed stock piles.
6. The fine yard debris is processed via a first grind within 24 to 48 hours. Every effort is made to get to the fine debris with a coverage of overs so as to minimize odiferous conditions in the case that a load was dumped after the unit loader operators have gone home for the day.
7. The Parker, will observe customers as they unload their vehicles, so as to not accept any non organics. Customer is instructed to take non organics with them upon exiting.
8. Additional fees are charged for all unacceptable materials if the customer has left non acceptable items on site.

9. CAUTION is expressed to Customers and they are advised; no smoking, children and pets must remain in the vehicle.

B. Processing

1. Processing and curing yard debris feed stocks with the static pile method is somewhere between 14 and 17 weeks which is consistent with the "On Farm Composting" manual produced by the Northeast Regional Agricultural Engineering Services. This is operating in the anaerobic or anoxic biological environment. The outer layers of the pile will have penetration of oxygen to form a narrow aerobic zone and a thicker anoxic zone. Moisture levels of the compost piles are moist but not wet. Water can be added by soaker hoses and sprinklers as required.
2. Bulldozers, unit loaders and track hoes are used to aerate, turn and stack piles. Loaders are also used to feed grinders and screens.
3. Product is then screened with coarse oversized materials and mixed back into green incoming yard debris. Screened sizes will be moved into finished piles.
4. A compost temperature wand was purchased on September 16th, 2013. The implementation into operations began February 17th, 2014. The wand is used during daily operations when rotating the static pile. The rotation of the pile occurs 5 days of the work week. The use of the temperature wand is to insure the thermophilic (hot) conditions of 135 to 165 degrees Fahrenheit, biochemical processes accelerate and beneficial microbes quickly deplete the compost of needed oxygen. This will insure the reduction of pathogen. For this reason, air must be supplied to an active compost pile by either forcing it in or by periodic turning of a static pile to maintain air spaces sufficiently large to allow passive ventilation.
5. As of March 1st, 2014 The Compost Aerated Slab had repairs to the fans and manifold in addition to the cleaning of the aerated holes in the concrete slab. The Compost Aerated Slab is slated to be in full operation by March 15th, 2014.

C. Wood Waste Recycling

The commercially generated clean, painted, or treated wood waste, large yard debris and stumps are ground and delivered by semi to local mills with industrial boilers for use as hogged fuel; to thus generate energy for that facility.

3. SURFACE WATER PROTECTION

The Company practices Best Management practices for our facility stormwater discharge in compliance with the Stormwater Discharge Permit, General Permit 1200-Z.

Any spillage is removed and disposed of appropriately before contact with surface water as per the company Hazard Communication and Emergency Action Plan. Vehicle maintenance is performed indoors and outdoors. Materials such as oil and grease are disposed of off site through appropriate best management practices.

See the Spill Prevention, Control and Countermeasure Plan Appendix B.
See the Emergency Action and Hazard Communication Plan Appendix C

4. GROUND WATER PROTECTION

Possible pollutants in site runoff are metals, plastic, organic matter, oils, grease and sediment. Sources include yard debris, customer vehicles and landscape materials. Processing of compost and bark products is performed with environmentally safe composting processes; whereby using the static pile composting method, which produces heat sufficient to extirpate most herbicides, pesticides and unhealthy pathogens. Particulates from bark dust, unpaved roadways, and windblown deposition are present. No metal processing is done on site. The only source of metal is bi-products. Little if any pollutant particles may reach the storm discharge and monitoring station. Compost and wood chips are used as a filtration material in many storm discharge systems.

See the Stormwater Pollution Control Plan Appendix D
See the Environmental Monitoring Plan Appendix E

5. ODOR CONTROL

a. With the static pile composting system, an odor control technique is to minimize disturbance of the material which contains the anaerobic byproducts in the pile until sufficient time has passed that the anaerobic composting process proceeds to the point that the byproducts are stabilized. There will still be some release of odiferous by products but the release will be minimized. Aerobic conditions are the result in the degradation of organic matter to carbon dioxide, water and residual complex organics. As the loads come in, Compost Overs from the CEC Screen It or the higher carbon sources of first grind feed stocks from the eastern side of the compost pile can be used to minimize an anerobic situation.

b. Some intermediate degradation products are released in aerobic composting but they are generally less odorous than the by-products of anaerobic composting. Odiferous by-products of anaerobic composting include sulfides, mercaptans and organic acids. Provided that the aerated material is maintained in a moist and controlled temperature atmosphere; odorous compounds such as these will be minimized. Temperature is taken with the wand in the morning, four places on the static pile in the four corner quandrants of the pile (SE, NE, NW and SW). The pile is in constant rotation and so the pile is constantly releasing moisture when not raining. On the pile there is a crust that creates a 3 foot depth of wetness and every time the pile is opened up it is able to absorb the new moisture if raining. Regulating the moisture is controlled by moving the pile. The constant rotation of the pile assists with the evaporation that may be needed in the rainy season. In the summer when needed, sprinklers can be placed upon the pile for additional moisture.
In some low level compost piles there have been issues with the pile becoming too cool or two hot; rotation is always the key to control from the pile going anerobic. And the very few occurrences that there was a cool area on the compost pile, the Bull Dozer Operator would take warm feed stock material to warm up a cool composting area. Due to our abundance of feed stock, the “too cool or too hot” situations have never been an issue for the Compost pile at McFarlane’s.
Bulldozers and Track Hoes are used to rotate the pile; because the pile does not go anerobic very quickly, the equipment Operator has time to manipulate the pile by opening up and burying. Each section to be worked on is approximately, on an average, of about 20 feet by 20 feet. The Bulldozer is digging between 20 and 35 feet deep, at times, as he is pushing the composting material toward the low

areas of the pile, toward the section that was moved forward the previous day (SE corner is moved into the NE and then from the NE to the NW corner). Our pile has areas that are always warm and so we have never experienced a problem of the pile coolness being an issue.

c. These approaches have been successful in reducing odors:

1.Time of Day - Piles are rotated between 6:00 am and 6:00 pm. The impact of turning and final pile breakdown of odorous material may, however, be reduced by limiting operations involving such materials to times of the day and weather conditions that are least contributory to movement of odors to neighboring properties without significant dilution by atmospheric conditions. Hence, where an anaerobic condition is suspected, it is policy to rotate the pile in the mid afternoon, when the possibility of impacts on surrounding uses are less. The piles will be rotated during shorter periods of time, reducing the periods when odors might be inadvertently generated. Pile will not be rotated in inclement weather conditions.

2. Wind Direction - When wind is at any velocity, there could be odor impacts upon our neighboring businesses and residences. In high winds there is an almost immediate dispersion of smells. However, if there is an odor concern we discontinue dozing the pile if the odor is not aligned with the receipt of a packer truck load.

3. Percent Moisture - The piles are kept damp by the recirculating water or hydrant water, if needed. This reduces the possibility of odors. The pile is constantly in rotation toward the northwest corner onto the last stage of the compost aerated slab. The hand "squeeze test" is performed at the finishing stage. The moisture can be seen in the hand squeeze test and if the product is too moist, then the coarser Overs material can be added. Another indicator of the compost being too moist is that the tracks on the dozer show very sticky compost and the compost clogs the tracks. If this occurs, then the material is rotated to move the moister material around and over into dryer material. In the times that the materials are too wet, we access the Overs to balance out the moisture. Fans on the compost aerated slab can also assist in drying wetter material.

4.Scalehouse and Parker staff are checking loads. The loads of fines are covered with cured compost
throughout the work day by the unit loader operator. This reduces the opportunity for odors to escape from the processing pile. Dilution with this more stable material absorbs odors and reduces the odiferous impacts.

5. Diversion - Problem loads are not accepted and may be diverted from site. This would be in the case of loads that the Scale house Operator or Load Measurer may consider to be highly unstable anaerobic grass or other vegetative odiferous loads which they will redirect to the Metro South recycling facility in Oregon City.

As of November 27th, 2013 Waste Connections of Vancouver, Washington made a choice to discontinue hauling curbside collection packer truck loads to McFarlane's Bark Vancouver yard. This feed stock was previously transferred to the McFarlane Milwaukie compost processing site and was 57,4440 cubic yard for the December 2012 through November 2013 period. They had been hauling to our Vancouver location for about 5 years.

As of June 1, 2014 McFarlane's rerouted all Milwaukie yard packer truck Clients. These Clients were informed that for the months of June through October McFarlane's would no longer be accepting these loads due to their generally odiferous condition 5 months of the year. Correspondence was generated to the packer truck clients via US Mail from February 28th and forward to give ample notice for these businesses to make other arrangements five months of the year. See Appendix M.

6.Leachate and water run off of the piles are covered with coarse overs and added back into the compost pile with the unit loader.

7. The Concrete Aerated Retention Pond - An Odor Control Plan may be referenced it is located in Appendix K. Thus, the odiferous conditions of the pond are remedied.

Note: The aeration pump that was recommended by Terracon was installed and began operation on September 10, 2013. It is a Kasco Model 3400. This aerator is 1 ½ times larger than the aerator that is needed for our maximum pond volume. This allows us the flexibility of running the aeration pump far less than what might be required by the next size down.

