Environmental Protection

Short description

This section describes the means and methods for minimizing the environmental impact of Centennial's business activities and process.

Contact person

Andrew Richardson	HSEQ
Name	Functional Department
770-613-2999	arichardson@cce-inc.com
Phone number	Email address

Responsible

Brent LeVander	HSEQ
Name	Functional Department

Approval

Mark Bailey	President and CEO
Name	Title

Content

1 Objective and area of application……..……...3
2 Superior and additional applicable documents……...3
3 Definitions……3
4 Personnel roles and responsibilities……4
5 Environmental commitment……...5
6 Environmental management system……..……...5
6.1 Evaluation of environmental aspects……6
6.2 Determination of environmental impacts…..……6
6.3 Controlling environmental impacts……..…… 7
6.3.1 Water quality……7
6.3.2 Air pollution……..7
6.3.3 Mobile construction equipment……8
6.3.4 Demolition……..8
6.3.5 Dust control……..8
7 Monitoring and corrective action…….....9
8 Management Review……..……10
9 Training and awareness.....……10
10 Amendment History..……10
11 Appendix……10

1 Objective and area of application

The determination and evaluation of environmental aspects is an important requirement for avoiding potentially negative environmental impact that can be caused by Centennial's business activities. This section therefore, represents an important element in the framework of Centennial's environmental management and sustainability values. The determination and evaluation of environmental impacts / aspects can be carried out using various methods. However, it always results in consideration of the environmental aspects that are relevant and the implementation of measures to reduce a negative impact on the environment.

The objective of this section is to present the system of determining and evaluating relevant environmental aspects associated with each individual project and to present an acceptable method of complying with local, state and federal environmental regulations.

Centennial begins the process of considering the environmental impacts of a proposed project by complying with and understanding all applicable federal, state, and local environmental requirements. This section provides guidance for compliance with local, state and federal environmental laws and regulations for all phases of project delivery.

2 Superior and additional applicable documents

1000_GP_11_01_en_5.0 Global Policy on Health, Safety, Environment/Sustainability and Quality (HSEQ)

1000_GS_11_10_en_2.0 Global Standard on Corporate Responsibility and Sustainability

1000_GS_11_16_en_1.0 Global Standard on Environment

National Environmental Policy Act (NEPA)

Resource Conservation and Recovery Act (RCRA)

Clean Water Act (CWA)

This procedure applies to all Centennial employees and subcontractors who are performing work on a Centennial project site that may have environmental impacts during the course of their work. There may be more stringent requirements than this procedure as defined by specific state or local regulations or contract specific environmental specifications. If there is a conflict between this section and other applicable regulations or requirements, the most stringent shall apply.

3 Definitions

The following definitions of terms are important for an understanding of this procedure.

Term	Definition
BMP	Best management practice
Centennial	All Centennial employees, joint venture employees, subcontractors and business partners
Contaminant	Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil

Environmental aspect / factor	Any component of activities, products or services of an organization that can affect the environment
Environmental impact	Any positive or negative change in the environment that is fully or partially the result of an organization's environmental aspects
EMS	Environmental Management System
EMP	Environmental Management Plan
Fugitive dust	Particulate matter suspended in the air by wind or human activity
Herbicide	A chemical designed to control or destroy plants, weeds, or grasses
HSEQ Director	Leads the HSEQ Team
Pollutant	Any substance of such character and in such quantities that upon reaching the environment (soil, water, or air), is degrading in effect so as to impair the environment's usefulness or render it offensive
Storm water	Rainwater that flows over land and into natural and artificial drainage systems. Storm water runoff is a major transporter of non-point source pollutants
Surface water	All water naturally open to the atmosphere, such as rivers, lakes, reservoirs, ponds, streams, wetlands, seas, and estuaries
Wastewater	Water that has been used for some purpose and discarded, or wasted; typically liquid discharged from domestic residential, business, and industrial sources that contains a variety of wastes

4 Personnel Roles and Responsibilities

All Centennial and subcontractor employees share a responsibility for preventing or minimizing negative impact to the environment. The Centennial project superintendent and/or PSO are responsible for the evaluation of environmental aspects and the resulting methods of environmental protection for each individual project.

Personnel roles and responsibilities include, but are not limited to:

- Managers and supervisors shall ensure that Centennial and subcontractor employees comply with the implemented Environmental Management Plan or specific Federal, state and contract environmental specifications
- Centennial employees and subcontractors performing activities on a Centennial project site must take all reasonable and practicable measures to prevent or minimize any environmental harm
- Any Centennial or subcontractor employee, who is made aware of environmental harm or non-compliance with the Environmental Management Plan, shall notify the appropriate individuals. The Centennial project superintendent and/or PSO shall immediately notify the appropriate personnel (internal and external). Internal notification shall be in accordance with HSEQ Manual section 8 (Incident and Near Miss Reporting). External notification shall be in accordance with installation and contract specifications

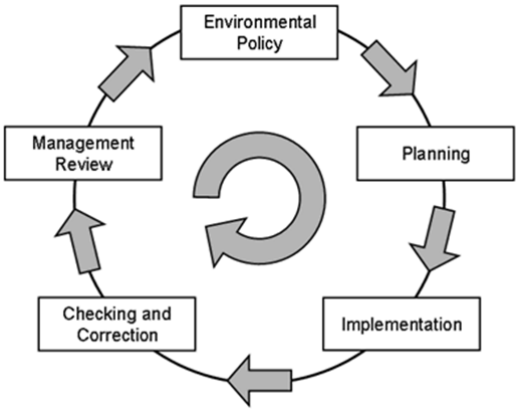
5 Environmental Commitment

As an environmentally aware organization, managing environmental issues in a systematic way is important to Centennial. Through the continual development of our EMS we endeavor to make our products and services more sustainable. Developing our EMS program will help us minimize the negative impacts and maximize our positive impact on the environment. In addressing this environmental HSEQ section and in meeting environmental responsibilities, Centennial shall:

- Consider sustainability issues in the decision-making process of planning and managing on all projects
- Facilitate and enhance the decision-making process by seeking opinions, feedback and participation from the Centennial stakeholders on environmental management issues on Centennial project sites
- Promote and encourage environmental awareness and training to ensure Centennial and subcontractor employees are aware of their environmental responsibilities
- Strive for continuous improvement of environmental performance by identifying and addressing environmental risk
- Create and implement procedures for minimizing environmental risks that comply with local, state or federal regulations and contract-specific environmental specifications with the goal of attaining best environmental practices and performance
- Ensure resources are available to implement and meet the requirements of this section
- Encourage and develop employees and subcontractors through courses, programs and research methods to improve environmental performance and limit negative impact
- Promote external awareness by supporting projects that seek solutions to environmental problems in order to improve the sustainability of the global environment

6 Environmental Management System

This Environmental Management System (EMS) portion outlines procedures that shall be implemented at every Centennial project site / office locaiton so as to meet environmental, economic and social goals. Centennial's mission for Environmental Management is to continuously improve our processes, therefore, Centennial operates its EMS according to the Plan-Do-Check-Act model as seen diagrammatically below:



6.1 Evaluation of Environmental Aspects

The Centennial HSEQ principles include the desire and intent to minimize negative impacts on the environment as a result of our business processes as well as utilize the concept of continuous improvement in environmental protection. These principles can only be achieved using appropriate programs, goals and measures on environmentally relevant topics.

Sensible and effective environmental goals shall, therefore, be included in the evaluation of project sites as it relates to environmental impact (e.g., consumption of resources(air, water and ground pollution, etc.) as well as the evaluation and continuous improvement of the processes and preplanning actions regarding evironmental concerns.

Environmentally relevant processes include all activities that consume resources such as materials, energy or water, as well as activities that release or could release emissions or byproducts into the air, ground or water. The determination and evaluation of environmental aspects is primarily carried out in the following stages:

- Identification and selection of relevant business processes (process or service-relevant activities) that relate to environmentally relevant activities
- Determination of the environmental aspects of conducting construction activities on project sites or in existing facilities
- Determination of the environmental impact from each environmental aspect
- Evaluation of the relevant environmental aspects
- Evaluation of the potential methods, processes and opportunities to reduce the impact on the environment due to construction activities

Based on the above evaluation, appropriate programs and measures shall be established to to reduce the environmental impact as a result of construction activities. Sensibly organized programs based on the criteria relevant to the organization generally lead to more than an improvement in environmental protection. They also lead to cost savings as a result of increased efficiency in processes and the conservation of resources and energy. Both this and an improved image for customers will, in the end, make a contribution to to the sustainability, as a world-class organization, of Centennial.

6.2 Determination of environmental impacts

Wherever possible, a distinction is made between direct and indirect environmental aspects at the time they are determined. Direct environmental aspects concern activities, products and services that are directly controlled by Centennial. These include, for example:

- Atmospheric emissions
- Drainage into bodies of water
- Avoidance, use of materials, reutilization, transport and disposal of solid and other waste materials, especially hazardous waste
- Use and contamination of soils
- Use of natural resources and raw materials (including energy)
- Local issues (especially noise, vibration, odor, dust, aesthetic disturbance)
- Traffic , both in respect to goods and services and employees
- Dangers of environmental accidents and the environmental impact that results from or can result from incidents, accidents and potential emergency situations

The indirect environmental aspects are not subject to the direct control of Centennial, and can only be influenced to a certain, sometimes quite limited, extent. These aspects include:

- Service or product-related effects (transportation, packaging, etc.)
- Selection and composition of subcontractor services

- Administrative and planning decisions
- Environmental protection and behavior of subcontractors and suppliers

6.3 Controlling environmental impacts

6.3.1 Water quality

Uncontrolled storm water runoff from project sites can significantly affect water quality and impact Rivers, lakes and estuaries. Sediment in water bodies from construction sites can reduce the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas and impede navigation.

Best Management Practices (BMPs) are required to develop a program to reduce pollutants in storm water runoff for Centennial project sites disturbing one or more acres.

This primarily includes developing:

- Requirements to implement erosion and sediment control BMPs
- Requirements to control other waste at the construction site
- Procedures for reviewing construction site plans
- Procedures to receive and consider information submitted by the public
- Procedures for inspections and enforcement of storm water requirements at construction sites
- Construction sequences that limit the impact to water quality

Water quality and other surface water issues that must be addressed during project development and design include:

- In-water work
- Shorelines
- Floodplains
- Interference with stream flows
- Critical areas
- Storm water discharges
- Herbicide or other chemical application

6.3.2 Air pollution

Construction-related air pollution can be caused by dust, vapors, fumes, mist, gas, smoke, or odorous substances. Controlling air pollution is intended to ensure it does not extend beyond the project site in sufficient quantities and duration that exceed or contribute to exceeding government laws, regulations and standards or that cause deterioration of the “quality of life” in neighboring properties (e.g. nuisance).

The following are examples of construction related activities that potentially generate air pollution:

- Site preparation and civil engineering work (e.g., grubbing, clearing, scraping, excavating, piling and filling) that can produce dust or emissions
- Vehicular traffic dust from exposed earth and gravel surfaces
- Soil treatment with lime, pesticides, fungicides, dust suppressants or fertilizers
- Surface preparation and coating that can create dust, vapors or spray from sand/bead blasting, painting, epoxy coating, hot tar roofing, and asphalt paving
- Mobile equipment that generates dust, vapors and spray to include portable concrete batch plants, rock crushers, chippers, thermal treatment of debris and soils, tank vents and portable electrical generators

- Demolition activities that can create dust, asbestos or lead during removal of buildings, structures, pipes and tanks

6.3.3 Mobile construction equipment

Mobile construction equipment can generate significant quantities of air pollutants. Typical mobile equipment that is used on a construction site includes portable concrete batch plants, rock crushers, thermal treatment of debris or soils, portable petroleum containers, and petroleum-powered electric generators. Although there is little that can be done to control exhaust from the internal combustion engines, there are actions that shall be taken related to control environmental impact from these types of tools and equipment.

- Substitute other types of equipment that do not operate with internal combustion engines
- Provide engineering controls to remove potential contaminants
- Ensure that all tools or equipment are properly maintained according to the manufacturer recommendations
- Shut of engines/equipment during periods when they are not needed

6.3.4 Demolition

The demolition of buildings, tanks, piping systems, etc., can often result in the release of air pollutants. Depending on the age of the building, the materials of construction could contain asbestos or lead-based paint. Ductwork or pipes may contain residual chemicals of concern (e.g., arsenic, adhesives/coatings, solvent or petroleum vapors, etc.). Tanks may contain materials which can release vapors or pose a potential hazardous situation when being removed.

Key elements associated with all demolition activities include the following:

- State / local permits are usually required for demolition of asbestos-containing / coated structures, pipes and equipment, or for removal of underground fuel/chemical tanks. See HSEQ Manual section 25 (Health Hazards in Construction) for specific requirements.
- Sand / Bead blasting of metal (interior / exterior) tanks, heavy equipment and steel structures generates spent abrasive material and residual rust and paint chips. The paint being removed may contain lead, requiring that additional steps must be taken to prevent the release of these materials or contact with personnel or the environment
- Prior to removal, dismantling, or disassembly of tanks, pipes, pumps or valves, they shall be checked to verify that they contain no liquids, sludge or residues. These residues shall be removed in accordance with Federal, state, local or contract-specific guidance prior to demolition

6.3.5 Dust control

A dust control plan shall be developed and submitted for any Centennial project that is anticipated to create significant fugitive dust for any duration or when the local jurisdiction (city, county, state or contract) requires a dust control plan for the project.

Methods to control the spread of fugitive dust from the project site include:

- Limit creation, distribution or presence of dust-sized particles. Cover exposed surfaces, use dust suppressants, install erosion control, minimize surface disruptions, pave dirt access roads, reschedule dusty work on windy days, reduce vehicle speeds, minimize spills
- Bind dust particles together. Apply flocculating agents, spray water
- Remove and capture fugitive dust from the source

- Filter fabric around catch basins
- Street Sweepers
- Wheel washing
- Vehicle scraping

The dust control plan shall contain the following minimum elements:

- Criteria and frequency for applying water to potentially dusty areas of the site subject to vehicular traffic (e.g., access roads, internal site roads, areas disturbed by heavy earth moving equipment, etc.)
- A log that specifies the location, the time(s) of day, number of times per day and amount of water to be applied per day to each location. The log is to be filled out by the driver of the watering truck and remain onsite at all times for inspection
- Provisions for determining when additional dust control is necessary (e.g., windy days, increased traffic, newly exposed soil, etc.)
- Areas that require the placement of aggregate to keep dust down (e.g., heavily traveled roads, equipment staging areas, etc.)
- Copies of permits required by local agencies for on-site water storage. (Some water storage arrangements (e.g., surface impoundments) require significant permitting lead time or are disallowed by local agencies.)

7 Monitoring and Corrective Action

Monitoring is an integral part of the EMS as it establishes how the project is performing against objectives and targets set in the EMP. A schedule and procedures for monitoring each project site and reporting findings should be developed in order to:

- Identify any negative impacts from construction activities
- Assess the effectiveness of control measures
- Demonstrate compliance with regulatory conditions and objectives and targets set in the EMP
- Identify if further controls/corrective action is required

If project specific environmental requirements are not fulfilled and appropriate/corrective action is not taken a non-conformance may be raised by the environmental manager. Examples of circumstances where this may arise include:

- Receipt of a complaint regarding pollution or other environmental impacts caused by the project
- Departure from approved or agreed procedures outlined in the Environmental Management Plan (EMP)
- Non-conformance identified as a consequence of any self-assessment, formal audit or other environmental survey or inspection

Corrective action may include changes to work instructions (frequency of testing, test method etc.), alterations to the EMP, further employee / subcontractor training etc.. Non conformances should be reviewed by the environmental manager and be addressed as part of the on-site construction meeting agendas.

In addition, non-conformance/corrective action report can be issued to the contractor by the client / customer. It is the responsibility of the Centennial to immediately initiate corrective actions and, once completed, provide details of the actions undertaken on the non-conformance / corrective action report and return it signed to the client’s / customer’s environmental manager within an agreed timeframe. If the non-conformance is considered to

breach legislative requirements, the breach should be reported to the appropriate public authority / regulatory body.

8 Managment Review

Review triggers will be set in order to maintain the suitability and effectiveness of each project site specific EMP. A review would be carried out when triggers such as the following are met:

- As a minimum annually
- If required as a corrective and/or preventative action in response to an environmental incident or the outcomes of an environmental audit
- If required by a regulatory body

The contents of this section / EMS shall also be reviewed / evaluated on an annual basis at a minimum.

9 Training and Awareness

Centennial recognizes that it is imperative to train all staff members in general environmental awareness, as well as focusing on environmental impacts and control methods which directly apply to our construction operations. This training information may be provided in various forms such as presentations, departmental briefings, wall mounted notices and the Centennial intranet. Formal training sessions will be documented and kept for recordkeeping purposes.

10 Amendment history

Date	Version	Revised content
05.06.2014	1.0	Initial Preparation
01.01.2018	2.0	Updates to Paragraph 2 Superior Documents to add the Group Policy and Global Standards, Paragraph 3 Definitions (Centennial and HSEQ Director) and Appendix 1 (logo)

11 Appendix

Appendix 1: Environmental Management Plan Template (0206500_CP_11_29_en_A1.1)

Environmental Protection Plan

0206500_CP_11_29_en_A1.1

Instructions: Complete the Environmental Protection Plan Template below. Ensure that site specific environmental aspects are addressed and incorporated into this plan.

Project Title:_____ Contract #:_____

Plan Author (print name):_____ Date:_____

Project Location:_____

EPP Section / Contents

Section		Contents
1		Introduction
2		Compliance
3		Personnel
4		Centennial environmental training program
5		Erosion and sediment control plan (SWPPP)
	5.1	Sample SWPPP for subcontractor use
6		Traffic control plans
7		Work area plans
8		Borrow area plans
9		Spill control plan
	9.1	Personnel
	9.2	Training requirements
	9.3	Materials and equipment
	9.4	Containment cleanup procedures
	9.5	Post-discharge review
10		Non-Hazardous waste management plan
	10.1	Recycling and waste minimization plan
11		Hazardous waste management plan
12		Air pollution control plan
	12.1	Pollutant emitting equipment
	12.2	Volatile organic compounds
	12.3	Solvents
	12.4	Fugitive dust emissions
	12.5	Boilers (hot water/steam), water heaters, generators and miscellaneous emissions units
	12.6	Pollutant emitting equipment and vehicles
	12.7	Ozone depleting substances (ODS)
	12.8	Open burning
13		Contaminant prevention plan
14		Wastewater management plan
15		Historical, archaeological, cultural and biological resources wetland plan
	15.1	Historical, archaeological and cultural resources
	15.2	Biological resources
	15.3	Wetland plan
16		Pesticide treatment plan
17		Plan review and approval

1. Introduction

The purpose of the Environmental Protection Plan (EPP) is to provide a comprehensive review of known or potential environmental issues which may be encountered by the Construction Team during project construction as well as preventative measures associated with those issues. The EPP shall be submitted to

(Customer)

for review and approval prior to the initiation of construction activities on the project site and/or the delivery of materials to the project site. Furthermore, Centennial shall discuss implementation of the EPP, possible revision or additions to the EPP, and methods for administration of the EPP. To facilitate implementation, a copy of the EPP should also be maintained at the project site for quick access and reference.

Project Description & Description of work (explain in detail)

Insert Aerial Photo of Project Site Location

2. Compliance

Centennial shall be responsible for compliance with applicable federal, state, and local environment laws and regulation. The information contained herein shall be supplemented, as needed, with additional information (i.e. plans, specifications, procedural information, etc.) by Centennial in order to remain in compliance. Such information shall be submitted to the

(customer) _____

for approval before being included in the EPP, as applicable.

3. Personnel

The following personnel are responsible for ensuring adherence of Centennial and subcontractor personnel to the guidelines of the EPP.

Project Superintendent

Name: _____
Phone: _____
Email: _____

Project PSO/SSHO

Name: _____
Phone: _____
Email: _____

Project Quality Control Manager

Name: _____
Phone: _____
Email: _____

Project Manager

Name: _____
Phone: _____
Email: _____

The following personnel are responsible for coordinating the hazardous waste manifest for removal of hazardous materials, if applicable.

Title: _____
Name: _____
Phone: _____
Email: _____

The following personnel will be responsible for training subcontractor personnel responsible for implementing environmental protection procedures outlined in this EPP.

Title: _____
Name: _____
Phone: _____
Email: _____

Note: The individual named above is the Centennial area environmental coordinator and will be responsible for supervision of field work, coordinating site meetings and inspections, and training subcontractor personnel on the aspects and protocols of the EPP prior to the initiation of on site construction activities. On site personnel will be trained as detailed in the environmental training program of this EPP.

4. Environmental Training Program

Centennial personnel and subcontractors are required to be trained regarding the different aspects of the EPP including the procedures to ensure compliance with the EPP. Individuals shall receive training prior to the commencement of construction activities at the site. Further, Centennial shall maintain a competent person at the site during all construction activities.

If applicable (reference project specifications), will an SSHO be required to maintain a presence on the project during construction activities?

Yes	No

If yes, see below

This individual shall have at least three (3) years safety work experience on similar construction projects, completed a 30-Hour Occupational Safety and Health Administration (OSHA) Construction safety Class or equivalent within the last three (3) years and Competent Person training, as applicable, based on the needs of the construction project (i.e. scaffolds, cranes, fall protection, confined space entry, etc.).

Construction environmental protection personnel shall be properly trained in all applicable aspects of environmental protection and pollution control by the individual listed in Section 3 above. Environmental protection and pollution control meetings shall be conducted prior to and routinely during construction to ensure specific anticipated environmental issues are addressed throughout the course of the project and to ensure new personnel are properly trained should site conditions change. Examples of training subjects to be addressed include, but are not limited to, the following:

- Pollution detection and avoidance
- Pollution and spill control standards (reference Section 10 and 14 below)
- Installation and maintenance of environmental controls and monitoring devices
- Anticipated hazardous or toxic wastes and chemicals at the construction site and proper handling, storage and containment protocols associated with those and other regulated substances including SDS sheets and location (reference Sections 11, 12, and 14 below)
- Physical hazard recognition and avoidance
- First aid station and material location at the construction site
- Recognition of archaeological sites and artifacts as well as proper protocols should these items be inadvertently discovered during construction (reference Section 16.1 below)
- Recognition and protection of wetlands and Resource Protection Areas (reference 16.3 below)
- Recognition and protection of threatened or endangered species and their habitat now or likely to be located in the project area (reference Section 16.2 below)

In addition to these aspects of environmental training programs which will help ensure adequate and comprehensive environmental controls during the project, Centennial shall be responsible for ensuring all applicable federal, state and local occupational and worker safety regulations are satisfied. Site safety meetings shall be held daily or as needed to inform the site workers on proper safety practices and communication protocols of any new aspects of the construction project. Workers shall be properly trained in aspect of worker safety detailed in the OSHA Construction Resource Manual (29 CFR 1903, 1904, 1910, and 1926), as well as (if applicable) sections of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1. Supplemental training appropriate for an individual worker's responsibilities (i.e. OSHA HAZWOPER) shall also be completed as required by applicable regulations.

5. Erosion and Sediment Control Plan (SWPPP)

Introduction

For projects with the potential to cause sediment or erosion issues, the Centennial Project Manager (PM) will require appropriate subcontractor(s) to submit and implement a site specific Storm Water Pollution Prevention Plan. This plan will address storm-water management. A recommended format for a separate SWPPP is included in section 5 of this EPP.

This plan, hereafter referred to as the SWPPP, identifies the project specific type and location of erosion and sediment controls to be provided including storm-water pollution prevention techniques, borrow areas, limited or non-use areas and features to be preserved. Each Erosion and Sediment Control Plan shall be specific to the project of discussion. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, limited or non-use areas and stockpiles shall be part of each plan. Methods to control runoff, including that potentially resulting from vehicular or heavy equipment traffic, as well as a means to contain materials on the site will be explained and implemented as needed. All potentially involved personnel will be familiar with the causes of pollution and soil erosion, with the contents of the SWPPP and with maintenance of the mitigation methods and any additional pollution prevention measures. The SWPPP shall also include monitoring and reporting requirements to assure that the control measures used are effective and are in compliance with applicable Federal, State and Local regulations.

Summary of Requirements

a. Storm-water runoff is regulated on the local and at the State level, however the Federal Facility Compliance Act requires that federal facilities comply with all local and state standards.

b. All construction activities will be conducted to prevent degradation of all water resources including ditches, wastewater collection systems, treatment facilities and effluents.

c. Soil and/or water runoff including that caused by rapid or uncontrolled runoff into drainage systems will be planned and implemented prior to commencing construction activities.

d. Sediment control will be implemented as a proactive approach to eliminate or reduce all types of erosion and runoff.

e. All connections to and discharges into the sanitary wastewater system, such as steam cleaning, require approval by the Fort Lewis O&M Division.

f. Construction and design activities within wellhead protection areas require approval of O&M.

g. Use of borrow and fill pits will be approved by the O&M Division via a use permit.

h. Vehicle maintenance is not permitted near water bodies or in housing areas, barracks areas or parking lots.

i. Faucets, valves and other plumbing fixtures shall not be allowed to leak and will be turned off completely when not in use. Every effort shall be maintained to conserve water.

j. (If applicable) A military installation, much like a county or city, operates under an NPDES permit. Industry and construction within that installation or municipality must comply with specifically established requirements. Construction projects for some regions must apply for coverage under the NPDES General Permit if the project results in disturbance of one or more acres of land (including clearing, grading and excavation) **AND** the project discharges storm-water from the site into a surface water or to a storm drain that discharges to surface water. The federal standard for compliance with an NPDES permit specifies disturbance of more than five acres, however some federal installations may require protection of all water bodies including surface water. This does not strictly apply to routine maintenance such as regrading a road or cleaning out a roadside ditch to maintain its as-built function; however every attempt will be made to avoid unnecessary runoff.

k. Construction activities that are not required to apply for coverage include routine maintenance activities, work that discharges only to the ground and not to surface water or a storm sewer; any discharge from a remedial action under consent decree; any emergency construction activity required to protect public health and safety; and any construction activity for routine maintenance of existing facilities to maintain original line and grade or hydraulic capacity. Centennial and its subcontractors will make attempt to apply the same protective standards to these activities where feasible.

l. Centennial will require all potentially affected subcontractors to comply with the provisions of the Endangered Species Act (ESA). The Endangered Species Act is of concern on construction sites because of the potential adverse impacts to receiving waters from discharges of sediment, turbidity or abnormal pH. Specific adverse impacts include:

- suffocation of eggs or fry;
- displacement and elimination of aquatic invertebrates utilized for food;
- reduction in the biodiversity of aquatic invertebrates;
- reduction of foraging abilities in turbid water;
- irritation of gill tissue that can lead to disease or death;
- and filling of resting, feeding areas or spawning gravels with sediment.

These impacts could be determined to be a violation of the federal ESA. The stranding of listed species behind erosion and sediment control features or the impairment of their access into certain areas due to the presence of erosion and sediment control features could also be determined to be a violation under ESA.

m. Other standards may require the implementation of BMPs to control pollutants in construction site storm-water runoff such as:

- Total Maximum Daily Load (TMDLs) or Water Clean Up Plans.
- Hydraulic Project Approval Permits.
- General provisions from the WSA Department of Transportation.
- Contaminated site remediation agreements.
- Local permits and approvals, such as clearing and grading permits.

5.1 Sample SWPPP for Subcontractor Use

Company Name:		Date:	
Project Title:		Contract Number:	

Background Information:

SWPPP Content:

SWPPP Coordinator and Duties

Customer Contacts

Project Engineer:		Contact #:	
Storm Water Inspector:		Contact #:	

SWPPP Coordinator

Name:		Contact #:	

The construction site SWPPP coordinator's duties include:

(1) Implement the SWPPP plan wit the aid of the SWPPP Team
(2) Oversee maintenance practices identified as BMPs in the SWPPP
(3) Implement and oversee employee training
(4) Conduct or provide for inspection and monitoring activities
(5) Identify other potential pollutant sources and made sure they are included in the plan
(6) Identify deficiencies in the SWPPP and make sure they are corrected.
(7) Ensure that any changes in construction plans are addressed in the SWPPP

SWPPP Team

Name:

Responsibilities:

Name:

Responsibilities:

Project Description

Site Location / Description:

Insert area map below:

Construction Type:

Existing Site Conditions:

Site plan:

Example site plan explanation:

a. Figure XXXX is a site map showing project site boundaries, the proposed location of the building, paved parking and drive areas, storm system inlets, the proposed limits of clearing and grading and the various drainage areas. A total of 15.8 acres will be cleared and grubbed during construction activities. Approximately 2.3 acres of the heavily wooded area along the eastern portion of the property will be clear-cut and the timber removed. The concrete block building and the loading dock area on the north side of the building will be 177,500 square feet and the 30,000 square feet respectively. Four storm system inlets will collect storm water from roof drains, parking areas and the loading dock area and convey it to a one-acre storm water sedimentation basin. Overflow from the sedimentation basin will discharge into Old Mill Stream and the discharge will be controlled to prevent flooding of the receiving stream.

b. Since the building will be slab-on-grade construction, rough grading and excavation for concrete footings will be the primary soil disturbing activities. All soils excavated for footings will be stockpiled an site prior to finish grading to allow drainage away from the building foundation. All soils excavated from storm system trenches will be stock piled and then finish graded during construction of the paved drive, parking and loading dock areas. All exposed soils will be re-seeded and new vegetation will be planted as soon as possible.

c. Figure XXXX also shows the locations of the drainage areas and the apparent storm water drainage patterns.

(1) Drainage area DA-01 located along the western one-third of the site currently drains toward Old Mill Stream. After clearing and grubbing, the majority of storm water will drain to the proposed sedimentation basin.

(2) Drainage area DA-02 included the loading dock area plus the roof drains from buildings. Storm water from DA-02 will collect in one of the two storm system inlets before discharging to the sedimentation basin.

(3) Drainage area DA-03 includes the proposed parking area south of the building. Storm water from DA-03 will empty into of two storm systems that discharge to the sedimentation basin.

(4) Drainage area DA-04 begins along the eastern edge of the parking area and continues east through the area where tree removal will occur. A vegetated swale will be developed in this area following construction and soil stabilization. The vegetated swale will improve storm water infiltration.

(5) Drainage area DA-05 located along the northern and eastern one-third of the site is generally covered by vegetation. Because of the high permeability of the soils and the

absence of site activities (clearing and grading) in this area, this drainage area is not significant and will not be addressed further in the SWPPP.

d. A description of each drainage area is provided in Table XXXX.

Identification of Potential Storm Water Contamination

Significant Material Inventory:

Potential Areas for Storm Water Contamination:

Examples:

a. Cleared and graded areas

b. Asphalt loading dock construction and building construction

c. Construction site entrance and asphalt parking area construction

d. Tree removal area

e All undisturbed areas

Site Specific Pollution Potential:

Note: may be beneficial to insert/reference a table which presents the information regarding storm water pollution potential

Summary of Available Storm Water Sampling Data:

Storm Water Management Controls

Purpose:

a. This section identifies the types of temporary and permanent erosion and sediment controls that will be used during construction activities.

b. The controls will provide soil stabilization for disturbed areas and structural controls to divert runoff and remove sediment. This section will also address control of other potential, storm-water pollutant sources such as construction materials (paints, concrete dust, solvents, plaster), waste disposal, control of vehicle traffic and sanitary waste disposal.

Temporary and Permanent Erosion Control Practices (list in detail the best management practices that will be implemented on site):

Construction Practices to Minimize Storm Water Contamination (list below):

Coordination of BMPs with Construction Activities (explain below):

Sampling Requirements (if there are sampling requirements, detail them here):

Endangered and Threatened Species and Critical Habitat Protection (if there is a restriction due to endangered and threatened species and critical habitat, explain below):

Total Maximum Daily Load (TMDL) (if this applies, explain below):

Certification of Compliance with Federal, State and Local Regulatory Bodies (explain below):

Maintenance Inspection Procedures

Inspections (example below, include site specific details):

a. Visual inspections of all cleared and graded areas of the construction site will be performed at least every 7 calendar days (or performed at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater).

b. The inspection will be conducted by the SWPPP Coordinator for their designated storm water team members.

c. The inspection will verify that the structural BMPs described in Section 5 of this SWPPP are in good condition and are minimizing erosion. The inspection will also verify that the procedures used to prevent storm water contamination from construction materials and petroleum products are effective.

d. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

(1) Built up sediment will be removed from silt fencing when it has reached a third the height of the fence.

(2) Silt fences will be inspected for depth of sediment, for tears, to see if the fabric is securely attached to the fence posts and to see that the fence posts are firmly in the ground.

(3) The sediment basin will be inspected for depth of sediment and built up sediment will be removed when it reaches one foot in depth.
(4) Temporary and permanent seeding will be inspected for bare spots, washouts and healthy growth
(5) The stabilized construction entrance will be inspected for sediment tracked on the road, for clean gravel and to make sure that the culvert beneath the entrance is working and that all traffic uses the stabilized entrance when leaving the site.

Maintenance Inspection Report:

a. The maintenance inspection report will be completed after each inspection.
b. A copy of the inspection report to be completed by the SWPPP Coordinator is provided at Annex A of this SWPPP.
c. Completed forms will be maintained on-site during the entire construction project.
d. Following construction, the completed forms will be retained at the Centennial or subcontractor office for a minimum of one year.
e. If construction activities or design modifications are made to the site plan that could impact storm water, this SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and the planned source control activities.

Employee Training:

a. An employee training program will be developed and implemented to educate employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP and hands-on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal

and control of waste, equipment fueling, and proper storage, washing and inspection procedures.

b. All employees will be trained prior to their first day on the site.

c. Training will be documented by recording the name and date of each individual.

a. An employee training program will be developed and implemented to educate.

Record of Storm Water Training

Name:	Company:	Date:

Certification

Centennial Certification :

Company Name: Date:

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. I also certify that the BMPs contained in this SWPPP were properly selected from those contained in the Western Washington Storm Water Manual and will be properly implemented and maintained in accordance with the guidance in the manual.

Signature:

Name:

Title:

Sub Contractor Certification:

Company Name: Date:

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature:

Name:

Title:

6. Traffic Control Plans

With respect to the Traffic Control plan, we will utilize DOT – MUTCD manual for guidance with a mutually agreed upon traffic control plan with the local jurisdiction authority. Our anticipated peak traffic conditions would generally be in the beginning and end of each work day when personnel are entering and leaving the work site. Centennial shall provide necessary provisions for the protection and diversion of traffic as necessary to comply with the state and/or local jurisdiction having authority. Measures to be utilized as needed may include watchmen and flagmen, erection of barricades and the placement of appropriate warning, danger and directional signage.

Describe in detail and attach the traffic control plans that will be implemented for this project:

7. Work Area Plans

Explain below the areas of this specific project facility/building which are approved or will be utilized for construction activities.

Note: Site Plans provided for this project may depict the areas approved for construction activities. If so, please reference the site plans.

Site Plans Titled:

8. Borrow Area Plans

Will borrow areas be required/anticipated for this project? Yes | No

If yes, explain and attach drawings below:

9. Spill Control Plans

An effective Spill Control Plan is required at the site to implement procedures and controls which will prevent and/or minimize adverse impacts associated with releases of hazardous, toxic or other regulated substances into the environment. The following Plan serves to supplement the spill prevention procedures outlined in Contract Specifications SWPPP for Construction Activities as well as incorporating (when working on Federal Land, the appropriate section of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1).

9.1 Personnel

The project superintendent will serve as the primary contact for reporting spills or releases of regulated substances and will be responsible for following up with complete and accurate documentation of the release. He/she can be reached via telephone numbers listed in section 3 of this plan. The superintendent will also coordinate cleanup activities and procedures should a release occur. If ever the superintendent is unavailable at the time of a release, the alternate contact shall be the quality control manager. Contact information for the QC manager can also be found in section 3 of this plan.

In the case of a release at the project site, on-site employees shall immediately notify the Centennial project Superintendent. He/she in turn will notify the customer Project Manager, Environmental Management Office (EMO) and the local Fire Department as necessary.

List below any Federal, State, Local or Military Installation reporting channels/guidelines:

9.2 Training Requirements

Employees shall be adequately informed and trained in the hazard notification standards stipulated in the OSHA Hazard Communication Standard 29 CFR 1910.1200. This standard provides employees the right to notify of the potential hazardous conditions and/or chemicals which may be present at a particular job site. Additionally, the standard includes provisions for informing employees about protective measures to prevent adverse effects from occurring. Effectively communicating the potential work-site hazards to site personnel will help minimize harmful workplace incidents. Additional training and information shall be provided to site personnel, the level of detail of which shall be commensurate with individual responsibilities and may include the following:

1. The contents of the EPP;
2. The effects of products expected to be utilized at the site to human health and the environment;
3. The responsibility of each person to prevent and contain spills;
4. Applicable pollution control laws and regulations;
5. Specific precautions for each area of operation including proper chemical storage, handling and labeling;
6. Proper operation and maintenance of associated equipment;
7. Proper use of Personal Protective Equipment (PPE);
8. Potential spill area contaminant migration routes at the site;
9. Initial spill response procedures and location and proper use of spill control equipment; and
10. Appropriate spill notification procedures and channels.

Personnel with the potential to respond to releases of hazardous materials are required to be trained in accordance with a 40-Hour OSHA HAZWOPER Certification course. Additionally, a minimum of one (1) individual at the site should have completed the 8-Hour OSHA HAZWOPER supervisor training course. Emergency response personnel are also required to be trained in the First Responder Operations Level specified in 29 CFR 1910.120 (g)(6)(ii).

9.3 Materials and Equipment

All subcontractors shall maintain appropriate equipment and materials at the site in quantities sufficient to adequately contain potential releases of substances utilized at the site. Spill control materials shall be located in portions of the site where the potential for spills or releases are relatively high and shall be easily accessible by site and emergency response personnel. Examples of equipment which may be provided include pre-fabricated spill kits, absorbent materials such as cat litter or oil absorbent socks/booms to contain surface liquid releases, spill mats, appropriate PPE (i.e. Tyvek suits, latex gloves, etc.), 55-gallon drums for temporary staging of released/contained materials, storm drain covers, brooms, and square point shovels, barricades and proper warning signage. Additional equipment and materials should be added or available for rapid mobilization as necessary.

Spill containment equipment and materials will be obtained prior to project site mobilization and the subcontractor is responsible for deploying these materials effectively to contain, clean-up, disinfect/decontaminate unforeseen minor spills, as well as other related disposal costs in non-emergency situations. Additional spill containment materials discussed above can be obtained as needed from the local safety supplier of choice. The Local Emergency Response Team (ERT) will respond to unforeseen emergency situations and hazardous material spills. Coordination with the ERT throughout the lifespan of the project shall be maintained by the project site superintendent.

9.4 Contaminant Cleanup Procedures

Cleanup procedures for accidental releases vary depending on the material involved in the release as well as the quantity of the release material. The following classifications and response will be utilized:

Category 0: Releases of this type are defined as petroleum spill of less than 5 gallons as well as any hazardous substance releases where the release can be safely contained and cleaned up by the person or persons causing the release. The subcontractor shall immediately ensure proper cleanup of these types of release, document the conditions of the release and the measures taken to contain and cleanup the substance. Formal notification procedures discussed above are not required for these types of releases. The subcontractor is required to immediately report any and all spills and/or release of hazardous materials, defined by OSHA as a substance requiring a Safety Data Sheet (SDS), to the Customer Project Manager/Contracting Officer, Local Fire and Emergency Services and the EMO.

Category 1: Petroleum release between 5 and 25 gallons as well as hazardous substances within the capability of the responsible person(s) to contain and cleanup fall into this category. If deemed necessary by on-site personnel, fire and emergency services may be notified and mobilized to assess the situation and provide technical and manpower resources. The ERT may be placed on standby until the situation is fully assessed and the response actions complete. The primary on-site contact at the time of the release will be tasked with notification of additional personnel as described above, including state authorities should surface waters be impacted, and all appropriate documentation such as antecedent conditions, nature of the release, and mitigation measures, shall be recorded.

Category 2: This category includes releases of petroleum products over 25 gallons or hazardous substances beyond the responsible person's cleanup capability. The ERT should have the capability to adequately and effectively contain and cleanup releases within this category and shall be mobilized as soon as practicable. An on-scene Coordinator will be designated by the Directorate of Public Works and Logistics (DPWL) and will be a representative of the EMO. The on-site Coordinator will be responsible for coordinating and mobilizing the cleanup and remediation of the release. Third party Emergency Response Contractors (ERC) may be put on notice and standby, but will not mobilize unless deemed necessary by the on-scene Coordinator. Releases of this volume require notification of state agencies.

Category 3: Spills which fall into this category are beyond the cleanup capabilities of the ERT and require response from a contracted third party. Release of this magnitude poses an imminent threat to human health and/or the environment. The contracted ERC may consist of an adequately trained and equipped hazardous materials (HAZMAT) team, and once mobilized by the on-site Coordinator, will conduct cleanup activities under the direction of the EMO on-site Coordinator. Depending on the magnitude and location of the release, the appropriate notification of state and federal emergency response agencies shall be followed.

If spills occur, it will be the responsibility of Centennial and/or the subcontractor to containerize impacted material and dispose of the media in accordance with applicable regulations. Spills caused by the customer will be the responsibility of the customer and the customer's Hazardous Waste Manager shall be contacted to arrange for pick-up of impacted material or media in such circumstances.

Significant quantities of hazardous materials, other than petroleum products, are not anticipated to be utilized as part of this project.

Should an inadvertent release of petroleum products occur, the following procedure shall be utilized:

Ø Stop the source of the spill, if possible. Identify the source and/or cause of the release and prevent additional release if possible. Determine if the release has the potential to impact surface waters and protect storm drains or drainage features as necessary to prevent contaminant migration into receiving waters. The primary concerns are to minimize the impacted areas and to prevent oil from entering the environment.

Ø For small spills, utilize spill equipment or absorbent material to clean up oil by forming a perimeter around the release. If needed, mobilize a vacuum truck to remove excessive amount of product. Storm drains that are threatened shall be covered with spill mats and surrounded by absorbent booms, and the entrance to drainage ditches that are threatened shall be blocked with absorbent booms. Should there be insufficient absorbent booms and pads, sand, fine aggregate and/or dirt may be used as spill absorbent. Contain debris in drums or another appropriate container and store in a designated drum storage area for subsequent disposal. Follow the appropriate notification and documentation procedures discussed in Section 9.1 above and contact the Customer Project Manager/Contracting Officer, EMO and Local Fire Department unless the release qualifies as a Category 0 petroleum release.

Ø For larger spills, immediately notify the Customer Project Manager/Contracting Officer, EMO and Local Fire Department. The on-site Coordinator will determine if the spill can be handled safely by Installation personnel or if conditions necessitate mobilizing the ERC. The on-site Coordinator will make appropriate regulatory notifications.

Ø On-site personnel should only respond to spills that are small enough to handle safely and only respond to a spill of substances with which you work or have familiarity. Identify the character, exact source and amount of any released materials by observation to aid in remediation activities and for reporting documentation.

Ø Take reasonable measures necessary to avoid fires, explosions and further releases. These measures shall include, when applicable, stopping and isolation processes and operation, collecting and containing released petroleum and removing or isolation problem containers. Evaluate the area if necessary. Monitor the affected equipment and areas for leaks and additional release, wherever appropriate.

If the spill cannot be handled safely or contained, if surface waters are threatened, if there are injuries or the potential for injuries, if there is fire or the potential for fires or if the release could endanger the public outside the work area, call the Local Fire Department and evacuate the site immediately. Provide Fire Department with the following information:

1. **Caller's name, exact location and phone number of the facility, if available**
2. **Any injuries observed**
3. **Date and time of the discharge**
4. **Product involved and approximate volume**

5. **Flow stopped or continuing**

6. **Danger to potential conduits (drains, sewers, ditches, surface water)**

7. **Potential for fire**

8. **Document spill response action and notification procedures followed. Take detailed notes including names, dates and times. Take photographs.**

9.5 Post Discharge Review

In addition to the reporting requirements discussed above, and not withstanding any applicable federal, state or local actions which may be required based on the magnitude of a spill, a Post-Discharge Review is required for petroleum related spill of 25 gallons or greater, spills that impact state waters or releases of hazardous substances over the specified Reportable Quantity (RQ). Post-Discharge review procedures are as follows:

Minor Spills: For petroleum related spills between 5 and 25 gallons that do not impact state waters, or for releases of hazardous substances below the RQ, a concise written report shall be prepared by the Officer in Charge or the Facility Operator. Information contained in this report shall include the cause of the spill, magnitude of the release and remedial efforts conducted, if any. The report shall be submitted to the DPWL for review upon completion.

Reportable Spills: For petroleum spills greater than 25 gallons, a release that impacts state waters or spill of hazardous materials above the RQ, a formal Post-Discharge Review is required. Information pertaining to the circumstances leading up to the release, potential effects to human health and the environment, notification and spill response procedures followed and any remedial or mitigative actions performed by the responsible party shall be included in the Post-Discharge Report provided to the EMO for review. Such information shall be provided within 7 days of the release. EMO personnel will then provide guidance concerning additional investigations or sire characterization which may be deemed necessary, as well as a thorough review of the response action(s) and whether modifications to the spill response protocols are needed.

10. Non-Hazardous Waste Management Plan

For each delivery order project potentially generating non-hazardous solid waste, the Centennial PM will require each subcontractor to submit a project specific plan detailing what material is to be disposed of, why these materials cannot be recycled, the schedules for disposal and the method of transportation to be used and the destination. Licenses or permits shall be submitted for solid waste disposal sites that are not considered a commercial operation facility as well as written notice of acceptance from the facility that the specified waste will be disposed there. Once the material is disposed of, the subcontractor shall submit to the Centennial PM, a Non-hazardous Solid Waste Diversion Report for each disposal event. These reports in turn shall be submitted to the Customer. Each report shall specify the total amount of waste generated and the total amount of waste diverted in cubic meters yards or tons along with the percent that was diverted.

Solid non-hazardous wastes will be disposed of at:

Non-hazardous liquid wastes are required to be placed in DOT-approved steel drums with proper labels including the contents and the non-hazardous nature of the material. These vessels shall be stored in a separate designated area prior to removal and disposal.

Non-hazardous wastes removed for off-site disposal shall be weighed and ticketed. Trip tickets shall be obtained from the landfill, incinerators and/or recycling facilities utilized and shall be submitted to the customer in order to document the amount (tonnage) of waste and debris land-filled, incinerated, reused, recycled or salvaged.

Centennial is required to ensure wastes, both hazardous and non-hazardous, are removed from the site at the end of the project. These items include, but are not limited to, dirt, concrete, asphalt, and rubbish piles, paints, plasters, solvents or other building materials. No such materials shall be left at the site without written permission from the customer.

10.1 Recycling and Waste Minimization Plan

Purpose: To establish, monitor and execute programs for non-hazardous solid waste, including waste minimization, resource recovery and recycling.

Applicability: This policy applies to all Centennial personnel and subcontractors.

References:

Explanation of Terms:

SOLID WASTE: Means all putrescible and non-putrescible solid and semi-solid wastes including but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged materials and recycled materials.

RECYCLABLE MATERIALS: Means those solid wastes that are separated for recycling or reuse, including but not limited to, papers, metals and glass, that are identified as recyclable material pursuant to a local comprehensive solid waste plan.

RECYCLING: Means transforming or re-manufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration.

Objectives:

To ensure all Centennial personnel and subcontractors are in compliance with federal, state and local environmental regulations for construction on this project.

1) To protect the environment.

2) To meet the customer/project specification goals by diverting non-hazardous solid waste from landfill disposal.

Explain additional goals/objectives:

Responsibilities:

a. The Centennial Environmental Compliance Officer (ECO) is responsible for reviewing the subcontractor's recycling plan prior to submittal to the customer. In so doing, the ECO will promote waste reduction and recycling and ensure compliance with provisions of this SOP and Federal, State, Local Regulation by all personnel involved in the project.

b. Each PM will require the subcontractor to develop and implement a Recycling Plan. This should include appointing an on site project Recycling Officer to ensure that the plan is actually implemented and that all applicable materials are recycled.

c. The subcontractor and their Recycling Officer are responsible for:

1) Encouraging all project personnel to reduce unnecessary waste of building materials or construction supplies, wastepaper usage and to recover construction materials, used paper, cardboard, glass, tin, aluminum cans, plastic bottles etc. for recycling.

(2) Facilitate awareness raising and education regarding recycling building materials (asphalt, wood, glass, concrete, etc.), paper reuse, recycling and the use of non-virgin paper.

(3) Ensuring that at each project or office, toner and ink cartridges are recycled in an environmentally sustainable manner or properly disposed and that following demolition the unpainted wood, concrete, and asphalt are diverted to the appropriate recycling center.

(4) Encouraging all Personnel to reuse/recycle packaging boxes and to find recycling opportunities for plumbing fixtures, metals, door and window units, etc.

(5) Ensuring that packaging is minimized, pallets are returned and that all chemicals brought onto the site that are not used are removed by the subcontractor who brought it.

(6) Ensuring that unwanted Hazardous Material is returned, used elsewhere or turned in via the PM.

(7) Ensuring that this procedure is kept up to date.

(8) Monitoring its effectiveness.

(9) Updating the policy as necessary.

(10) Monitoring outcomes derived from introducing this policy.

(11) Communicating with and informing Centennial personnel and subcontractor personnel on issues relating to this procedure and the recycling goals.

d. All Centennial Personnel are responsible for:

(1) Reusing recyclable materials as much as possible. Avoiding paper use where practical (edit documents on-screen, use electronic forms of communication).

(2) Ensuring that double-sided copying/printing is employed whenever possible and using the unprinted side of any previously printed paper (printed on one side) to produce draft copies of documents and for notes.

(3) Using available recycling bins for disposal.

(4) Identifying new ways to recycle, new items to recycle and new recycling options for subcontractors.

(5) Help all subcontractors to recover used construction materials (unpainted wood, asphalt, concrete, etc.), remove intact plumbing fixtures, window and door units, lighting, etc. so these can be sent to a recycling firm. Recover used paper, books, magazines, cardboard, glass, tin, aluminum cans, plastic bottles #1 through #7 etc. for recycling.

General Guidance:

To aid in maintaining a strong and effective program, the following guidelines will be implemented:

a. Recycling containers will be positioned at each project scheduled to take more than one day to complete. The "blue bin" recycling program will be implemented and includes both mixed paper (red label bin) and a commingled recyclables (green label bin).

b. Blue bins with red labels will be used to collect all types of paper..

c. Blue bins with green labels will be used to collect glass, tin, aluminum cans, plastic bottles #1 through #7 and juice boxes.

11. Hazardous Waste Management Plan

Will significant volumes of hazardous waste be expected on this project?	Yes	No

Note: the potential exists for the inadvertent discovery of hazardous wastes and in such instances, all applicable federal, state, and local regulation are to be followed.

Hazardous wastes shall not be removed from the project site without approval from the Hazardous Waste Manager or other qualified EMO personnel. Uniform Hazardous Waste Manifests shall be signed by the Hazardous Waste Manager, shall include EPA ID number and maintained to ensure proper documentation record keeping.

Will a Nuclear Density Gauge be utilized during the course of this project?	Yes	No
If yes, is the work being conducted on a Federal Installation/Base?	Yes	No

Note: A nuclear density gauge device emits low levels of gamma radiation. If using a nuclear density device on a federal installation, a permit is required. Centennial is responsible for obtaining the necessary approvals for the use of the equipment.

Additional potential hazardous or toxic materials which may be utilized at the site include diesel fuel and gasoline, various lubricating oils or hydraulic fluids, paints, adhesives, sealants or fluorescent lights and ballasts. Hazardous wastes, both solid and liquid, stored in approved containers must remain closed or properly covered when not in direct use to provide protection from the weather. Such materials shall be properly labeled according to applicable regulations in order to provide clear direction as to the contents of the container. Hazardous wastes in excess of 55 gallons must be removed from the project site within 72 hours of generation. If such wastes must be stored on-site for more than 72 hours, Centennial shall contact the Hazardous Waste Manager. Centennial is responsible for ensuring all such wastes are removed and properly disposed of at the completion of the project.

12. Air Pollution Control Plan

To the extent feasible, all Centennial construction projects will maintain a "no visible dust" policy and will make all attempts to control fugitive emissions of nuisance dust such as from excavation. All projects involving lead based paint, asbestos or other hazardous materials in soil, water or buildings will have strict abatement/removal plans developed and strict controls implemented. The Centennial PM will require that applicable subcontractors submit and implement plans to control emissions and visible dust as well as trash and other debris.

In the event a release occurs that will impact the environmental air quality, we will notify the Chief Environmental Compliance Officer, the Local Fire Department and any other regulatory agencies as required.

12.1 Pollutant Emitting Equipment

If applicable, information shall be provided for equipment which emits pollutants including but not limited to, boilers and furnaces, hot water heaters and other fuel burning equipment. It should be noted that actual unit-specific data is required and more general references to inclusion of the equipment on various low emission lists is not adequate to satisfy this requirement.

Details (if applicable):

12.2 Volatile Organic Compounds

Coatings and solvents utilized during construction shall meet applicable performance specification and shall not exceed the volatile organic compound (VOC) limits of the Air Pollution Control Districts where they are used. Low VOC-emitting or Chemical Agent Resistant Coating (CARC) point is recommended to minimize VOC emissions both during and after application .

Certification statements shall be prepared and executed which indicate paints and protective coating utilized at the site do not contain mercurial mildecides or insecticides, lead, zinc, chromate or strontium chromate and these materials will comply with applicable state and local laws, thereby facilitating compliance with Federal Clean Air Standards and the VOC regulations of the Air Pollution control Agencies having jurisdiction over the site.

VOC materials shall not be intentionally spilled or discarded into sewers and shall be stored in covered containers with proper labels pursuant to the manufacturer's recommendations. Containers shall be stored in locations with adequate ventilation to prevent the accumulation of harmful or flammable vapors and to protect the materials from exposure to excessive heat, cold or ignition sources. All subcontractors shall maintain SDS sheets which can be readily viewed at the construction site.

12.3 Solvents

Emission Standards for Solvent Metal Cleaning Operation using Non-Halogenated Solvents shall be followed. Non- or low-VOC solvent use shall be specified for activities which require solvents such as degreasing, paint cleanup or other general maintenance activities. A water reducible product shall be used to clean paint guns and lines and ozone depleting compound (ODC) containing solvents shall not be used without approval from the customer. Cut back asphalt will not be used at the site to further minimize VOC emissions from solvents. Centennial will ensure appropriate pollution control measures are taken to minimize the risk of release of solvents into the environment either in liquid or gaseous form.

12.4 Fugitive Dust Emissions

Dust sources shall be mitigated in accordance applicable Federal, State and Local requirements. All subcontractors shall institute measures which prevent particulates from becoming airborne. Measures can include the use of water or chemicals on roads or denuded areas during construction and/or demolitions to suppress dust generation, wet suppression or covering stockpiled materials, precautions preventing deposition and subsequent Aeolian transport of particulates on roadways and the use of hoods, fans and/or fabric filters to contain dusty materials or sand blasting activities. Equipment utilized to transport materials which have the potential to emit particulates shall be adequately covered during operation and sediment inadvertently tracked onto existing roadways shall be removed as soon as practical to limit off-site migration.

A primary source of dust emission at the subject property will be denuded areas exposed during construction activities. As such, the subcontractors shall minimize the exposure of these areas by properly coordinating site activities and schedules. Specifically, wet suppression systems shall be provided prior to site disturbance in areas which will be exposed for prolonged periods and permanent ground coverings including asphalt, sod or seeding/mulch shall be applied as soon as practical following clearing and final grading of the project area. Logistical planning should be conducted so selected stabilization measures are accessible shortly following final site grading thereby minimizing exposure of denuded areas.

12.5 Boilers, Generators and Misc Emissions Units and Hot Water/Steam Boiler and Water Heaters

Information for boilers, generators and other emissions units as well as hot water/steam boilers and water heaters will be provided. This information includes specifications on the equipment performance and operation criteria as well as the manufacturer location and model information. This data is necessary to ensure equipment is selected which will comply with applicable operating and emission requirements.

Are Emergency generators anticipated to be installed on this project?	Yes	No

If yes, provide information below:

12.6 Pollutant Emitting Equipment and Vehicles

Equipment which emits pollutants shall operate in accordance with all Federal, State and Local standards. The subcontractor shall routinely inspect pollutant-emitting equipment to verify the equipment does not produce visible emissions with greater than 20% opacity except during startup, shutdown or malfunction. Any piece of equipment which cannot satisfy this requirement shall be shut down and necessary repairs initiated or replaced with a properly functioning unit.

Certification reports shall be provided to the customer which state diesel fuels utilized at the site both in stationary equipment and mobile sources do not exceed 0.05% sulfur by weight or 500ppm. These certification statements shall be provided prior to the initiation of construction activities or upon request from the customer.

Vehicle engines shall not be permitted to idle for more than three (3) minutes. Equipment providing auxiliary power for other than heating or air conditioning is permitted to exceed this threshold. In addition, diesel power engines may idle for up to ten (10) minutes to minimize re-start problems and/or emissions. Centennial will be responsible for monitoring vehicle idling during construction and for facilitating the efficient use of construction vehicles at the site by minimizing down time to ensure these requirements are met.

12.7 Ozone Depleting Substances (ODS)

Class I ODS equipment shall not be utilized for this project. Documentation verifying equipment specifications and emissions (i.e. manufacturer stack testing, emissions certifications, not to exceed emission data, etc.) shall be provided to the customer for subsequent submission to regulators. This information shall be provided to the customer no more than 30 days after each piece of equipment is ordered.

12.8 Open Burning

Will open burning take place on this project site?	Yes	No

If yes, explain:

13. Containment Prevention Plan

All subcontractors are required to take all reasonable precautions to prevent the introduction of hazardous materials into the surrounding environment. Examples of hazardous materials which may be utilized at the site and be subject to the requirements discussed below included paints, thinners, sealing compounds, glues, solvents, petroleum products, pesticides, adhesives, acids, flammable materials, corrosives, oxidizers and aerosols. Centennial shall provide a list of proposed hazardous materials to the customer along with the SDS for that material.
Hazardous Material Worksheets shall be completed and submitted to the Customer for hazardous materials proposed to be utilized at the site prior to transporting any such substances onto the project site and will include information regarding the material information, quantity expected to be utilized, purpose of the material, storage and use location and any special protective measures which shall be instituted. For projects expected to exceed six (6) months in duration, Centennial's Monthly Report for HAZMAT must also be completed and submitted to the Customer.

Centennial is responsible for ensuring unused quantities of hazardous materials are removed from the Installation and disposed of in accordance with applicable regulations.

Storage of hazardous materials will be conducted in a prudent and reasonable matter pursuant to applicable federal, state and local regulations. Containers shall be kept in good condition and properly labeled with the container contents and hazard class clearly visible. Storage areas will be cited appropriately and measures such as fire proof lockers or sealed and palletized drums shall be employed as needed to maintain safe storage and handling of these materials. Containers shall be employed as needed to maintain safe storage and handling of these materials. Containers shall be covered when not in use to protect the materials from the elements and to prevent storm-water runoff contamination. Incompatible materials shall be segregated from one another to preclude potentially dangerous chemical and physical reactions (i.e. flammables separate from corrosives, corrosives separate from oxidizers and flammable gases separate from flammable liquids). Storage vessels and tanks greater than 55-gallons in size shall be stored within secondary containment structures. Gas cylinders which are stored and utilized at the site shall be secured with chains and locks in an upright position and easily visible signage shall be posted indicating the type of gas contained within the cylinders.

On-site fueling sources may be employed during the completion of construction activities. Such sources may include temporary Aboveground Storage Tanks (ASTs) or fueling vehicles. ASTs shall be placed within secondary containment structures capable of holding 110% of the AST capacity. Containment structures shall be covered to prevent the accumulation of rainfall, or the structure shall be routinely inspected and accumulated precipitation removed and properly disposed of in accordance with all applicable regulations and specifications. Fueling equipment shall have emergency shut off switches that are maintained in good working order and are located in areas easily and rapidly accessible by the fueling technician. Given the relatively high potential for releases during fueling operations, subcontractors shall site and maintain spill kits and absorbent materials proximal to fueling areas. Furthermore, all fueling vehicles shall be equipped with absorbent pads and/or booms to facilitate rapid containment and cleanup of minor petroleum releases. If releases of petroleum substances occur, proper spill containment, cleanup and notification protocols detailed elsewhere in this EPP shall be followed.

Centennial will also ensure that equipment brought on-site is properly cleaned. Decontaminating equipment prior to arrival at the project site will minimize the potential for cross contamination from residual soils, pests, weeds or other undesirable materials.

14. Wastewater Management Plan

Construction activities may result in the generation of wastewater depending on the nature of the activity. Examples of such activities include concrete curing water, clean-up water, disinfection water and water generated through the flushing of lines or equipment. Placed concrete will be cured utilizing either curing compounds or through a wet curing process. As such, wastewater discharges from this process are not believed to be significant. Wastewaters generated during equipment or site cleaning activities, equipment flush-out procedures or equipment testing shall be disposed of either in the sanitary sewer where practicable or by collection and off-site transport if sanitary facilities are not available. Centennial shall obtain approval from the customer concerning the flow rate, volume and type of wastewater discharge before such discharges occur. Discharges to surface waters shall be minimized to the maximum extent practicable and reasonable measures will be employed to remove excess solids from the wastewater (i.e. settling tank).

Will wastewater discharges from dewatering activities take place on this project?	Yes	No

In either case,

Should such water be encountered and dewatering becomes necessary, Centennial shall provide primary treatment of the effluent utilizing a settling tank prior to off-site disposal. Discharged wastewater shall also be properly characterized prior to removal from the site.

15. Historical, Archaeological, Cultural & Biological Resources Wetland Plan

15.1 Historical, Archaeological and Cultural Resources (HAC)

Are there any known historical, archaeological or cultural resources associated with this project?

Yes	No

In the event of an inadvertent discovery of previously undocumented HAC resources, Centennial will immediately cease construction operations and notify the customer within 24 hours of the discovery. Potential HAC resources which would cause cessation of work include any human skeletal remains or burial, artifacts (i.e. ceramics, pottery, tools, etc.), shell, midden, bone, charcoal or other deposits rock or coral alignments, pavings, walls or other constructed features and any other indication of previous agricultural or other human activities. Until the customer has made a determination on the historical or cultural significance of the inadvertently discovered resources, Centennial shall effectively secure the area in a manner that prevents employees or other persons from trespassing on, removing or otherwise disturbing such resources. Failure to follow these procedures could result in fines and penalties under 36 CFR 800.

15.2 Biological Resources

Are there any known biological resources associated with this project?

Yes	No

Centennial shall minimize disturbance to biological resources outside the approved footprint of disturbance. Examples of biological resources include fish, wildlife, and plants and trees, including their habitat and disturbance of these resources are to be limited by remaining within the Work Area Limits approved by the customer. Inadvertent destruction or degradation of adjacent areas outside the approved Work Area Limit shall be remedied as soon as practicable by restoring the site to its original condition. Protective fencing shall be utilized around trees and shrubs that are designated to remain on-site after construction, if applicable. Damage caused to preserved trees should be documented and repaired and/or restoration plans shall be approved by the customer prior to implementation. Finally, appropriate measures shall be implemented to prevent the migration of sediment and fugitive dust from the construction site to protect off-site terrestrial and aquatic biological resources. Special care should be taken with work around storm drains, culverts, swales or other drainage features which may discharge to surface waters. Should biological resources be encountered during construction, Centennial shall cease operation and contact the customer immediately. A description of the situation and/or resource encountered shall be provided and guidance obtained to resumption of construction activities.

15.3 Wetland Plan

Are there any known wetland areas associated with this project?

Yes	No

In the event wetlands are encountered, employees shall not enter, disturb, destroy or allow the discharge of contaminants into any wetlands or Resource Protected Area.

16. Pesticide Treatment Plan

Will the use/application of pesticides be anticipated on this project?	Yes	No

If yes, Centennial will retain a licensed firm to provide treatment of excavated areas for pest infestations. The firm will be responsible for compliance with all applicable federal, state and local regulations regarding the proper selection of pesticide products and equipment, storage, handling, labeling, and transportation regulations, application methods, application rates, and record keeping and reporting requirements including any customer specific requirements. A Pest Management Plan shall be prepared and submitted to the customer for approval and obtain an Authorization-To-Treat prior to pesticide application activities.

17. Plan Review / Approval

Centennial Superintendent:

Signature: _____ Date: _____

Centennial Quality Control Manager:

Signature: _____ Date: _____

Centennial Project Manager:

Signature: _____ Date: _____

Centennial SSR:

Signature: _____ Date: _____