

Appendix A

Environmental Management Plan Review

Applications for Contaminated Media

Management and Active Chemical Treatment

Systems

September 2021



WQ Permitting

700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5185
800-452-4011
Fax: 503-229-6124
Contact: Blair Edwards

www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



State of Oregon
Department of
Environmental
Quality

This report prepared by:

Oregon Department of Environmental Quality

700 NE Multnomah Street, Suite 600

Portland, OR 97232

1-800-452-4011

www.oregon.gov/deq

Contact:

Blair Edwards

503-229-5185

Table of Contents

1. Contaminated Media Management	1
2. Active Chemical Treatment Systems	2

Executive Summary

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us

The purpose of this appendix is to assist stormwater permit applicants in 1200-CN jurisdictions in complying with the Section 2 requirements of the 1200-CN regarding DEQ review and approval of a contaminated media management plan (CMMP) and an active chemical treatment system prior to the automatic coverage of the 1200-CN permit. The owner or operator must complete an Environmental Management Plan (EMP) application, pay the review fee (See Table 70F), and submit to DEQ the required documents found on DEQ's website and electronic reporting system when contaminated soil, contaminated groundwater or hazardous materials exist or are anticipated to be encountered during construction activities. If contaminated soil, contaminated groundwater or hazardous materials are discovered on a construction project site after receiving automatic 1200-CN permit coverage, the EMP application must be submitted and approved before discharges from areas exposed to contaminated media will be authorized. The approved EMP becomes a component of the Erosion and Sediment Control Plan. This appendix is organized as follows:

Contaminated Media Management

This Section of Appendix A provides the Environmental Management Plan review application form for construction projects that will or have the potential of encountering contaminated soils, contaminated groundwater, or hazardous materials during construction activities. Section 2 of the 1200-CN permit requires the owner or operator to provide detailed information with the Contaminated Media Management Plan (CMMP) on the nature and extent of the contamination (concentration, location, and depth) as well as pollution prevention and/or treatment Best Management Practices proposed to control the discharge of impacted soil, groundwater, or hazardous building materials debris in stormwater. In the event that undocumented contamination, underground storage tanks, or other potentially hazardous conditions are encountered that are not addressed in the Environmental Management Plan, discharges exposed to the contaminated media must cease and DEQ must be notified within 48 hours. The discharges exposed to the contaminated media may not occur until DEQ approves the CMMP.

The DEQ ECSI Database can be found at: <https://www.oregon.gov/deq/hazards-and-cleanup/env-cleanup/pages/ecsi.aspx>

On sites without a DEQ Environmental Cleanup Site Information (ECSI) number where potential contamination is encountered. DEQ provides the following guidance:

Unanticipated and unknown contaminated soil is soil that exhibits any of the following: Any soil distinctly different in its physical characteristics, such as observation of unusual soil staining, color variations, unusual odors, building debris (bricks, stained timber, or charcoal), or oily liquids. Odors, such as a petroleum hydrocarbons odor may coincide with elevated constituent concentrations indicated of gasoline or diesel fuel. Anticipated and unknown contaminated soil is present if it exhibits a volatile organic compound (VOC) vapor concentration in excess of 50 parts per million (ppm), as measured with a photoionization detector (PID) using soil sample head space. Upon discovery of suspected unanticipated and unknown contaminated soil, immediately suspend all activities in the vicinity, notify DEQ. Additional work at the property should be performed in accordance with an approved CMMP.

For groundwater, additional management protocols for unknown or unanticipated contamination should be followed if any unusual odors or sheen (or free product) is present on the water surface. In the event of discovery of unknown groundwater contamination, suspend work activities and notify DEQ. Following notification, proceed with site activities following the management requirements identified in a DEQ-approved CMMP. In the event of sheen or free product, the construction contractor should remove the sheen and/or free product and containerize the water in a temporary aboveground storage tank for testing to determine the appropriate management requirements.

If free-phase product petroleum is encountered in groundwater, the free product should be removed for disposal in a manner consistent with local, state, and federal regulations. To remove free product from the surface of the groundwater, the construction contractor may choose to use a vacuum truck to skim the product from the surface of the groundwater (if sufficient product is present). The removed product should be vacuumed directly into the vacuum truck or into drums. Alternatively, the construction contractor may choose to use adsorbent booms/pads to remove the product/sheen. However, adsorbent booms/pads are not encouraged, because of the elevated health and safety risks of handling the used booms and the higher costs associated with disposal of used booms/pads. Alternatively, the groundwater can be treated through a DEQ-approved treatment system prior to discharge through an approved permit to stormwater or sanitary sewer.