8. Water spray heads were installed on our equipment Morbark grinder #621 on October 29, 2013. The Morbark grinder #622 has not ground hog fuel in the last 8 months but these spray heads will be added when it returns from our Molalla property in early summer of 2014.

6. Pathogen Reduction

Processing of compost is performed with environmentally safe and Best Management composting processes; whereby using the static pile composting method, which produces heat sufficient to extricate most herbicides, pesticides unhealthy or harmful pathogens to an inert state.

Monthly testing is performed. The pathogens fecal coliform and salmonella are tested for. At the time of obtaining a pull sample for sending to the Soil Control Lab, Watsonville, California; particular communication must be made with the Production Department Assistant Managers to be sure that sampling is obtained from the cured area of the pile. If samples of Compo-Stuff are taken from a non cured area of the Compo-Stuff pile there could be a situation that a positive pathogen could result.

In the event that a test result shows positive results for pathogens and discovery is made that the pull was taken from the cured area, then the cured area will be cleared of a 5 unit swath from it's eastern end and rotated to the back of the pile for further curing.

Soil Control Lab
42 Hangar Way
Watsonville, CA 95076
Phone 831-724-5422
Fax 831-724-3188

If the fecal coliform or salmonella pathogens are showing a test result of a non passing result, an immediate sample is pulled and sent to The Soil Test Lab for another test.

A free distribution of the complete lab report and the condensed version are available to all customers. Distribution is made by e-mail, fax and US Mail, or the results may be picked up at our sales counters.

See the Soil Test Lab Report Appendix F
See the Condensed Compo-Stuff Analyses Appendix G

7. Dust Prevention

a. On non rainy days the incoming southern road, product yard and yard debris recycling areas are watered down by Production Department workman with fire hose. This process takes about 1 hour and is performed about 3 times per work day or as needed. Keeping areas damp reduces dust almost completely.
b. Quarterly washing of the gravel entry.
c. Regular sweeping of the concrete slab and the Johnson Road entry, using a sweeper attachment on our unit loader.
d. Squeegee clean up on product and yard debris area concrete. The squeegee is attached to the one yard scoop and the wet and dry materials are pushed into the fines area of the yard debris.
e. Daily use of sprinkler stands on the West road when not raining
f. Best attempts are made to keep traffic flow of McFarlane vehicles, vendor vehicles and Customer vehicles; at 5 mph or less.
g. Beginning August 19th, and ending September 1st, 2014; Evergreen trees were planted on the perimeter of the West and North property lines. The trees create a screen that assists with dust control. The trees have a lifetime guarantee by LBD Landscaping Company. See appendix L.
    1. There are 17, 10 to 12 foot Leland Cypress trees along the Western property line. These trees will grow up to 30 feet tall and will create a complete screening. All of these trees have been double staked.
    2. There are 75 Castlewellan trees along the Northern property line. These trees will grow up to 30 feet tall and will create a complete screening.
    3. Trees are planted 12 feet on center. The root ball plantings were planted in at 30 inches deep in a screened clay soil top soil. The top dressing was with compost. Annual pruning will be maintained after the 2015 year.
    4. Installation of a sprinkler system occurred on September 3, 2013. An automated sprinkler system timely waters the trees. These are the Rain Bird 1806 Pop Ups with Spray Heads. The West Road has MP Rotators. These rotators mist the road, keeping the road misted and dust free a minimum of three times per day when there is no rain to keep the dust free. The North road has 3500 Rain Bird Rotors for keeping the road damp. All are maintained via the ESP Rain Bird Control Timer System.
    5. The MORBARK 6600 – McFarlane Equipment ID #621 - Install in March of 2014 and The MORBARK 6600 McFarlane Equipment ID #622 – Install in May of 2014 of the overhead misters and the “Grinding Chamber Dust Suppression Unit” respectively.

The horizontal MORBARK grinders had installation of the discharge belt overhead misters. The misters have two spray heads that have four streams. The misters are permanently mounted in order to provide 360 degree coverage; with a 40 foot radius. These misters are used whenever the grinder is used for grinding wood waste hog fuel and yard debris feed stocks. To initiate operation of the misters, the machine Operator affixes the fire hose adaptor to an onsite 3" fire hose.

NOTE: In addition, these machines were purchased with an additional apparatus; the "Grinding Chamber Dust Suppression Unit". During operation, water is injected into the grinding chamber to completely cover all the feedstock material and this limits any dust from escaping with the ground finished product.

6. LBD Landscaping – July 2nd, 2014 A total of 270 Rush Grass plants were planted all along the Northern property line; East to West within the bio filter swale where vegetation had dissipated. Some areas needed more plantings than others. Rush grass multiplies naturally and the poison hemlock plants will not be a problem as they have been sprayed with the appropriate herbicide. LBD Landscaping is on contract to a bi-monthly agreement for monitoring, maintaining beneficial plant matter and management of the swale's progress to continue to eradicate the unwanted vegetation, such as poison hemlock, black berry, invasive species, etc.

   Clean up of garbage and debris, addition of 10 cubic yards of soil throughout the entire length as only a few areas were low due to winter rains. This added soil will maintain the slope of the swale.

8. SITE CLOSURE PLAN

The purpose is to clear the site to make it a saleable property.

a. In the event of a short-term cessation of operations (7 days to 30 days), management will contact all customers and advise them of the approximate time the closure will be in effect. The scale house will be closed for incoming yard debris and wood waste. A sign will be posted at the SE corner entry on SE Johnson Road advising of the Temporary Closure. All finished outbound material will be transported as soon as is feasible. DEQ and METRO will be advised of the nature of the problem, the proposed resolution and the approximate time of re- opening.
b. Cease hauling in saleable products
c. In the event of a long-term or permanent cessation of operations, management will immediately contact and meet with Metro as early as it is known that there is a significant market change which necessitates either a major shift in operations or closure of a product line or lines. As the result of meetings with Metro the best course of action possible will be decided which serves our company, Metro, and the customer base. If at all possible, efforts will be made to secure alternative markets for the customers in order to not cause any significant disruption of their business.

d. Once a decision is made to cease operations, as much as practicable, receipt of materials from non-critical customers will stop immediately. All remaining product will be shipped on a expedited basis. Any non-merchantable product remaining at the end will be shipped to an appropriate facility for disposal. The site will be left clean and all bills will be paid in full.

Liquidate sellable products:

- Advertise the liquidation
- Trucking saleable products to other company site or other business locations
- Sell products at reduced rates
- Sell equipment

9.Record Keeping and Internal Reporting Procedures

a.An using our point of sale system, the tracking of incoming feedstocks and outgoing product yardage is produced, maintained summarized by the Administration department personnel. Incoming quantities, inventory totals and product quantity sales are reported to the necessary government entities.

b.The Environmental Services Concern Journal (ESCJ) is managed by the Sales office lead personnel. The ESCJ is used to journalize any neighborhood concern regarding dust, noise or odiferous conditions. The Weather Wizard is used twice daily to record the outside temperature, wind velocity and direction. Daily monitoring of the weather is performed in the morning and in the afternoon by the Cashier Lead personnel.

See the Environmental Services Procedure Appendix H

c.Records of inspections, maintenance, repair, education activities, sampling and flow data shall be kept in the appropriate department's files. The Environmental Services Journal will contain records of incidents that had the potential to impact or affect, storm water or surface water. Entries involving spills are to include the date and time of spill, the substance spilled, the activity relating to the event, detailed explanations of the clean up disposal procedures and recommendations for future avoidance of similar circumstances in the form of an Action Plan. All other entries are to include the data and time, type of activity, repair, education and person directly responsible for the activity. The Safety Officer is to personally review and initial each entry as well as consider modifications to current practices and control procedures.

See the Environmental Services Journal Appendix I
See the Emergency Action Plan Training Check List Appendix J

10.Revisions

August 2014 ADD Morbark mister installations and bio filter swale rush grass planting.
Dust Prevention- 7.g.5.6.

March 2014 EDITED – REMOVED – "The Morbark grinding dust. A cannon type water hose is
Dust Prevention - 7.e. placed up about 10 to 12 feet high and is positioned to spray directly into the

	infeed of the Morbark grinder, thus controlling the ground wood waste debris that is later hauled to the mill and used as bio fuel. The water spray heads were installed on our equipment Morbark grinder #621 on October 29, 2013. The Morbark grinder #622 has not ground hog fuel in the last 8 months but these spray heads will be added when it returns from our Molalla property in early summer of 2014". CHANGE TO - Grinding Chamber Dust Suppression Unit and overhead misters on the MORBARK Grinders, etc.
June 1, 2014 Odor Control - 5.c.5.	ADD - McFarlane's rerouted all Milwaukie yard packer truck Clients. See Appendix M.
November 27th, 2013 Odor Control 5.c.5.	ADD - Waste Connections of Vancouver, Washington made a choice to discontinue hauling curbside collection packer truck loads to McFarlane's Bark Vancouver yard.
August 19th through September 1st, 2013 Dust Prevention – 7.g.1.2.3.4	ADD - Evergreen trees were planted on the perimeter of the West and North property lines. Sprinkler system installation.

McFarlane's Bark, Inc.

CONTENTS:

HAZARD COMMUNICATION PROGRAM, EMERGENCY ACTION PLAN, STORM WATER POLLUTION CONTROL and SPILL PREVENTION, CONTROL and COUNTERMEASURE SAFETY TRAINING

Our operations utilize some hazardous materials. You may encounter hazards in each department. Be very familiar with Company Policies; handbooks are located in Employee lunch rooms, Shop Library and Sales Office Library.

- No Personal Cell Phone Use on Company Time- Please leave your phone in your locker, cubicle or purse. Only exception is if your phone is used for McFarlane business and you have been given specific Manager approval to carry it with you. Music devices in any head gear form are also prohibited.

1. Severe winter storms bring heavy snow, ice, strong winds and freezing rain. There could be a temporary closure; for only a few hours or until roads are cleared. Employees are encouraged to contact their Supervisor if there are any questions or concerns. Supervisors will inform their employees if there is a shut down due to extreme weather conditions.

2. Personal protective equipment is based on the hazards in your work area. Fire protection equipment and fuel or other wet or oily cleanups will need:

- Reflective Vest
- Hardhat
- Safety Glasses
- Gloves
- Sawdust
- Shovel
- Loader
- Oil Soak Rags ~ Small or Boom {for small or larger spills}
- Containment Barrel

3. Emergencies are natural and man-made hazards; some of them are:

Break in	Earthquakes	Extreme Heat/Cold	Explosions/Fire	Extreme Air Pollution
Fire in Building	Fire in Plant	Fire in Product Pile	Flood	Hazardous Material Release
Hostage Situation	Inclement Weather	Lightning Power/Utility Failure		Snow/Ice/Hail
Terrorism	Transportation Accidents		Windstorm/Tornado	Workplace Violence

Shop ~ Time Clock Area

Work place Violence

Interactions between Our workers and the public would be the most likely time for an incident to occur.
Workplace violence includes:

Threats	Harassment	Stalking	Fist fights	Rape	Robbery	Bomb threats

Prevention Procedures. To prevent violent acts, we can be prepared with excellent communication skills. It is an angry customer whom might be the most likely to veer off to insensible behaviors. The Company has zero tolerance for violence.

Security Procedures. Employee may contact their Supervisor if a situation escalates to an unmanageable state. The employee can also radio for assistance from another employee. If the situation persists and the Employee feels gravely threatened it is prudent to phone the police at 911. If a customer or other person comes on site and has committed any act of violence, the first Employee that notices the action is to phone 911 and to invite local police onto the worksite to assist in promoting good relations. It may also be prudent to evacuate the area by saying, "There has been a disturbance in the building/on site, we are asking that you exit the property as soon as possible".

Unacceptable Behavior Between Employees

The Company has a firm policy in place; which promotes a work environment that is free of discrimination and unlawful harassment.. Please see the Company Policy Handbook for procedures.

a. If health problems develop in the workplace, an employee can see a Certified First Aid Company representative. The nearby hospitals and clinic are:

- Providence Milwaukie Hospital
- Kaiser Permanente Medical Center
- Willamette Falls Immediate Care Center

b. An ill or slightly injured employee can be driven to one of these facilities by a Supervisor, an Assistant Supervisor, Lead Person or otherwise qualified employee to address what medical help may be needed to resolve the medical problem. The Company keeps a well stocked first aid kit along with an oxygen station.

c. Where the eyes or body of any employee may be exposed to injurious corrosive material, there are eye wash supplies in the lunch room First Aid kit. Sinks are also in this area for drenching.

TRAINING TOUR:

1. Employee notice board:
   - Emergency Phone List
   - First Aiders List
   - Monitors List
   - Evacuation Map
   - Other Employee Notices
   - Company Handbook ~ Lunch room cupboard

Brown Shop Cabinet Library

2. MSDS. MSDS sheets for shop products are in the library of the Brown Cabinet in the shop and in the Sales office library. Do not proceed to work if you have questions or concerns about your safety in any work area.

3. Inventory of Resale Fertilizers. Located in the store. If breakage occurs, refer to the MSDS sheets on how to clean up. Spilled materials or liquids are to be cleaned up immediately. Normally, clean up of a spill is with sawdust and ventilating of the area. Inform a supervisor of the spill. All work areas in the office and store are to be clean and orderly. Work surfaces are kept dry and slip resistant. Do not store any items precariously on cabinets or shelves.

4. MSDS. MSDS sheets, office copy. This is a duplicate of the shop copy. Do not proceed to work if you have questions or concerns about your safety in any work area. (HC)

Office to Store

5. Store Products; Chemicals and Fertilizers. Located in the store area on pallets or on the store shelving. If breakage occurs, refer to the MSDS sheets. Inform a supervisor immediately. Normally, clean up of a spill with sawdust and ventilating of the area is all that is needed. (HC)

Diesel Tank

6. Diesel Storage: Spill Prevention, Control and Countermeasure response procedures are in all Company Handbooks and procedures for spills are place-carded at all spill kits.
Hazardous material and flammable; this is a non-smoking area. Above ground tank is located on the SE side of property. Tank stores diesel for fueling trucks and loaders. Adjacent to the tanks are the electrical operation, alarm system and fire extinguishers. If an alarm is sounding contact your Supervisor. If leakage is observed use the spill pads at this station and inform your Supervisor. Area is to be kept clean. Fuel is transferred to the company fuel tank from a commercial fuel delivery vehicle using approved procedures. Fueling of company vehicles occurs at the fueling station when practical. Fluids used and removed during vehicle maintenance are transferred to the holding tank and disposed of using approved methods.
Preventative maintenance of storm water management practices shall be preformed monthly at the company fueling station, detention pond, catch basins and wares. All portions of the storm water system will be repaired immediately after discovery of discrepancies. Spill response procedures are place-carded at all spill kits.

Smoke Shack

7. NO SMOKING signs are posted and enforced. Designated smoking area is on East side of building outside.

Oil Shack

8. Hydraulic Oil and Regular Gas Storage: Located in the white trailer at back NE corner of building, flammable materials, no smoking area. Alert supervisor if you observe any leakage. . To remain locked when not in use. Oil storage tanks stored in the oil trailer are kept clean and tightly sealed.

Procedure For Cleanup of Fuel and Other Liquid Hazardous Materials:

Spills or leaks can happen on or off site. Examples are: Customer vehicle, loader, truck out on delivery, etc.

a. Upon first knowledge of a spill or leak, Employee is to take action to assert clean up operations. If the Employee is not trained for cleanups, then they must contact the Maintenance Department by radio or phone to notify of the accident and request a cleanup crew.

- Block off area with cones and caution tape if necessary
- Place neoprene mat over catch basin
- Place pads directly on spill
- If mini-booms are necessary to prevent spill from spreading:
- Anchor mini-booms with brick or stone
- Link booms together using built in connectors
- When joining 2 or more mini-booms, overlap slightly

b. After the cleanup is in process, the Employee is to notify their Supervisor of the spill, leak, vehicle type, what caused the incident and how cleanup is being remedied. NOTE: If cleanup can be made with a few oil rags, reporting to Supervisor is not necessary.

9. North and West Side of Building and Property. Scrap metal storage ~ Use caution. If earthquake or tornado occurs, remove yourself from areas where shelving or storage areas could topple. Heavy traffic area for truck traffic; Drivers may not see you if there is sun glare in their eyes. Pedestrian traffic should remain to North side of road watching for equipment and truck traffic. On the ground Employees keep pedestrians and self clearance of 15 to 25 feet for safety.

West Side of Building

10. Plant # 1 Bark production area on West side of building. Stay clear of Stickpicking platform re: thrown debris. Authorized personnel only. Required hard hat, safety vest and eye protection area.
Stickpickers: Quality products are a necessity and the safety of Employees is imperative; do not allow metal, rocks, large sticks, plastic, non organics and garbage, or anything larger than the conveyor to flow through the system. Always wear a hard hat, safety vest and safety glasses when West of the building. NEVER get upon a moving conveyor.

SW Corner/NWCorner/Scale House/East Parking Area

11. Fire Hydrants: 1 at SW corner, 1 NW corner, 1 at the scale house on the parking area and 1 more at the SW corner of building. Please inform a Supervisor if you notice a "hot spot", as you may be the first to notice it. A hot spot in the pile will appear to be smoky. Sometimes it could be steam but inform a Lead or Supervisor anyway. With time we all get better at understanding of what is smoke and what is steam. A hot spot could be caused by:

- Product Piles ~ Internal combustion
- Product Piles ~ Paper or rags lying about
- Welding and burning spatter
- RR Track ~ cigarette butt ~ transients

12. Undercut of Piles: ALL EMPLOYEES do not walk near large piles of product; it CAN "cave in" and serious injury could occur.

13. Wood Waste Recycling and Grinding Area. No customer or pedestrian traffic near in feed of grinder. (EAP)

North side of property

14. Electrical Shack - Processing Area: Authorized Personnel only. High voltage area. Electrical shack (runs fans).

North west side of Property

15. Pond Primary storm water discharge travels through a concrete sediment settling pond and then through a concrete wares before a single point discharge to an established drainage way on the northeast corner of the site. Secondary storm flow drains though a grassy swale on the northern property line before discharge at the above point source; this insures adequate controls on outfalls of storm water. Storm water discharge enters the Mt Scott watershed and Mt Scott Creek, in the Willamette River basin. Storm water monitoring of testing this water will occur at this outfall before leaving the site; 4 times each year.

SWALE CLEAN UP

- Place mini-booms on angle to flow of water
- Anchor with stones or heavy object
- Place pads on spill area

A significant reduction of storm water naturally occurs with composting and wood waste production. The composting process requires water in order to obtain the significant amount of heat that is needed and generated; creating evaporation.

Possible pollutants in site runoff are metals, plastic, organic matter, oils, grease and sediment. Sources include yard debris, customer vehicles and landscape materials. Processing of compost and bark products is performed with environmentally safe composting processes; whereby using the static pile composting method, which produces heat sufficient to extirpate most herbicides, pesticides and unhealthy pathogens. Particulates from bark dust, unpaved roadways, and windblown deposition are present.

16. Electrical Shack - Processing Area: Authorized Personnel only. High voltage area. Electrical shack runs fans for composting aerated concrete slab. High voltage area. (EAP)

West side of Site

17. Production Area: Grinders and aerated slab for composting. DANGER - This area has heavy loader traffic during operation. There is limited view around loaders. Communicate to Operators that you are in the area via radio. Safe disposal of smoking materials such as hot bark or compost are managed by highly trained Production staff. There is continual knowledge and training shared in how to handle the hot material. Loader Operators maintain watchful eye on possible hot spots in product piles, digging out and burying the hot spot when necessary; water is used as needed. Fire extinguishers and fire hydrants are provided throughout the site. Trained employees in Production, Maintenance and Sales Department may operate them. If an employee is not trained, they must evacuate and contact their Supervisor. Regular maintenance is scheduled for all equipment to keep equipment operating safely and preventing heat producing equipment from causing accidental ignition of combustible materials. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

South Side of Site

18. Loading Area # 2: Heavy traffic; trucks and loaders. Customer loading area for rock and compost products. Safety glasses, safety vest and hardhat required. DRIVERS maintain clearance of all roads for loader passage. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

Southside

19. Yard Debris and Wood Debris Unloading and Parking Area: Located West of the Scale House. Congestion. Safety vest required. Mechanics, Loader Operators, Sales Crew and Production Employees use extreme caution in this area. PARKERS; park your customers clear of the grinders as they throw debris quite far. Children and pets must remain in their vehicle. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

West of the Main Building

20. Scale House: Heavy traffic area. Safety vest required. Children and pets must remain in their vehicle. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

South Side of Property

21. Trailer Parking Area: Extra customer vehicle parking. This is also the employee's Emergency Assembly Area in the event of fire or evacuation of the building or yard.

West Side of Building

22. Loading Area # 1: Heavy traffic; trucks and loaders. Customer loading area. Safety vest required. Ask customer to remain in their vehicle. Children and pets must remain in their vehicle. On the ground Employees keep pedestrians and self clearance of 20 to 30 feet for safety.

Shop

23. Warehouse / Maintenance Department:

Water or Sewer:
Any plumbing problems can be reported to your Supervisor. Our Maintenance department is equipped to repair most any problem that could occur.

Fire extinguishers: Located at every door and bay area. Both CO2 and dry chemical types. Fire extinguishers are checked for charge annually and stored strategically throughout the building and property. Annual training is performed in March of each year for specific employees

Workplace Fire Hazards and Potential Ignition Sources:

a. Waste Oil Tank b. Dirty Grease Rags Can c. Paint Cabinet d. Parts Washer e. Gas Cans

Storage of boxes and other supplies on shelves must be placed in a safe manner. Remove yourself from areas where shelving or storage areas could topple, during an earthquake or tornado.

Quarterly Grounding Maintenance is performed to minimize any concern for electrical fires that might be caused by damaged electrical cords or outlets.

24. Paints, Removers and Similar Materials: Stored on shelves in the yellow paint cabinet in the middle of the building. These are flammable and should not be exposed to excessive heat. Do not stand in this area when there is an earthquake or tornado, remove yourself from areas where shelving or storage areas could topple.

Procedure For Cleanup of Fuel and Other Liquid Hazardous Materials:

Spills or leaks can happen on or off site. Examples are: Customer vehicle, loader, truck out on delivery, etc.

a. Upon first knowledge of a spill or leak, Employee is to take action to assert clean up operations. If the Employee is not trained for cleanups, then they must contact the Maintenance Department by radio or phone to notify of the accident and request a cleanup crew.

- Block off area with cones and caution tape if necessary
- Place neoprene mat over catch basin
- Place pads directly on spill
- If mini-booms are necessary to prevent spill from spreading:
- Anchor mini-booms with brick or stone
- Link booms together using built in connectors
- When joining 2 or more mini-booms, overlap slightly

c. After the cleanup is in process, the Employee is to notify their Supervisor of the spill, leak, vehicle type, what caused the incident and how cleanup is being remedied. NOTE: If cleanup can be made with a few oil rags, reporting to Supervisor is not necessary.

25. Welding Area: Located at and around Northwest corner of building. Authorized personnel only. Storage area for oxygen and acetylene tanks; flammable, fumes, light arcs and welding spatters. Millwrights and Maintenance department must maintain clear work areas, free of combustible items prior to doing any welding; paper, cloth, towels and anything dry or burnable. Combustible debris and waste materials are to be stored in covered metal receptacles. Flammable liquids are kept in closed containers when not in use. All solvent wastes and flammable liquids are kept in fire resistant and covered containers. No smoking. Fire extinguishers available. CO2 for electrical fires. There are certain employees in the Maintenance, Production and Sales Department that have been trained to use them. If an employee is not trained, they must evacuate and inform their Supervisor.

26. Electrical Panels: Inside building on North and West wall are for Plant # 1 operation. Authorized persons only. Yellow cages are used for lock out. Maintain 3 foot walkway.

Communication of an Emergency: In Office and Shop areas, a "shout" and word-of mouth will be made by the on duty Supervisor. In addition, the hand held radios may be used to communicate seriousness, location, directives and other safety issues that are arising. All emergency messages take priority over day-to-day business.

An evacuation may be ordered by any department Supervisor or Manager. If a Supervisor is unavailable, the Employee may confer with their department Monitor. It is understood that if the Employee feels their life is in danger they may evacuate immediately. Evacuation is to proceed by way of staying calm, walking; no running or disturbing behavior. This will enable the First Aiders and Monitors to evaluate which persons need help. Employees are to wait at the assembly area for instructions from their Supervisors before reentering the building or work areas. Report your arrival to the assembly area to the Monitor. All exit routes are mapped out and posted on the evacuation maps.

Flooding

Areas in Our facility that are subject to minimal flooding are:

a. Shop b. Offices c. Front Road d. Swale area

Earthquake

Leaving the site is not recommended, however, it may be permitted; as long as the Monitor has noted who has left the assembly point. Employees may want to use the telephone, cell phone or lap tops to contact their family. This is approved by the Company as long as the equipment is located in a designated safe area. Do not re-enter any building, operating bark plant or piece of heavy equipment if it is in a potentially dangerous area.

Office. If an earthquake occurs, occupants shall duck under a desk or sturdy table. Cover your head and neck with your arms and hold on until the quaking stops. Do not attempt to evacuate the building while the earth is trembling. After the shaking stops and you are ordered to do so, evacuate the building and report to your department

Monitor at the designated assembly area. If trapped, stay low to the floor. If possible, use a radio or telephone to relay your location to your department Monitor.

Scalehouse and Parker Employees. Move to the Assembly area. Crouch down and cover your head and neck with your arms and hands. **Do Not** stand next to concrete product bin walls as they could topple.

Production. Remain inside your vehicle and "ride out" the turbulence of the quake. Try to drive the vehicle to the flattest area possible (if worker tries to leave their vehicle, they could end up with the vehicle falling on top of them). **Do Not** stand next to concrete product bin walls as they could topple. Stickpicker ~ hit emergency off switch and move over to the road and concrete planter wall. Sit down or lay down against the planter wall.

Maintenance. Get under the truck if working on it. Get down from conveyors and ladders. Stay clear of any shelving, free standing cabinets, pop machines and unhooked trailers.

Tornadoes

- *What To Do If You Are Outdoors:* If possible, get inside a building and proceed to the Employee lunch room. Close the bathroom door that has a window. If shelter is not available or there is no time to get indoors, lie in a ditch or low-lying area or crouch near a strong building. Employees on the West side of the property should
- crouch down by the fan plumbing bay by the concrete aerated slab. Be aware of the potential for flooding. Use arms to protect head and neck.
- *What To Do If You Are In A Car:* Never try to out drive a tornado in a car or truck. Tornadoes can change direction quickly and can lift up a vehicle and toss it through the air. Get out of the vehicle immediately and take shelter in a nearby building. If there is no time to get indoors, get out of the car and lie in a ditch or low-lying area away from the vehicle. Be aware of the potential for flooding.
- *What To Do If You're At Home **or at Work**:* Go to the Employee lunch room. Close the bathroom door that has a window. Be in the lowest level of the building, or to an inner hallway or a smaller inner room without windows, such as a bathroom or closet. Get away from the windows. Go to the center of the room. Stay away from corners because they tend to attract debris. Get under a piece of sturdy furniture such as a workbench, heavy table or desk and hold on to it. Use arms to protect head and neck. If in a construction trailer, get out and find shelter elsewhere.
- *Do not evacuate* the building until your Supervisor approves this.

PERSONAL PROTECTIVE EQUIPMENT PLAN and TRAINING

1. Your Supervisor will go over the clothing and safety apparel that you must wear when on the job, in order to maintain your personal safety. Write in these item here per your Supervisor at the time of you training and orientation session: _____

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2. A copy of the personal protective equipment necessary for your job is available for your reference from your Supervisor, the Safety Committee or the Company's Safety Officer.

CC: Share/Safety and Security/Safety/Certification and Training/Emerg Ac and Haz Com Plan/Annual Orient Training Forms

Date of Last Revision:
1/18/13 Move Smoke Shed, KMcF
7/24/12 Add SPCC Plan, KMcF

5/19/11 KMcF Add PPE
2/17/09 KMcF Addition of Storm Water Pollution Control Plan
4/7/08 KMcF & AMM
2/12/08 KMcF
3/6/07 J.Vargas 2007 & J. Guzman 2006,Safety Committee Chairmen KMcF
9/27/01 KMcF

McFarlane's Bark, Inc.

HAZARD COMMUNICATION PROGRAM, EMERGENCY ACTION PLAN, STORM WATER POLLUTION CONTROL and SPILL PREVENTION, CONTROL and COUNTERMEASURE SAFETY TRAINING

1. Industrial activities at the site consist of wholesale and retail yard debris recycling and compost production. We prepare compost mixes, screen bark through the bark plant and sell these products wholesale and retail to landscapers, homeowners, nursery growers and municipalities.
Light preventive maintenance of company vehicles is also performed on site. Our Company's operations utilize a variety of hazardous materials. You may encounter different materials and hazards in each operating department. Supervisors can assist you with hazard identification. We encourage awareness and responsibility for materials which may harm your health, a customer, the environment or equipment.

- No Personal Cell Phone Use on Company Time- Please leave your phone in your locker, cubicle or purse. Only exception is if your phone is used for McFarlane business and you have been given specific Manager approval to carry it with you. Music and any other personal electronic devices in the form of any head gear or any other form are also prohibited.

1. Employee Notice Board and Time Clock

2. Employee Safety Notice Board
   - Emergency Phone List
   - First Aiders List
   - Monitors List
   - Other Employee Notice Boards
   - Company Hand Book ~ Contains All Company Policies ~ Lunch room cupboard
   - Evacuation Map ~ Describe in detail, the exit route for this Employee

A. Communication of an Emergency In Office and Shop areas, a "shout" and word-of mouth will be made by the on duty Department Monitor or Supervisor. (EAP ~ OSHA required)

B. Evacuating Work Areas Perform and conduct actual evacuation drill (EAP ~ OSHA required) {Walk the new employee to the Trailer Parking Assembly Area}. Employees shall stay calm, take only essential items with them and depart the building at the nearest safe exit. Evacuation is to proceed by way of staying calm and walking when exiting. No running or disturbing behavior; as this will enable the First Aiders and Monitors to evaluate which persons need help. Employees are to wait at the Trailer Parking Assembly Area for instructions from their Supervisors before reentering the building or work areas. Report your arrival to the Monitor person there. All exit routes are mapped out and posted on the evacuation maps in each department area. Exit signs are free of obstructions, clearly marked and visible. In addition, the hand held radios may be used to communicate seriousness, location, directives and other safety issues that are arising. All emergency messages take priority over day-to-day business. (EAP ~ OSHA required)
If a Supervisor is unavailable, the Employee may confer with their department Monitor. It is understood that if the Employee feels their life is in danger they may evacuate immediately.

C. Annual Evacuation Drill Conducted by Managers in March every year. (EAP/SWPCP ~ OSHA and DEQ required)
The Manager of every department has the entire month to perform drills. Upon the 31st of the month their documentation of the drill is to be forwarded to the Safety Officer (Ann McFarlane, Human Resources). (EAP/SWPCP ~ OSHA and DEQ required)

Example of Medical Emergency

Procedure: Man On The Ground

What is a Man on the Ground (MOG)? An MOG is any person; whether an employee or a customer who has fallen or is down on the ground due to illness, heat exhaustion or fatigue.
What to do when you find a Man on the Ground: If you see a MOG, please use your radio or phone to let someone else know that there is a "Man On The Ground". The first employee closet to the MOG is to check with the MOG and ask them, "Are you OK"?
Employee: Radio the Scalehouse that there is a "*Man on the ground!*"
Scalehouse: "*What is their location*?"
Employee: Stay with man on the ground and ask them "*Are you OK?*"
If no response; radio the front office; "Please call 911 for an ambulance, we have a Man on the Ground". "He is not responding and may have had a heart attack".

Fuel is transferred to the company fuel tank from a commercial fuel delivery vehicle using approved procedures. Fueling of company vehicles occurs at the fueling station when practical. Fluids used and removed during vehicle maintenance are transferred to the holding tank and disposed of using approved methods.

Preventative maintenance of storm water management practices shall be preformed monthly at the company fueling station, detention pond, catch basins and wares. All portions of the storm water system will be repaired immediately after discovery of discrepancies. (SWPCP ~ DEQ required)
Indicate location of spill kit. (HC/EAP/SWPCP ~ OSHA and DEQ required) Spill Prevention, Control and Countermeasure response procedures are in all Company Handbooks and procedures for spills are place-carded at all spill kits. Spill kits:

SPILL PROCEDURE TRAINING
Block off area with cones and caution tape if necessary
Place neoprene mat over catch basin
Place pads directly on spill
If mini-booms are necessary to prevent spill from spreading:
Anchor mini-booms with brick or stone
Link booms together using built in connectors
When joining 2 or more mini-booms, overlap slightly

9. Smoke Shed This is the ONLY smoking area on site.

10. Hydraulic Oil and Regular Gas Storage Located in the white trailer at back NE corner of building. Flammable materials; no smoking area. Alert supervisor if you observe any leakage. Spillage pads are available at this station. Follow the Spill Clean Up procedure in your hand out. Eye wash stations are located in the employee lunch room. (HC/EAP/SWPCP ~ OSHA and DEQ required)

11. Scrap Metal Storage. Use caution. If earthquake or tornado occurs, remove yourself from areas where shelving or storage areas could topple. Heavy traffic area for truck traffic.

Drivers may not see you if there is sun glare in their eyes. Pedestrian traffic should remain to North side of road watching for equipment and truck traffic.

12. Plant #1 Bark production area, authorized personnel only. Required hard hat, safety vest and eye protection area. Pedestrian traffic should remain to north side of road watching for equipment and truck traffic; stay away from Stick Picker platform and NEVER get upon a moving conveyor. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

STICKPICKERS - As quality products are a necessity and the safety of all Employees is imperative; do not allow metal, rocks, large sticks, plastic, other non organics, garbage, OR anything larger than the conveyor to flow through the system.

13. Fire Hydrants On North side of property there are 4 stands placed approximately 150 feet apart. 1 at SW corner, 1 NW corner, 1 at the scale house on the parking area, 1 SW corner of building. ALL EMPLOYEES inform a Lead Person or Supervisor if you notice a "hot spot", you may be the first to notice it. A hot spot in the pile will appear to be smoky. Sometimes we see steam but inform a Lead or Supervisor just in case. With time we all get better at understanding the specifics of which one is smoke and which is steam. (HC/EAP ~ OSHA required)

14. Undercut of Piles ALL EMPLOYEES do not walk near large piles of product; it CAN "cave in"; stay clear. Serious injury could occur. (EAP ~ OSHA recommended)

15. Wood Waste and Grinding Area. North side of property. Stay clear when operating.

16. North Electrical Shack - Processing Area North side of property. Authorized Personnel only. High voltage area. (EAP ~ OSHA required)

17. Pond Primary storm water discharge travels through a concrete sediment settling pond, and then through a concrete wares before a single point discharge to an established drainage way on the northeast corner of the site. Secondary storm flow drains though a grassy swale on the northern property line before discharge at the above point source; this insures adequate controls on outfalls of storm water. Storm water discharge enters the Mt Scott watershed

and Mt Scott Creek, in the Willamette River basin. Storm water monitoring of testing this water will occur at this outfall before leaving the site; 4 times each year. (SWPCP ~ DEQ required)

SWALE CLEAN UP
Place mini-booms on angle to flow of water
Anchor with stones or heavy object
Place pads on spill area

A significant reduction of storm water naturally occurs with composting and wood waste production. The composting process requires water in order to obtain the significant amount of heat that is needed and generated; creating evaporation.

Possible pollutants in site runoff are metals, plastic, organic matter, oils, grease and sediment. Sources include yard debris, customer vehicles and landscape materials. Processing of compost and bark products is performed with environmentally safe composting processes; whereby using the static pile composting method, which produces heat sufficient to extirpate most herbicides, pesticides and unhealthy pathogens. Particulates from bark dust, unpaved roadways, and windblown deposition are present.

18. West Electrical Shack – Compo-Stuff Processing Area Authorized Personnel only. High voltage area. (EAP ~ OSHA required)
Production Area – Heavy Traffic Along North, West and South Side of Building and Property High traffic area for incoming and outgoing truck traffic. Watch for loaders and trucks; they may not see you if there is a glare or sun in their eyes. (EAP ~ OSHA required)

19. Yard Debris Recycling Area
A. Grinders and aerated slab for composting.
B. Electrical shack (runs fans), authorized personnel only. DANGER - This area has heavy loader traffic by production department. If you must be in the area, communicate to operators that you are there via radio. During operation there is limited view around them. (EAP ~ OSHA required)
C. Screen It. Fine Compo-Stuff production area.
D. Yard Debris Unloading Area.
E. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

20. Scale House – West of the Main Building Heavy traffic area. Safety vest required. (EAP/SWPCP ~ OSHA and DEQ required)
21. Loading Area #2 Heavy traffic; trucks and loaders. Customer loading area for rock and compost products. DRIVERS keep all yard roads clear for loader traffic. Safety vest required. (EAP ~ OSHA required)

22. Wood Debris Unloading and Grinding Area Wood debris receiving. Located North of the Scale House. Excessive congestion. Safety vest required. Mechanics, Loader Operators, Production Employees use extreme caution in this area. PARKERS ~ Park your customers clear of the Peterson grinder as it throws debris quite far. Children and pets must remain in their vehicle. (EAP ~ OSHA required) No customer or pedestrian traffic near infeed of grinder. (EAP)

23. Trailer Parking Area Extra customer vehicle parking. This is also the Emergency Assembly Area in the event of fire or evacuation of the building or yard.

24. Loading Area #1 South Side of Property, heavy traffic; trucks and loaders. Customer loading area. Safety vest required. Customer must remain in their vehicle. (EAP) On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.

25. Warehouse, Lunch room and Maintenance Shop
Fire extinguishers are located at every door and bay area. Note each of their locations. Both types are available, CO2 and dry chemical. Annual training is performed in March of each year for specific employees (EAP/SWPCP ~ DEQ and OSHA required)
Preventative maintenance is performed to reduce vehicle oil and, or grease leakage on site. (HC/EAP/SWPCP ~ DEQ required) All vehicle maintenance is to be conducted indoors with the exception of wash down and disabled equipment catch basins receiving wash down affluent are to be protected by catch basin insert bags and skimmed if necessary. Materials such as oil and grease are to considered combustible, be disposed of off site and though appropriate means. Any hazardous materials used in vehicle maintenance are to be stored outdoors, under cover, before removal to appropriate facilities. (SWPCP ~ DEQ required)

26. Paints, Removers and Similar Materials Stored on shelves in the yellow paint cabinet in the middle of the building. These are flammable and should not be exposed to excessive heat. Follow the Spill Clean Up procedure in your hand out. Eye wash stations are located in the employee lunch room. (HC/EAP ~ OSHA required)
27. Welding Area Authorized personnel only. Located at and around Northwest corner of building. Storage area for oxygen, acetylene. Keep combustibles clear; paper, clothes, towels, and anything dry or burnable. Hazardous area, no smoking, flammable gases, fumes and light arcs {explanation if needed}. Both extinguisher types stored nearby. CO2 for electrical fires. (HC/EAP ~ OSHA required)

28. Electrical Panels Inside building on north wall and west wall are for bark plant operation, special authorization in this area. Yellow cages are used for lock out. 3 foot walkway must be maintained (EAP ~ OSHA required)

29. Personal Protective Equipment: Discuss the personal protective equipment that is necessary for this employee to perform their job safely.

30. Fire Suppression Equipment Training Certain employees are chosen for this training in March of every year. Upon completion of training by March 31st the Supervisor or Trainer is to submit verification to the Safety Officer (Ann McFarlane, Human Resources) (EAP/SWPCP ~ OSHA and DEQ required)

Remember PASS = Pull pin, aim hose, squeeze handle and sweep at the base of the fire.

32. Lock Out Tag Out.
33. Forklift Training.
34. Record Keeping and Internal Reporting Procedures Records of inspections, maintenance, repair, training, education activities, sampling and flow data shall be kept in a log of activities relating to the SWPCP. Spills and leaks of significant materials that impacted or had the potential to impact, storm water or surface water are to be recorded along with the clean-up and corrective measures taken. One is the Environmental Services Journal, the other is the DEQ Storm Water Inspections and Monitoring log. These documents are managed by the Sales Department Supervisors and Leads. Entries involving spills are to include the date and time of spill, the substance spilled, the activity relating to the event, detailed explanations of the clean up disposal procedures and recommendations for future avoidance of similar circumstances in the form of an Action Plan. All other entries are to include the date and time, type of activity, repair, education and person directly responsible for the activity. (SWPCP ~ DEQ required)

DEQ = Oregon Department of Environmental Quality
EAP = Emergency Action Plan
HC = Hazard Communication
OSHA = Oregon State Health Administration
SWPCP = Storm Water Pollution Control Plan

Cc: Share/Safety and Security/ Hazard Communication and Stormwater Reclamation Plan/Annual Orientation Training Forms

Distribution:
Safety Policy Binder
Site Operation Plan

NOTE: Copy in DEQ Operation Plan
Date of Last Revision:
1/18/13 Move Smoke Shed KMcF
7/24/12 Add SPCC Plan, KMcF
3/10/12 Add Man on the Ground KMcF per Safety Committee 12/14/11
5/19/11 KMcF Reorganization of document to match successive order of Employee's copy.
4/8/11 KMcF – Addition of PPE
2/13/09 KMcF ~ Addition of SWPCP requirements
4/7/08KMcF & AMM
3/7/08 AMM
3/6/07 J.Vargas 2007 & J. Guzman 2006 {Safety Committee Chairmen} KMcF
9/27/01 KMcF

SIGNATURE FORM

McFarlane's Bark, Inc.

HAZARD COMMUNICATION PROGRAM, EMERGENCY ACTION PLAN, STORM WATER POLLUTION CONTROL and SPILL PREVENTION, CONTROL and COUNTERMEASURE SAFETY TRAINING

_____ 1. Employee notice boards and Time Clock.
_____ 2. Employee Safety Board - Evacuation Route. Explanation of Man on the Ground Procedure
_____ 3. Workplace Behavior.
_____ 4. MSDS Shop Library.
_____ 5. Inventory of Resale Fertilizers.
_____ 6. MSDS Office Library.
_____ 7. Store Products; Chemicals and Fertilizers.
_____ 8. Diesel Storage. Spill Procedures are in Company Handbooks.
_____ 9. Smoke Shed.
_____ 10. Hydraulic Oil and Regular Gas Storage.
_____ 11. Scrap Metal Storage
_____ 12. Plant # 1
_____ 13. Fire Hydrants Every 150 Feet Apart
_____ 14. Undercut of Piles and Angle of Repose.
_____ 15. Wood Waste Recycling and Grinding Area.
_____ 16. North Electrical Shack - Processing Area-Concrete Aeration.
_____ 17. Pond – Swale Cleanup. Production Area- Heavy Traffic Along North and West Side of Property. Stormwater and Pollution Control
Measures.
SWALE
Place mini-booms on angle to flow of water
Anchor with stones or heavy object
Place pads on spill area
_____ 18. West Electrical Shack – Compo-Stuff Processing Area- Heavy Traffic. On the ground Employees maintain clearance for Pedestrians and yourself of 15 to 25 feet for safety.
_____ 19. Yard Debris Recycling Area. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.
_____ 20. Scale House – Spillage Training. SPILL
Block off area with cones and caution tape if necessary
Place pads directly on spill
Block off catch basin(s) (if in close proximity)
If mini-booms are necessary to prevent spill from spreading:
Anchor mini-booms with brick or stone
Link booms together using built in connectors
When joining 2 or more mini-booms, overlap slightly
_____ 21. Loading Area #2. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.
_____ 22. Yard and Wood Debris Unloading and Grinding – Stay Clear When Wood Being Ground.
_____ 23. Trailer Parking Area.
_____ 24. Loading Area #1. On the ground Employees maintain clearance for pedestrians and yourself of 15 to 25 feet for safety.
_____ 25. Warehouse / Lunch Room / Maintenance Shop
_____ 26. Paints, Removers and Similar Materials.
_____ 27. Welding Area
_____ 28. Electrical Panels.
_____ 29. Personal Protective Equipment.

AUTHORIZED EMPLOYEES

_____ 30. Fire Suppression Equipment Training. _____ 32. Lock Out Tag Out. _____ 33. Forklift Training.

I have received training in the Hazard Communication, Emergency Action, Evacuation and Storm Water Pollution Control Safety Training in the areas noted above. I understand that I have the right to know about potential hazards and a right to participate in securing and maintaining a safe and healthy working environment. I fully understand that I am responsible to comply with these work procedures, practices and policies. I will observe the safety policies of the Company. I will notify my Supervisor of any deficiencies found within my work area and will wear the necessary personal protective equipment in the hazardous work areas.

Orientation Date: _____ Annual Review Disbursement Date: _____

Print Name Clearly: _____ Signature: _____

Date of Last Revision: 1/18/13 Move of Smoke Shed 7/24/12 SPCC Plan added KMcF, 3/10/12 Add Man on the Ground KMcF 4/8/11 KMcF PPE, 12/10/10 KMcF, 4/7/08KMcF & AMM, 3/7/08 AMM, 3/6/07 J.Vargas 2007 & J. Guzman 2006 {Safety Committee Chairmen} KMcF, 9/27/01 KMcF

APPENDIX F

HISTORY OF SPILLS OR LEAKS

APPENDIX G

COMPLETED INSPECTION AND SITE EVALUATION FORMS (CHRONOLOGICAL)

APPENDIX H

EMPLOYEE TRAINING RECORDS

APPENDIX I

OPERATION AND MAINTENANCE PLAN FOR CHITOSAN SYSTEM

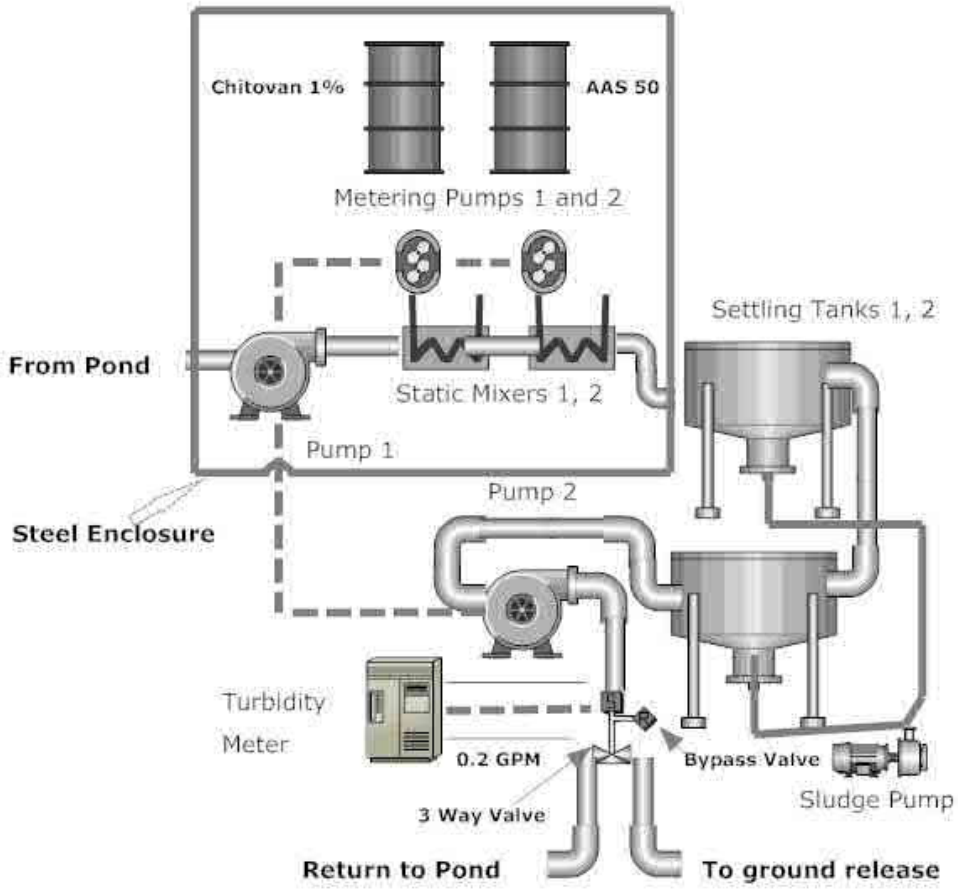
Dungeness Environmental Solutions Inc
909 SE Everett Mall Way, Ste. A119
Everett, WA USA, 98208
425-481-0600 Office
425-481-5253 Fax
info@dungenessenviro.com

McFarlane's Bark Stormwater Treatment System Operating Sequence

1. Refer to system diagram for component identification.
2. Before starting system visually inspect to make sure all pieces of equipment are unobstructed and ready to operate. Make sure all equipment switches are in "off" position.
3. Prime the Pulsafeeder metering pumps (refer to model 4UP25 instruction manual).
4. Start the metering pumps.
5. Start Starite DS-2 pump (pond to tank) using switch in enclosure.
6. Turn on turbidity meter.
7. Make sure 3-way valve is positioned to "Return to pond" condition.
8. When settling tank is ¾ full turn on Starite pump #2.
9. Observe turbidity meter and make sure it operates 3-way valve to the "ground Release" position when turbidity of the water reaches 25 NTU or less.

Maintenance of the System:

1. Every month drain sludge from tank and return the sludge to pond.
2. Calibrate turbidity meter using "0" and "100" NTU standards according to the Microtol User's Manual.
3. Every 3 months calibrate the metering pumps using a graduated cylinder and a stop watch. Metering pump for Chitovan 1% to be set to deliver 25 mg/L, metering pump for AAS set for 30 mg/L delivery.



Components:

Pumps 1 and 2: Starite DS-2
Metering Pumps 1 and 2: Pulsafeeder 4UP25
Static Mixers 1 and 2: Cole Parmer 1 1/2"
Settling Tanks 1 and 2: JTI Portland, 2,500 Gal. Cone Bottom, steel stand Part number 5110, stand number 79100
Sludge Pump: Flojet 1 1/2"
Turbidity Meter/Control: Microtol
3 Way Valve, 110V Actuator: Grainger 64W675
Enclosure: 10' wide, 4' deep, 7' high, model ELPHD104 Arrow Eurolite
Bypass valve: 1 1/2" Gate Valve

WATER LINE - 1 1/2" i.d.

---------- ELECTRIC LINE

DUNGENESS ENVIRONMENTAL			
MacFarlane's Bark			
DRAWN	CHECKED	DATE	DRAWING NO.
MM		4/20/16	M1

Date: 12/09/2016

Revision: 01

Safety Data Sheet

ChitoVan™ 1.0%

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name:	Dungeness Environmental
Corporate Address:	909 SE Everett Mall Way, Ste. A119, Everett, WA 98208
Manufacturer's Telephone:	(425) 481-0600 (Monday-Friday, 8AM-5PM PDT)
Emergency Telephone (24 Hours):	**(206) 390-2432 (Domestic, North America)** **(Country Exit Code) +1-(425) 481-0600 (International)**
Material/Trade/Product Name:	**ChitoVan™ 1.0%**
Synonyms:	None
Chemical Name:	Chitosan Acetate Solution
Chemical Formula:	Not available
CAS No.:	Not applicable
EPA Registration #:	Not applicable
Product Use:	Flocculates soil contamination in Stormwater.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	COMPONENT	%	OSHA HAZARDOUS?
Trade Secret	Trade Secret	4	NO
	All other components are non-hazardous.	96	NO

NOTE: See Section 8 for permissible exposure limits.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear to pale yellow viscous liquid with a pungent vinegar odor.
May be mildly irritating to eyes. Not likely to be hazardous to skin, respiratory tract, or by ingestion.

POTENTIAL HEALTH EFFECTS

EYE: May be mildly irritating to eyes.
SKIN: Not hazardous to skin.
INHALATION: Not likely to be hazardous by inhalation.
INGESTION: Not likely to be hazardous by ingestion.
CHRONIC EXPOSURE/CARCINOGENICITY: None of the components present in this material at concentrations of equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye irritation.
AGGRAVATION OF PRE-EXISTING CONDITIONS: None known.

POTENTIAL ENVIRONMENTAL EFFECTS: Material is 100% biodegradable and nontoxic.

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES

EYE CONTACT: Remove contact lenses (if applicable), flush with water for 15 minutes. Call a physician.

SKIN CONTACT: Cleansing the skin after exposure is advisable.

INHALATION: If large amounts of fumes are inhaled, remove to fresh air and consult a physician.

INGESTION: Consult a physician if necessary.

NOTE TO PHYSICIANS: None.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: Not available
AUTOIGNITION TEMPERATURE: Not available
UPPER FLAMMABLE LIMIT: Not available
LOWER FLAMMABLE LIMIT: Not available
FLAMMABLITY CLASS (OSHA): Not applicable
FLAME PROPAGATION/BURNING RATE: Not available

UNIQUE FIRE PROPERTIES: None known.
HAZARDOUS COMBUSTION PRODUCTS: None.

EXTINGUISHING MEDIA: Does not burn. Use water, dry chemicals, carbon dioxide, sand or foam. Use extinguishing media appropriate for surrounding fire.

PROTECTION OF FIREFIGHTERS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coat, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Water may be used to keep fire-exposed containers cool until fire is out.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: See Section 8 (Personal Protective Equipment).
ENVIRONMENTAL PRECAUTIONS: Material is 100% biodegradable and nontoxic.
METHODS FOR CLEANING UP: Dilute with water and hose down.

SECTION 7: HANDLING AND STORAGE

SAFE *HANDLING* RECOMMENDATIONS

VENTILATION: General ventilation should be sufficient under normal conditions.
FIRE PREVENTION: Non-flammable, no special fire protection required.
SPECIAL HANDLING REQUIREMENTS: Avoid eye contact.

SAFE *STORAGE* RECOMMENDATIONS

CONTAINMENT: The container should be kept covered to prevent contamination.
STORAGE ROOM RECOMMENDATIONS: Store in a cool, dry, well-ventilated area away from direct heat.
INCOMPATIBLE MATERIALS: Strong oxidizing material and strong bases.
STORAGE CONDITIONS: 10-50°C (will freeze @ ~3°C). Indefinite Shelf Life; Viscosity will decrease over time.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: General ventilation should be sufficient under normal conditions.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE/FACE PROTECTION: Safety glasses recommended.
SKIN PROTECTION: For operations where skin contact can occur, wear impervious clothing such as apron, boots, or whole bodysuit.
HAND PROTECTION: For operations where hand contact can occur, rubber gloves recommended.
RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. *Respirator use is not required for this product.*
GOOD HYGEIENE/WORK PRACTICES: Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

EXPOSURE GUIDELINES

PERMISSIBLE EXPOSURE LIMITS

INGREDIENT CAS NO.	OSHA		WISHA		ACGIH (TLV)	
	TWA	STEL	TWA	STEL	TWA	STEL
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Pale yellow to light amber
PHYSICAL FORM: Liquid
pH: 3.0 - 4.5
VAPOR DENSITY: Not available
MELTING POINT: Not available
SOLUBILITY IN WATER: None
SHAPE: Liquid
ODOR: Pungent vinegar odor
VAPOR PRESSURE: Not available
BOILING POINT: Not available
FREEZING POINT: Not available
SPECIFIC GRAVITY OR DENSITY: Not determined

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Values should not be construed as a guaranteed analysis of any specific lot or as specifications.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
CONDITIONS TO AVOID: Freezing temperatures or excess heat (for quality purposes).
MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing material and strong bases.
HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition will not occur.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ORAL LD_{50} (rat): Not available.
DERMAL LD_{50} (rabbit): Not available.
SKIN IRRITATION: Not available.
EYE IRRITATION: Not available.
SKIN SENSITIZATION: Not available.
ADDITIONAL INFORMATION: None

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY (in water):

Acute:

- Daphnia LC 50 – 1369 mg/ L
- Daphnia NOEC – 1000 mg/L
- Fathead minnows LC 50 – 642 mg/L
- Fathead minnows NOEC – 500 mg/L
- Rainbow Trout LC 50 – 173mg/L
- Rainbow Trout NOEC – 125 mg/L

Chronic:

- Rainbow Trout LC 50 – 154 mg /L
- Rainbow Trout LC 25 – 121 mg/L
- Fathead Minnow LC 50 - > 100mg/L
- Fathead Minnow LC25 – 932 mg/L

MOBILITY: Not available.
PERSISTENCE AND DEGRADABILITY: Not available.
BIOACCUMULATIVE POTENTIAL: Not available.
ADDITIONAL INFORMATION: Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

NOTE: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT):

Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated
Identification Number (UN Number): Not Regulated
Packing Group (PG): Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA STATUS: The substances in this preparation are included on or exempted from the TSCA 8(b) inventory (40 CFR 710).

CERCLA REPORTABLE QUANTITY (RQ):

CHEMICAL NAME	RQ
Not applicable	Not applicable

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):

CHEMICAL NAME	TPQ	RQ
Not applicable	Not applicable	Not applicable

SARA TITLE III SECTION 311/312 HAZARD CATEGORIES: Does this product/material meet the definition of the following hazard classes according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of SARA Title III?

ACUTE HEALTH HAZARD	CHRONIC HEALTH HAZARD	FIRE HAZARD	REACTIVE HAZARD	SUDDEN RELEASE OF PRESSURE
NO	NO	NO	NO	NO

SARA TITLE III SECTION 313 TOXIC CHEMICALS INFORMATION:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

al(s) is/are known to the state of
or

CALIFORNIA PROPOSITION 65:
reproductive toxicity:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

SECTION 16: OTHER INFORMATION

REVISION INFORMATION:

MSDS sections(s) changed since last revision of document:

· None, this SDS is new, in accordance with OSHA's Hazard Communication Standard directive for GHS alignment.

DISCLAIMER:

********** The above information is based upon information Dungeness Environmental believes to be reliable and is supplied for informational purposes only. Dungeness Environmental disclaims any liability for damage which results from the use of the above information and nothing contained therein shall constitute a guarantee, warranty (including fitness for a particular purpose) or representation with respect to the accuracy or completeness of the data, the product described or their use for any specific purpose even if that purpose is known to Dungeness Environmental The final determination of the suitability of the information, the manner of use of the information or product and potential infringement is the sole responsibility of the user.
********** *********

SDS PREPARED BY: Joel Van Ornum, President

Dungeness Environmental
A Division of Dungeness Development Assoc.

425-481-0600

MATERIAL SAFETY DATA SHEET

1. Product Name/Identification

ChitoVan CF

2. Composition

Active Ingredient: Chitosan, dry flake	CAS # 90-12-76-4
Chemical names(s):	Chitosan
Source:	From recycled crab and shrimp shells

3. Physical/Chemical Properties

Appearance and Odor:	Dry oatmeal-like flakes
Solubility:	Completely insoluble in water
Specific Gravity	0.2±0.05 g/mL
Boiling Point:	NA
Chitosan Molecular Formula	$C_6H_{11}NO_4$
Chitosan Molecular Weight	161
pH:	NA

4. Toxicological Data

Acute oral, LD50 (mice)	>g/kg

5. Ecological Information

LOEC Acute Rainbow trout	>10,000 mg/l
NOEC Acute Rainbow trout	>10,000 mg/l
LC50 Acute Rainbow trout	>10,000 mg/l

6. Fire and Explosion Hazard Data

Flash Point:	n/a
Flammability:	Non-flammable.
Unusual Fire and Explosion Hazards:	There is no danger of fire or explosion
Fire Fighting Media:	Use water or foam (not flammable in nature).

7. Health Hazards Information

Acute Health Effects – Signs and Symptoms of Exposure, Emergency and First Aid Procedures:	Eye Contact: Chitosan may be mildly irritating to eyes. Flush with water for 15 minutes to remove and call a physician. Skin contact: Chitosan is not hazardous but cleansing the skin after use is advisable. Inhalation: If a large amount of dust is inhaled, remove to fresh air and call a physician. Ingestion: if swallowed, no specific intervention is indicated as the compound isnot likely to be hazardous by ingestion. However, consult a physician if necessary.
Potential Chronic Health Effects:	There is no known effect from chronic exposure to this product.
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NRP, or OSHA.

Dungeness Environmental
www.dungenessenviro.com

11805 North Creek Parkway S.
Suite 101, Bothell, WA 98011

8. Person Protective Equipment

Respiratory Protection:	Not required.
Protective Gloves:	Rubber gloves are recommended.
Eye Protection:	Safety glasses are recommended.
Other Protective Clothing:	Not needed.

9. Regulatory

TSCA:	Not listed on the TSCA inventory.
OSHA:	Not considered hazardous.
EPA:	Exempt from EPA code.
SARA Section 302:	Does not have an RQ or TPQ
SARA Section 313:	Not reportable under Section 313
RCRA:	Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a waste material containing the product, or derived from the product should be classified as a hazardous waste

10. Storage, Handling and Disposal

Storage:	Store away from strong oxiderzers.
For Spills:	Utilize protective clothing. Sweep up spilled Chitosan and dilute residual dust with water and hose down.
Waste Disposal Method:	Land disposal is acceptable as the compound is biodegradable. Follow local, state and federal regulations.
Work/Hygiene Practices:	Follow good hygienic and housekeeping practices. Clean up areas where Chitosan was used.

11. Transportation Information

DOT Shipping Name:	Chitosan
Technical Shipping Name:	Chitosan
DOT Hazard Class:	Class 55, not regulated
Product RQ (lbs.):	None
DOT Label:	None
DOT Placard:	None required
Product Label:	Chitosan

12. Stability and Reactivity

Chemical Family:	Natural polysaccharide.
Stability:	Stable.
Hazardous Polymerization:	Polymerization will not occur.
Incompatibility:	Incompatible with strong oxidants and strong bases.
Decomposition:	Decomposition will not occur.
Instability Conditions:	Stable at normal temperatures and storage conditions.
Decomposition Temperature:	211° F
Decomposition Products:	NA

Reviewed by: Joel Van Ornum – Dungeness Environmental May 2014

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ACRONYMS AND ABBREVIATIONS

AST	aboveground storage tank
BMP	best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DEQ	Oregon Department of Environmental Quality
DMR	Discharge Monitoring Report
EPA	U.S. Environmental Protection Agency
mg/L	milligrams per liter
NPDES	National Pollutant Discharge Elimination System
NTBEL	narrative technology-based effluent limits
O&M	operation and maintenance
ppm	parts per million
SARA	Superfund Amendments and Reauthorization Act
SIC	Standard Industrial Classification
SPCC	Spill Prevention, Control, and Countermeasure
S.U.	standard unit
SWPCP	Stormwater Pollution Control Plan
TSS	total suspended solids