DEQ may assign coverage under this permit after the owner/operator has included appropriate controls and implementation procedures designed to ensure that the above activities will not lead to discharges that cause an exceedance of water quality standards. In the absence of authorization, the owner/operator must apply for and receive coverage under an individual permit prior to discharging from the sit

Contaminated Media Environmental Management Plan Review Application

Under Section 2 of the 1200-CN NPDES Construction Stormwater General Discharge Permit, if “treatment chemicals” are to be added to stormwater and/or authorized non-stormwater prior to discharge, a local permit application may not be submitted without the following EMP application. Submit this form to describe the proposed use of treatment chemicals.

I. Owner or Operator Information

Owner or Operator Name:

Mailing Address:

City:

State:

Zip:

County:

Phone:

Email:

II. Project/Site Information

Project/Site Name:

Project/Site Address:

City:

State:

Zip:

County:

Site contact name (if different from owner or operator):

Name:

Phone:

Email:

Name:

Phone:

Email:

Names of receiving waterbodies:

III. Map

Attach a map that illustrates the entire site including all of the below items. Include this map in your Erosion and Sediment Control Plan (ESCP):

- DEQ Environmental Cleanup Site Information (ECSI) site number (if applicable)
- A list or table of all known contaminants with lab tests results showing concentration and depth
- A list of all disposal locations
- Notice of approval from local jurisdiction if discharge is to public storm system
- A map with sample locations
- Temporary Erosion and Sediment Control Plans specific to contaminated soils;
- Plans for offsite disposal of contaminated soils;
- Any relevant (related) portions of ESCP that address the management of contaminated and potentially contaminated construction stormwater and dewatering program (if applicable); and,
- The dewatering plan (if applicable)
- All proposed point(s) of discharge to receiving waterbodies
- All soil types within areas to be disturbed
- All area of earth disturbance
- Sufficient indication of topography to indicate where stormwater flows

Attach a schematic drawing of the proposed treatment system(s). Include all components of the treatment train, sample points, and pipe configurations. In addition to sufficient holding capacity upstream of treatment, the system must have the capacity to hold water for testing and to re-treat water that does not meet water quality standards.

IV. Responsible Personnel

Treatment System Operator		Subcontractor (if applicable)		
Street/Location:	City:	State	Zip	County

Responsible personnel. List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals. Cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

V. Proposed Treatment

- Check proposed treatment system.
- Chitosan enhanced sand filtration with discharge to infiltration (ground water)
- Chitosan enhanced sand filtration with discharge to temporary holding ponds (batch).
- Chitosan enhanced sand filtration with discharge to surface waters (flow-through).
- Other (describe below and submit documentation that the proposed system and chemical(s) demonstrate the ability to remove turbidity and produce non-toxic effluent/ discharge)

Check proposed cationic chemical(s) to be used:

FlocClear™ (2% chitosan acetate solution)		LiquiFloc™ (1% chitosan acetate solution).	
ChitoVan™ (1% chitosan acetate solution)		StormKlear™	
LiquiFloc™ (3% Chitosan acetate solution)		StormKlear™ LiquiFloc™ (1% chitosan acetate solution)	
Other”			
Estimated Treatment Period Start Date:		Estimated Treatment Period End Date:	

Describe sampling and recordkeeping schedule. Attach additional sheets as needed:

VI. Certification Information

I have documented and hereby certify that the following information is correct and has been documented in the ESCP for this project:

- The ESCP includes a complete site-specific description of the chemical treatment system herein proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used.
- The controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment.
- I verified through jar tests that the site soil is conducive to chemical treatment.
- I verified that the chemical treatment system operators for this project received training.
- I read, understand, and will follow all conditions and design criteria in the applicable use designation(s).
- If the discharge is to tribal waters, I notified the appropriate tribal government of the intent to use chemical treatment on a site located within that jurisdiction.
- I will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment.
- A licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements.
- I verify that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g. cause erosion).

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 gathered and evaluated 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.

Authorized Official First Name, Middle Initial, Last Name:

Title:

Signature:

Date:

Email:

Active Chemical Treatment Systems

This Section of Appendix A provides the Environmental Management Plan review application for projects with an active chemical treatment system (e.g. electro-coagulation, flocculants, filtration, polymers, hydrochloric or sulfuric acid) for sediment, pH neutralization, or other pollutant removal is planned or implemented. When “treatment chemicals” are proposed to treat stormwater and/or authorized non-stormwater prior to discharge, Section 2 of the 1200-CN permit requires the owner or operator to submit the following EMP review application to DEQ concurrent with the local permit application. DEQ may assign coverage under this permit after the owner or operator has included appropriate controls and implementation procedures designed to ensure that the above activities will not lead to discharges that cause an exceedance of water quality standards. In the absence of authorization, the owner or operator must apply for and receive coverage under an individual permit prior to discharging from the site.

Active Chemical Treatment System Environmental Management Plan Review Application

Under Section 2 of the 1200-CN NPDES Construction Stormwater General Discharge Permit, if “treatment chemicals” are to be added to stormwater and/or authorized non-stormwater prior to discharge, a local permit application may not be submitted without the following EMP application. Submit this form to describe the proposed use of treatment chemicals.

I. Owner or Operator Information

Owner or Operator Name:

Mailing Address:

City:

State:

Zip:

County:

Phone:

Email:

II. Project/Site Information

Project/Site Name:

Project/Site Address:

City:

State:

Zip:

County:

Site contact name (if different from owner or operator):

Name:

Phone:

Email:

Name:

Phone:

Email:

Names of receiving waterbodies:

III. Map

Attach a map that illustrates the entire site including all of the below items. Include this map in your Erosion and Sediment Control Plan (ESCP):

- DEQ Environmental Cleanup Site Information (ECSI) site number (if applicable)
- A list or table of all known contaminants with lab tests results showing concentration and depth
- A list of all disposal locations
- Notice of approval from local jurisdiction if discharge is to public storm system
- A map with sample locations
- Temporary Erosion and Sediment Control Plans specific to contaminated soils;
- Plans for offsite disposal of contaminated soils;
- Any relevant (related) portions of ESCP that address the management of contaminated and potentially contaminated construction stormwater and dewatering program (if applicable); and,
- The dewatering plan (if applicable)
- All proposed point(s) of discharge to receiving waterbodies
- All soil types within areas to be disturbed
- All area of earth disturbance
- Sufficient indication of topography to indicate where stormwater flows

Attach a schematic drawing of the proposed treatment system(s). Include all components of the treatment train, sample points, and pipe configurations. In addition to sufficient holding capacity upstream of treatment, the system must have the capacity to hold water for testing and to re-treat water that does not meet water quality standards.

IV. Responsible Personnel

Treatment System Operator		Subcontractor (if applicable)		
Street/Location:	City:	State	Zip	County

Responsible personnel. List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals. Cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

V. Proposed Treatment

- Check proposed treatment system.
- Chitosan enhanced sand filtration with discharge to infiltration (ground water)
- Chitosan enhanced sand filtration with discharge to temporary holding ponds (batch).
- Chitosan enhanced sand filtration with discharge to surface waters (flow-through).
- Other (describe below and submit documentation that the proposed system and chemical(s) demonstrate the ability to remove turbidity and produce non-toxic effluent/ discharge)

Check proposed cationic chemical(s) to be used:

FlocClear™ (2% chitosan acetate solution)		LiquiFloc™ (1% chitosan acetate solution).	
ChitoVan™ (1% chitosan acetate solution)		StormKlear™	
LiquiFloc™ (3% Chitosan acetate solution)		StormKlear™ LiquiFloc™ (1% chitosan acetate solution)	
Other”			
Estimated Treatment Period Start Date:		Estimated Treatment Period End Date:	

Describe sampling and recordkeeping schedule. Attach additional sheets as needed:

VI. Certification Information

I have documented and hereby certify that the following information is correct and has been documented in the ESCP for this project:

- The ESCP includes a complete site-specific description of the chemical treatment system herein proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used.
- The controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment.
- I verified through jar tests that the site soil is conducive to chemical treatment.
- I verified that the chemical treatment system operators for this project received training.
- I read, understand, and will follow all conditions and design criteria in the applicable use designation(s).
- If the discharge is to tribal waters, I notified the appropriate tribal government of the intent to use chemical treatment on a site located within that jurisdiction.
- I will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment.
- A licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements.
- I verify that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g. cause erosion).

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 gathered and evaluated 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.

Authorized Official First Name, Middle Initial, Last Name:

Title:

Signature:

Date:

Email: