

Exhibit G Materials Analysis

Boardman to Hemingway Transmission Line Project



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Application for Site Certificate

September 2018

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ACRONYMS AND ABBREVIATIONS

AST	aboveground storage tank
CFR	Code of Federal Regulations
EFSC or Council	Energy Facility Siting Council
IPC	Idaho Power Company
kV	kilovolt
MSDS	material safety data sheet
OAR	Oregon Administrative Rule
ODEQ	Oregon Department of Environmental Quality
PCB	polychlorinated biphenyl
Project	Boardman to Hemingway Transmission Line Project
Second Amended Project Order	Second Amended Project Order, Regarding Statutes, Administrative Rules, and Other Requirements Applicable to the Proposed BOARDMAN TO HEMINGWAY TRANSMISSION LINE (July 26, 2018)
SPCC	Spill Prevention, Control, and Countermeasures

Exhibit G Materials Analysis

1.0 INTRODUCTION

Exhibit G describes the hazardous and non-hazardous materials to be used as part of the Boardman to Hemingway Transmission Line Project (Project) and Idaho Power Company's (IPC) plan for managing said materials.

2.0 APPLICABLE RULES AND SECOND AMENDED PROJECT ORDER PROVISIONS

2.1 Site Certificate Application Requirements

Oregon Administrative Rule (OAR) 345-021-0010(1)(g) provides Exhibit G must include:

- (A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation;*
- (B) The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills; and*
- (C) The applicant's plans to manage non-hazardous waste materials during construction and operation.*

2.2 Second Amended Project Order Provisions

The Second Amended Project Order includes the following discussion regarding Exhibit G:

The Department uses the materials analysis to identify any hazardous materials whose management and storage could affect the cost of site restoration because of the possibility of spills. The applicant shall include in the application any proposed fuel storage areas, vehicle maintenance areas, or other areas that will be utilized for activities that could result in a spill of a hazardous substance. Additionally, identify the expected storage locations and quantities of hazardous materials expected to be used during construction and operation of the facility.

The ODEQ Hazardous Waste program implements requirements of the EPA and is a federally-delegated program. The applicant shall comply with ODEQ regulations concerning the storage and management of hazardous materials and the clean-up and disposal of hazardous waste; however, note that compliance with federally-delegated programs is outside EFSC jurisdiction.

(Second Amended Project Order, Section III(g)).

3.0 ANALYSIS

3.1 Analysis Area

The analysis area for Exhibit G includes all areas within the Site Boundary, which is defined as "the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micro-siting corridors proposed by the applicant" (OAR 345-001-0010(55)). The Site Boundary encompasses the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kilovolt (kV) electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes, including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

The Project features are fully described in Exhibit B, and the location of the Project features and the Site Boundary is described in Exhibit C and Table C-24.

3.2 Industrial Materials Inventory

OAR 345-021-0010(1)(g)(A): An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation.

IPC utilized its experience constructing and operating transmission line projects—as well as the experience of its engineer contractor—to identify the types and quantities of materials that IPC expects will be required for the Project. The materials inventory covered each of the Project features, including multi-use areas, communication stations, transmission towers, insulators, conductors, and station equipment. For example, the planning of transmission tower and access road locations was used to estimate the quantities of concrete, aggregates and fill materials, and blasting and reclamation supplies that will be required. Road and stream crossing types and locations are documented in Exhibits B and C, which allowed for an estimate of the number of culverts and road crossing materials.

Hazardous materials were determined using the known processes required for transmission line construction. This includes herbicides necessary to control vegetation growth beneath the transmission lines. Most of the hazardous materials are associated with fuel and other liquid materials required to operate vehicles and construction equipment. They are either temporarily stored at the multi-use areas during construction, or brought on-site during construction or operations in service vehicles.

Tables G-1a and G-1b provide a list of industrial materials to be used during Project construction based on engineering estimates for the Project.

Table G-1a. Construction Materials Inventory for Project Construction of Proposed Route

Material	Ultimate Disposition	Units	Quantity
Structures and Wire			
Concrete for Foundations	Remains on-site as structure footings	cubic yards	50,360
Steel Plates for Foundations (Avg. weight = 1.8 tons each)	Remains on-site as structure footings	number	533
500-kV lattice structures (Avg. weight = 21 tons each)	Used on-site for power transmission	number	1,076
500-kV H-frame structures (Avg. weight = 25 tons each)	Used on-site for power transmission	number	90
230/138-kV wood pole structures (Avg. weight = 9 tons each)	Used on-site for power transmission	number	20
500-kV Conductor (Avg. weight = 40.2 tons per mile)	Used on-site for power transmission	miles	272
230-kV Conductor (Avg. weight = 9.1 tons per mile)	Used on-site for power transmission	miles	0.9
138-kV Conductor (Avg. weight = 4.5 tons per mile)	Used on-site for power transmission	miles	1.1
½ " Steel overhead ground wire (Avg. weight = 1.4 tons per mile)	Used on-site for power transmission	miles	272
3/8" Steel overhead ground wire (Avg. weight = 0.8 tons per mile)	Used on-site for power transmission	miles	2.0
Optical ground wire (weight = 1.1 tons per mile)	Used for communications for system operations	miles	272
Insulator bells	Used on-site for power transmission	number	217,568
Communication Stations			
Communication shelters (Pre-fabricated concrete shelter 10'x20' tall)	Used for communication signal regeneration. Remains on-site for operations.	number	8
Concrete for Communication Shelters Foundations	Remains on-site as foundations	cubic yards	80
External liquefied natural gas (propane) fuel storage tank (500 gallon)	Used to provide backup power to communications station. Remains on-site for operations.	number	8
Aggregate Base for Communication Stations	Used for access road, yard surfacing. Remains on-site.	cubic yards	40,000
Pea Gravel	Backfill of propane tanks. Remains on-site.	cubic yards	160
Communication Station Chain link fencing	Remains on-site for operations	feet	2,400
Multi-use Areas			
Aggregate Base for Multi-use Areas	Used for temporary working surface. Reclaimed for use on local access roads unless otherwise requested by landowner to remain.	cubic yards	255,190
Multi-use area fencing (temporary)	Removed and recycled or disposed of.	feet	159,600
Longhorn Station			
Concrete for Longhorn Station Foundation	Remains on-site as foundation	cubic yards	1,272
Aggregate Base for Longhorn Station	Remains on-site as yard rock	cubic yards	71,660
500-kV Breaker, Areva, 4000-A,63-k (535A and 536A)	Remains on-site for operations	each	6

Material	Ultimate Disposition	Units	Quantity
500-kV Breaker, Areva, 2000-A,63-k (504W)	Remains on-site for operations	each	1
500-kV Breaker, Areva, 2000-A,40-k (511Z and 512Z)	Remains on-site for operations	each	2
500-kV, 2000-A switches with MO (511X and 512X)	Remains on-site for operations	each	2
500-kV, 4000-A switches with MO (504E, 535B, 535C, 536B and 536C)	Remains on-site for operations	each	18
500-kV, 4000-A/2000-A grounding disconnect switch (504M and 504N)	Remains on-site for operations	each	2
500-kV continuously variable transmission (1-Phase)	Remains on-site for operations	each	5
(1) Single Phase Neutral Shunt Reactor 29.418 Mvar (L510)	Remains on-site for operations	each	1
550/317.54-kV Shunt Inductor (L511)	Remains on-site for operations	each	1
550/317.54-kV Shunt Inductor (L512)	Remains on-site for operations	each	1
500-kV 507.4 MVAR Series Capacitor (C504)	Remains on-site for operations	each	1
500-kV Dead-End Assemblies for Substation Overhead Strain Bus	Remains on-site for operations	lot	1
500-kV Overhead Conductor and Static Wire Dead-end Asmb	Remains on-site for operations	lot	1
500-kV Bus work and Miscellaneous Connectors	Remains on-site for operations	lot	1
500-kV Structure and Equipment Grounding Material	Remains on-site for operations	lot	1
New Control Building	Remains on-site for operations	lot	1
Duplex Panel with Relays & Controls	Remains on-site for operations	lot	1
Chain link fencing	Remains on-site as permanent fencing	feet	7,300
Access Roads, Stream Crossings, and Restoration			
Pit run gravel	Remains on-site as fill	cubic yards	60,826
Aggregate base	Remains on-site as road surface, structural backfill for direct embedded structures, culvert backfill	cubic yards	795
Geotextile stabilization fabric	Used on-site for construction	miles	9
Concrete for stream crossing structures	Remains on-site for permanent access	cubic yards	70
Culverts (high-density polyethylene [HDPE], Concrete and Corrugated Metal)	Remains on-site for drainage and stormwater control	number	159
Channel Spanning Structures (Temporary)	Removed and recycled or disposed of	number	7
Silt fence or fiber roll	Used for sediment control	miles	96
Spill absorbent material	Used to contain liquid spills if needed	containers	250
Native grass seed	Used for erosion control, reseeding, and restoration	acres	233

Material	Ultimate Disposition	Units	Quantity
Fencing and Gates			
Barbed wire fence	Replace damaged fence or add per landowner request	feet	29,500
Barrier fence	Replace damaged fence or add per landowner request	feet	6,600
Gates	Remains on-site for access control	number	105
Liquid or Hazardous Materials			
Herbicide	Used on transmission rights-of-way for weed control	gallons	200
Insulating Oil (PCB free)	Used at Longhorn Station to insulate shunt reactors. Remains on-site for operations.	gallons	14,800

Table G-1b. Construction Materials Inventory for Project Construction of Alternate Routes

Material	Ultimate Disposition	Units	Quantity				
			West of Bombing Range Rd 1	West of Bombing Range Rd 2	Morgan Lake	Double Mountain	Total
Structures and Wire							
Concrete for Foundations	Remains on-site as structure footings	cubic yards	2,170	2,249	2,153	1,387	7,959
Steel Plates for Foundations (Avg. weight = 1.8 tons each)	Remains on-site as structure foundations	Number	0	0	59	0	59
500-kV lattice structures (Avg. weight = 21 tons each)	Used on-site for power transmission	number	0	0	82	34	116
500-kV H-frame structures (Avg. weight = 25 tons each)	Used on-site for power transmission	number	22	15	0	0	37
500kV Y-Frame Structure (Ave. weight = 18 tons)	Used on-site for power transmission	number	0	8	0	0	8
500-kV Conductor (Avg. weight = 40.2 tons per mile)	Used on-site for power transmission	miles	3.7	3.7	18.5	7.4	33.3
½ " Steel overhead ground wire (Avg. weight = 1.4 tons per mile)	Used on-site for power transmission	miles	3.7	3.7	18.5	7.4	33.3

Material	Ultimate Disposition	Units	Quantity				
			West of Bombing Range Rd 1	West of Bombing Range Rd 2	Morgan Lake	Double Mountain	Total
Optical ground wire (weight = 1.1 tons per mile)	Used for communications for system operations	miles	3.7	3.7	18.5	7.4	33.3
Insulator bells	Used on-site for power transmission	number	2,316	1,950	16,404	5,012	25,682
Communication Stations							
Communication shelters (Pre-fabricated concrete shelter 10'x20' tall)	Used for communication signal regeneration. Remains on site for operations.	number	0	0	1	0	1
Concrete for Communication Shelters Foundations	Remains on site as foundations	cubic yards	0	0	10	0	10
External propane fuel storage tank (500 gallon)	Used to provide backup power to communications station. Remains on-site for operations.	number	0	0	1	0	1
Aggregate Base for Communication Stations	Used for access road, yard surfacing. Remains on-site.	cubic yards	0	0	5,000	0	5,000
Pea Gravel	Backfill of propane tanks. Remains on-site.	cubic yards	0	0	20	0	20
Communication Station Chain link fencing	Remains on site for operations	feet	0	0	300	0	300
Access Roads, Stream Crossing, and Restoration							
Pit run gravel	Remains on-site as fill	cubic yards	0	0	3,757	4,822	8,580
Aggregate base	Remains on-site as road surface, structural backfill for direct embedded structures, culvert backfill	cubic yards	15	75	50	35	175
Geotextile stabilization fabric	Used on-site for construction	mile	0	0	0.4	0.6	1
Culverts (HDPE, Concrete and Corrugated Metal)	Remains on-site for drainage and stormwater control	number	3	15	10	7	35

Material	Ultimate Disposition	Units	Quantity				
			West of Bombing Range Rd 1	West of Bombing Range Rd 2	Morgan Lake	Double Mountain	Total
Silt fence or fiber roll	Used for sediment control	miles	0	0	5.93	7.61	14
Spill absorbent material	Used to contain liquid spills if needed	containers	1	2	20	6	29
Native grass seed	Used for erosion control, reseeding and restoration	acres	0	0	14	18	33
Fencing and Gates							
Barbed wire fence	Replace damaged fence or add per landowner request	feet	370	370	1,940	740	3,420
Barrier Fence	Replace damaged fence or add per landowner request	feet	0	0	0	450	450
Gates	Remains on-site for access control	number	0	0	0	3	3
Liquid or Hazardous Materials							
Herbicide	Used on transmission rights-of-way for weed control	gallons	3	3	17	7	30

HDPE – high-density polyethylene; kV – kilovolt

Concrete will be obtained from commercial sources where available or from Project-related portable batch plants. Portable batch plants, if needed, will be placed at selected multi-use areas. Multi-use areas are placed at intervals of approximately every 15 miles. These facilities will require storage of cement, sand, gravel, and water for concrete mixing. Other construction materials (pit run, aggregate base, gravel, cobbles/stone) will also be distributed at multi-use areas for use in road building or for stormwater best management practices.

IPC has dedicated personnel with responsibility to purchase, track, test, handle, store, and dispose of all oil and oil-filled equipment within the company inventory. IPC and its contractors will be required to follow the specific written procedures in the Spill Prevention, Control, and Countermeasures (SPCC) Plan (Attachment G-4), when oil and oil-filled equipment and other hazardous or regulated liquids are being handled. None of the oils in the reactors at the Longhorn Station will contain polychlorinated biphenyls (PCB). All equipment and oil since 1990 are purchased as PCB-free and are required to be certified by the manufacturer as PCB-free. The procedures used by IPC include tracking PCB-status of oil-containing equipment and keeping PCB-contaminated oils separate from non-PCB oils. All PCB-contaminated oils are disposed of in accordance with all state and federal requirements.

During construction:

- The reactors are shipped empty, without oil.
- Each reactor will be consecutively assembled/set up ready to receive oil. The oil for that reactor will then be delivered in a tanker truck and added directly into the reactor as soon as the reactor is ready to receive the oil. Oil will not be stored on-site.

During operations:

- When a reactor is installed, the oil is sealed into the reactor where it stays, and it typically is never removed until the reactor is removed from service.
- If the presence of water or other contaminants is indicated, the oil is dried and filtered. If there are any indications of something requiring repair or servicing with the reactor itself, it may be necessary to remove the oil, temporarily placing it in a tanker truck while repairs are made. Once the repairs are made, the oil is reinstalled into the reactor.

When decommissioned:

- A tanker is brought in, the oil is pumped from the reactor into a tanker, and then the oil is taken to IPC's facilities to be recycled or disposed of in accordance with state and federal requirements.

The shunt reactor bank is composed of three single-phase reactors connected to form a three-phase bank. Each single-phase reactor will hold approximately 4,500 gallons of insulating oil, so all three combined will hold approximately 13,500 gallons of insulating oil.

The neutral grounding reactor (only one of which will be installed) will hold about 1,300 gallons of insulating oil. At the Longhorn Station, a total of approximately 14,800 gallons of insulating oil will be installed (Table G-1a).

There will be no substation transformers installed as part of the Project.

To assess the availability of concrete and aggregates for the Project, providers were contacted by telephone and letter. A total of 16 concrete and aggregate suppliers were identified. Of the 16 aggregate suppliers identified, phone conversations were conducted with 14, four of whom also responded with a letter. Attachment G-1 contains a summary of the aggregate suppliers

contacted by telephone. Attachment G-2 contains copies of the letters sent to the concrete and aggregate suppliers. Attachment G-3 contains copies of letters received from suppliers who responded to the IPC availability letter. Results of the inquiries indicate there are suppliers distributed along the route, and adequate supplies to provide for Project requirements.

Estimated volumes of water to be used for all purposes, including concrete batching and dust abatement, are presented in Exhibit O.

Table G-2a provides a list of materials estimated for use on the Project for a typical 5-year period during the operations phase. Table G-2b provides a list of materials estimated for use on Alternative Routes for a typical 5-year period during the operations phase. Operations phase materials are variable and dependent upon the maintenance or repair events that occur. It is possible that no materials would be required during a typical 5-year period. However, Tables G-2a and G-2b provide for minimal replacement of materials that are sometimes lost, damaged, or stolen, including insulators, copper wire, or culverts. Operations phase materials will be delivered to the required location at the time needed. There are no plans to regularly store materials or maintain inventories of materials on-site during the operations phase.

Table G-2a. Materials Inventory for Operations (Typical Five-Year Estimate)

Material	On-Site Storage	Ultimate Disposition	Units	Quantity
Transmission Line Components				
Insulator bells	No	Used to replace broken insulators	number	150
Copper Wire for Tower Grounds	No	Used to replace damaged or stolen copper wire grounding	feet	5,000
Road Maintenance				
Aggregate base	No	Used for road repair/stabilization	cubic yards	225
Culvert	No	Used to repair washed out or failed culverts	each	5
Communication Station/Station Maintenance				
Liquid Propane	Yes	Used at communication stations to fuel backup generators	gallons	3,600
Herbicide	No	Used on-site for weed control	gallons	60
Aggregate base	No	Used to replenish yard rock	cubic yards	120

Table G-2b. Materials Inventory for Alternative Route Operations (Typical Five-Year Estimate)

Material	On-Site Storage	Ultimate Disposition	Units	Quantity
Transmission Line Components				
Insulator bells	No	Used to replace broken insulators	number	25
Copper Wire or Aluminum for Tower Grounds	No	Used to replace damaged or stolen copper or aluminum wire grounding	feet	625
Road Maintenance				
Aggregate base	No	Used for road repair/stabilization	cubic yards	35
Culvert	No	Used to repair washed out or failed culverts	each	1

Material	On-Site Storage	Ultimate Disposition	Units	Quantity
Communication Station/Station Maintenance				
Liquid Propane	Yes	Used at communication stations to fuel backup generators	gallons	450
Herbicide	No	Used on-site for weed control	gallons	8
Aggregate base	No	Used to replenish yard rock	cubic yards	15

3.3 Hazardous Substance Management

OAR 345-021-0010(1)(g)(B): The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills.

Project activities will involve certain hazardous materials, including motor vehicle fuel, lubricants, and automotive fluids used primarily in construction vehicles during the construction phase. During construction, motor fuel and vehicle lubricants will be stored on-site in the multi-use areas. Any or all of the multi-use areas could be used as construction-stage material storage locations, depending on its location relative to current construction.

Hazardous materials will be segregated when stored within the multi-use areas. Hazardous materials will be stored in approved containers and clearly labeled. The construction contractor will maintain an inventory of all hazardous materials used and corresponding material safety data sheets (MSDS). The construction contractor will maintain copies of the required MSDSs for each hazardous chemical, and will ensure they are readily accessible during each work shift, to all employees when they are in their work areas. MSDSs will also be kept in service and refueling vehicles. The MSDSs will provide basic emergency response information for small and large releases of each hazardous material. If bulk hazardous materials are used, the Emergency Response Guidebook, produced by the United States Department of Transportation, also will be used to prepare for emergencies.

Table G-3a and Table G-3b provide a summary of explosives and hazardous materials that will be used on the Project.

Table G-3a. Explosives and Hazardous Materials Storage During Project Construction and Operations

Material	Project Need	Quantity/Units	Quantity	Storage Method
Construction Phase				
Gasoline	On-site vehicle fueling	gallons	72,000	At multi-use areas, in aboveground dual-walled tanks with secondary containment
Diesel fuel	On-site vehicle fuel	gallons	216,000	At multi-use areas, in aboveground dual-walled tanks with secondary containment
Motor oil, gear oil, and other lubricating oils	Used on-site for construction vehicles	gallons	4,000	Stored in mechanic vehicles or multi-use areas
Antifreeze	Used on-site for construction vehicles	gallons	400	Stored in mechanic vehicles or multi-use areas
Transmission fluid	Used on-site for construction vehicles	gallons	400	Stored in mechanic vehicles or multi-use areas
Hydraulic fluid	Used on-site for construction vehicles	gallons	400	Stored in mechanic vehicles or multi-use areas
Detergents	Used on-site for construction vehicles	gallons	130	Stored in mechanic vehicles or multi-use areas
Paint/solvent	Used on-site	gallons	40	Stored in mechanic vehicles or multi-use areas
Herbicide (concentrate)	Used on-site for weed control	gallons	200	Stored in multi-use areas
Shock tube (lead line)	Bedrock Removal	feet	52,700	All blasting materials will be stored in approved containers per NFPA 495 and OAR 837-012-1340
Blasting caps	Bedrock Removal	number	10,500	All blasting materials will be stored in approved containers per NFPA 495 and OAR 837-012-1340
Cast booster (ammonium nitrate based)	Bedrock Removal	pounds	102,000	All blasting materials will be stored in approved containers per NFPA 495 and OAR 837-012-1340
Jet Fuel	Helicopter Use	gallons	TBD	Jet fuel or any other fuel used by the helicopter will not be kept in storage at any of the multi-use areas. Helicopter fuel is expected to be provided by the helicopter service subcontractor. ¹

Material	Project Need	Quantity/Units	Quantity	Storage Method
Operations Phase (Typical Five-Year Estimate)				
Liquid or hazardous materials				
Liquid propane	Used at communication stations to fuel backup generators	gallons	3,400	Stored at communications stations in underground tanks
Herbicide	Used on-site for weed control	gallons	60	Delivered to site when needed, then hand applied under manufacturer directions to control vegetation
Gasoline	Used on-site for operation vehicles	gallons	1,200	Stored in operation vehicles
Motor oil	Used for operation vehicle	gallons	30	Stored in operation vehicles
Antifreeze	Used for operation vehicle	gallons	30	Stored in operation vehicles
Transmission fluid	Used for operation vehicle	gallons	30	Stored in operation vehicles

¹ Fuel is normally provided by the subcontractor in tanker vehicles (6,000-9,000 gallon capacity) at the helicopter fly yards on a temporary basis. Typical helicopter use requires the tankers to be refilled about every other day. It is the subcontractor's responsibility to have a sufficient quantity of fuel available for work each day. The subcontractor is responsible for all licenses and permits needed for the transport and use of the fuel. As such, no jet fuel (or similar purpose fuel) will be stored on a regular basis by the contractor at any of its laydown areas and no quantities are presented here.

Note: Quantities reflect the maximum expected volume on the Project at any one time, including fuel in on-site refueling trucks and construction vehicles.

NFPA – National Fire Protection Association; OAR – Oregon Administrative Rule.

Table G-3b. Explosives and Hazardous Materials Storage during Alternative Route Construction and Operations

Material	Project Need	Quantity/Units	Quantity	Storage Method
Construction Phase				
Gasoline	On-site vehicle fueling	gallons	9,000	At multi-use areas, in aboveground dual-walled tanks with secondary containment
Diesel fuel	On-site vehicle fuel	gallons	27,000	At multi-use areas, in aboveground dual-walled tanks with secondary containment
Motor oil, Gear Oil and other Lubricating Oils	Used on-site for construction vehicles	gallons	500	Stored in mechanic vehicles or multi-use areas

Material	Project Need	Quantity/Units	Quantity	Storage Method
Antifreeze	Used on-site for construction vehicles	gallons	50	Stored in mechanic vehicles or multi-use areas
Transmission fluid	Used on-site for construction vehicles	gallons	50	Stored in mechanic vehicles or multi-use areas
Hydraulic fluid	Used on-site for construction vehicles	gallons	50	Stored in mechanic vehicles or multi-use areas
Detergents	Used on-site for construction vehicles	gallons	16	Stored in mechanic vehicles or multi-use areas
Paint/solvent	Used on-site	gallons	5	Stored in mechanic vehicles or multi-use areas
Herbicide (concentrate)	Used on-site for weed control	gallons	30	Stored in multi-use areas
Shock tube (lead line)	Bedrock Removal	feet	6,588	All blasting materials will be stored in approved containers per NFPA 495 and OAR 837-012-1340
Blasting caps	Bedrock Removal	number	1,313	All blasting materials will be stored in approved containers per NFPA 495 and OAR 837-012-1340
Cast booster (ammonium nitrate based)	Bedrock Removal	pounds	12,750	All blasting materials will be stored in approved containers per NFPA 495 and OAR 837-012-1340
Jet Fuel	Helicopter use	gallons	TBD	Jet fuel or any other fuel used by the helicopter will not be kept in storage at any of the multi-use areas. Helicopter fuel is expected to be provided by the helicopter service subcontractor. ¹
Operations Phase (Typical Five-Year Estimate)				
Liquid or Hazardous Materials				
Liquid propane	Used at communication stations to fuel backup generators	gallons	428	Stored at communications stations in underground tanks
Herbicide	Used on-site for weed control	gallons	8	Delivered to site when needed, then hand applied under manufacturer directions to control vegetation

Material	Project Need	Quantity/Units	Quantity	Storage Method
Gasoline	Used on-site for operation vehicles	gallons	150	Stored in operation vehicles
Motor oil	Used for operation vehicle	gallons	4	Stored in operation vehicles
Antifreeze	Used for operation vehicle	gallons	4	Stored in operation vehicles
Transmission fluid	Used for operation vehicle	gallons	4	Stored in operation vehicles

¹ Fuel is normally provided by the subcontractor in tanker vehicles (6,000-9,000 gallon capacity) at the helicopter fly yards on a temporary basis. Typical helicopter use requires the tankers to be refilled about every other day. It is the subcontractor's responsibility to have a sufficient quantity of fuel available for work each day. The subcontractor is responsible for all licenses and permits needed for the transport and use of the fuel. As such, no jet fuel (or similar purpose fuel) will be stored on a regular basis by the contractor at any of its laydown areas and no quantities are presented here.

NFPA – National Fire Protection Association; OAR – Oregon Administrative Rule.

Motor fuel will be stored in the segregated hazardous materials storage area of multi-use areas. Fuel will be stored in aboveground storage tanks (AST). Gasoline and diesel fuel ASTs for construction vehicles and equipment will be approximately 1,000-gallon capacity, and up to one of each may be stored at a multi-use area. Five-hundred-gallon ASTs containing diesel fuel may be located in select multi-use areas to fuel generators for portable concrete batch plants. The Environmental Protection Agency regulates ASTs under provisions of 40 Code of Federal Regulations (CFR), Part 112. Use and location of ASTs on Oregon sites are regulated by the Uniform Fire Code and enforced by the Oregon State Fire Marshal. A State Fire Marshal permit will be required for any individual fuel tank exceeding 1,100 gallons in capacity. The Oregon Department of Environmental Quality (ODEQ) does not regulate ASTs in Oregon unless they are greater than 10,000 gallons in capacity, and no tanks of that size will be used for this Project. Fuel ASTs will be located within secondary containment consisting of lined soil berms with capacity of at least 10 percent greater than the volume of the AST. Figure G-1 shows a typical example of a spill containment area that may be used during construction. The dimensions of the spill containment area will vary based on the volume of the materials stored with a capacity of at least 10 percent greater than the volume of materials stored.

To comply with fuel storage requirements, IPC has attached a draft SPCC Plan as Attachment G-4. IPC will require its construction contractor to finalize the SPCC Plan. The SPCC Plan will comply with 40 CFR, Part 112, and will include site-specific implementation of cleanup procedures in the event of soil contamination from spills or leaks of fuels, lubricants, coolants, or solvents. The SPCC Plan will identify applicable legal and contractual requirements, Project-specific spill prevention procedures, and other stipulations and methods to address Project spill prevention, response, and clean-up procedures. Proposed fuel storage areas, vehicle maintenance areas, and other areas that may be used for storage of materials that could result in a spill will be limited to multi-use areas. Multi-use areas will be fenced and their gates locked.

Fuel ASTs and motor vehicle fluids will be removed from the multi-use areas as soon as construction is complete in any particular area. No fuel or vehicle fluid storage will occur after the construction phase.

Concentrated liquid herbicides will be stored in the hazardous materials portion of multi-use areas during construction.

During construction, hazardous materials will be delivered to the Project as needed, unless regular use requires storage at the multi-use areas. During operations, small amounts (less than 20 gallons per year) will be used to control vegetation. No herbicide will be stored on-site during the operations phase. Herbicides will be brought to the site as needed. No hazardous materials of any type will be stored on-site during the operations phase.

IPC will fully comply with ODEQ requirements for storage of hazardous materials and cleanup and disposal of hazardous waste on all lands associated with the Project. ODEQ Hazardous Waste and Materials Statutes are found in Oregon Revised Statutes Chapters 465 and 466.

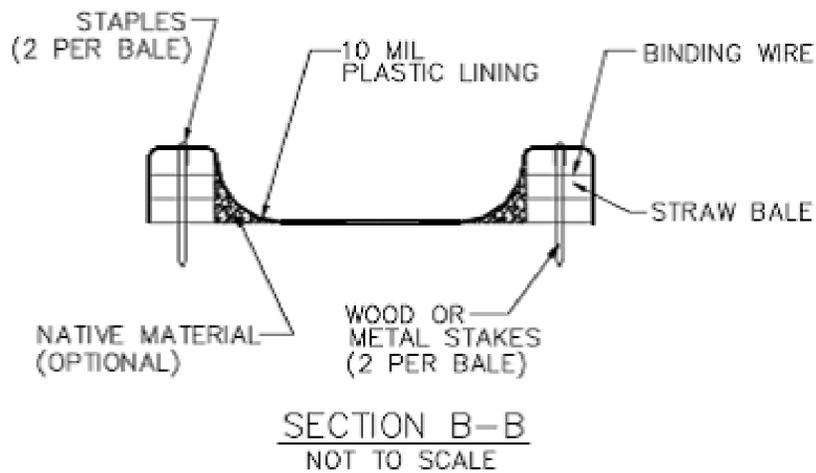
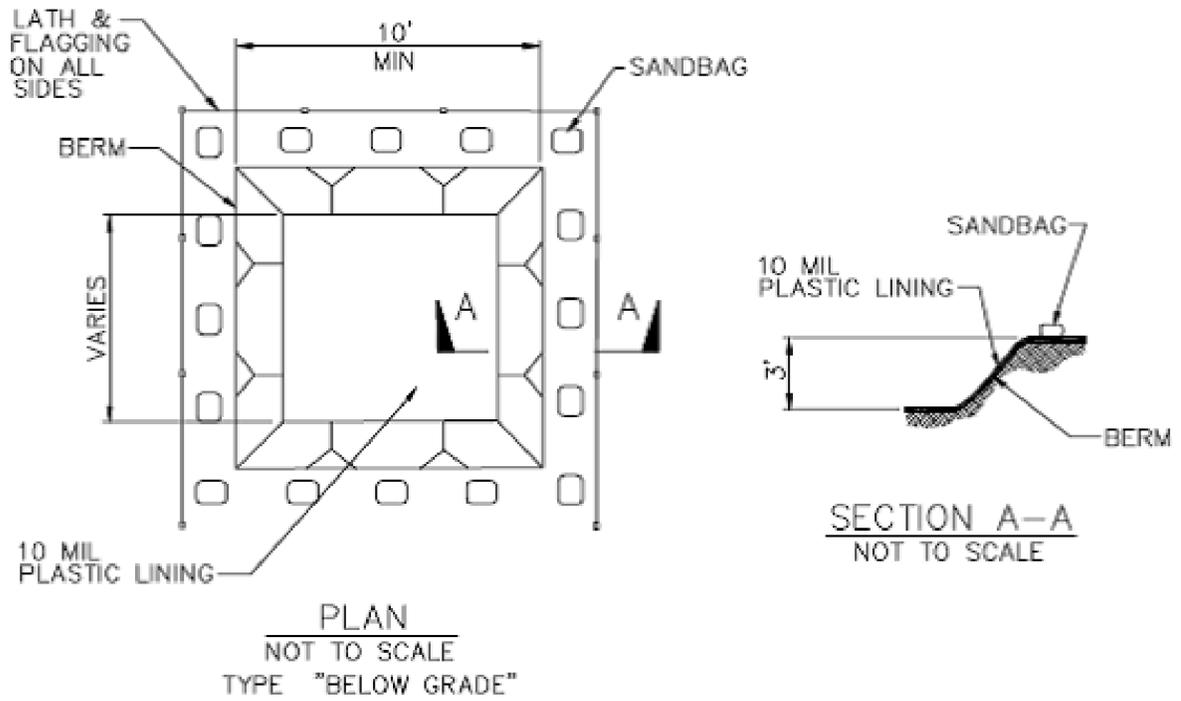


Figure G-1. Example of Typical Spill Containment Area

Each Project communications station will contain a buried propane tank to be used for emergency power in the event of temporary loss of electrical power. Propane tanks will be installed, maintained, and operated in accordance with State Fire Marshal rules and OAR Chapter 837, Division 030. Propane fuel containers do not require secondary containment structures.

IPC and construction contractors will minimize the amount of hazardous materials needed for the Project by using alternative nonhazardous substances when available, recycling usable material such as oils, paints, and batteries to the maximum extent feasible, and filtering and reusing solvents and thinners whenever possible. Pesticides and herbicides will be used according to labeling and in accordance with IPC's Noxious Weed Plan (Exhibit P1, Attachment P1-5) and applicable regulations.

Persons responsible for handling or transporting hazardous materials for the Project will be familiar with State Fire Marshal and ODEQ laws, policies, procedures, and mitigation measures related to handling and transportation.

The Project may generate small quantities of hazardous waste. Hazardous waste may include small remnants of hazardous substances remaining in containers. Accidental spills or leaks of motor fuel, vehicle fluids, or chemicals may also result in small quantities of hazardous waste. Hazardous waste spills will be cleaned up promptly. Spill kits containing items such as absorbent pads will be located on equipment and in each multi-use area containing hazardous materials to ensure a quick response to spills. If hazardous spills in excess of reportable quantities, as identified in OAR 340-142-0050, contact the ground surface, ODEQ and the Oregon Department of Energy will be notified, and excavation of contaminated soil initiated. Hazardous materials and cleanup equipment will be stored in approved containers until they can be properly transported and disposed of at an approved treatment, storage, and disposal facility. Hazardous waste will be disposed of by a licensed contractor.

The attached SPCC Plan details IPC's plans to manage hazardous substances during construction, including measures to prevent and contain spills. IPC does not anticipate that it will need an SPCC Plan for any of its Project facilities or activities during operation. However, to the extent required by ODEQ statutes or regulations, IPC will develop an operations SPCC Plan. To ensure proper management of hazardous substances during construction and operations, IPC proposes that the Energy Facility Siting Council (EFSC or Council) include the following conditions in the site certificate:

Soil Protection Condition 1: *Prior to construction, the certificate holder shall submit to the department a copy of an Oregon Department of Environmental Quality (ODEQ)-approved construction-related final Spill Prevention Control and Countermeasures Plan (SPCC Plan). The protective measures described in the draft SPCC Plan in ASC Exhibit G, Attachment G-4, shall be included as part of the construction-related final SPCC Plan, unless otherwise approved by the department.*

Soil Protection Condition 4: *During construction, the certificate holder shall conduct all work in compliance with the construction-related final SPCC Plan referenced in Soil Protection Condition 1.*

Soil Protection Condition 7: *Prior to operation, if certificate holder is required by ODEQ statutes or rules to implement a SPCC Plan for operation of the facility, the certificate holder shall submit to the department a copy of an ODEQ-approved operation-related SPCC Plan.*

Soil Protection Condition 8: *During operation, the certificate holder shall conduct all work in compliance with the operation-related SPCC Plan referenced in Soil Protection Condition 7, if applicable.*

Explosives (considered a class of hazardous material) will be used for blasting rock where needed. Explosive line hardware will be used to terminate and splice the conductor. The use, storage, and other details pertaining to the use of explosives will be conducted in accordance with the Framework Blasting Plan (Attachment G-5). The Framework Blasting Plan describes the procedures, safety measures, and monitoring that the contractor will adhere to while implementing activities during construction of the Project. The procedures include measures to secure the storage area from theft and control access to the material to ensure the protection of public health and safety. All explosive storage facilities and employees handling explosives will meet all necessary Bureau of Alcohol, Tobacco, Firearms, and Explosives requirements. Regulated blasting materials will be stored in accordance with the National Fire Protection Association 495: Explosive Materials Code and OAR 837-012-1340. Any relocation of explosives will be reported to the Office of the State Fire Marshal as required by OAR 837-012-1360. The Framework Blasting Plan will be updated following site-specific geotechnical investigation. In addition, the Contractor will be required to submit a detailed blasting plan (Contractor's Blasting Plan) to IPC that is consistent with the provisions in the Framework Blasting Plan. To ensure proper management of hazardous substances during construction and operation, IPC proposes that the Council include the following conditions in the site certificate:

Soil Protection Condition 2: *Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Blasting Plan. The protective measures described in the draft Blasting Plan in ASC Exhibit G, Attachment G-5, shall be included as part of the final Blasting Plan, unless otherwise approved by the department. The final Blasting Plan shall meet the requirements of the Oregon State Police – Oregon Office of State Fire Marshal for the transportation, storage, and use of explosives.*

Soil Protection Condition 5: *During construction, the certificate holder shall conduct all work in compliance with the final Blasting Plan referenced in Soil Protection Condition 2.*

3.4 Non-Hazardous Solid Waste Management

OAR 345-021-0010(1)(g)(C): The applicant's plans to manage non-hazardous waste materials during construction and operation.

IPC will fully comply with applicable non-hazardous waste handling and disposal regulations on all lands associated with the Project during construction and operations. Solid waste will be stored in a manner that does not constitute a fire, health, or safety hazard until it can be hauled off for recycling or disposal, as appropriate. Exhibit V provides details on the types and amounts of waste, and procedures and systems for handling and disposal of non-hazardous waste materials.

4.0 IPC'S PROPOSED SITE CERTIFICATE CONDITIONS

IPC proposes the following site certificate conditions to ensure compliance with the Soil Protection Standard, and other EFSC standards as indicated elsewhere in this application for site certificate:

Prior to Construction

Soil Protection Condition 1: *Prior to construction, the certificate holder shall submit to the department a copy of an Oregon Department of Environmental Quality (ODEQ)-approved construction-related final Spill Prevention Control and Countermeasures Plan (SPCC Plan). The protective measures described in the draft SPCC Plan in ASC Exhibit G, Attachment G-4, shall be included as part of the construction-related final SPCC Plan, unless otherwise approved by the department.*

Soil Protection Condition 2: *Prior to construction, the certificate holder shall finalize, and submit to the department for its approval, a final Blasting Plan. The protective measures described in the draft Blasting Plan in ASC Exhibit G, Attachment G-5, shall be included as part of the final Blasting Plan, unless otherwise approved by the department. The final Blasting Plan shall meet the requirements of the Oregon State Police – Oregon Office of State Fire Marshal for the transportation, storage, and use of explosives.*

During Construction

Soil Protection Condition 4: *During construction, the certificate holder shall conduct all work in compliance with the construction-related final SPCC Plan referenced in Soil Protection Condition 1.*

Soil Protection Condition 5: *During construction, the certificate holder shall conduct all work in compliance with the final Blasting Plan referenced in Soil Protection Condition 2.*

Prior to Operation

Soil Protection Condition 7: *Prior to operation, if the certificate holder is required by ODEQ statutes or rules to implement a SPCC Plan for operation of the facility, the certificate holder shall submit to the department a copy of an ODEQ-approved operation-related SPCC Plan.*

During Operation

Soil Protection Condition 8: *During operation, the certificate holder shall conduct all work in compliance with the operation-related SPCC Plan referenced in Soil Protection Condition 7, if applicable.*

5.0 CONCLUSIONS

Exhibit G includes the information required by OAR 345-021-0010(1)(g) and the Second Amended Project Order regarding the Project materials.

6.0 COMPLIANCE CROSS-REFERENCES

Table G-4 identifies the location within the application for site certificate of the information responsive to the application submittal requirements in OAR 345-021-0010(1)(g) and the relevant Second Amended Project Order provisions.

Table G-4. Compliance Requirements and Relevant Cross-References

Requirement	Location
OAR 345-021-0010(1)(g)	
(g) Exhibit G. A materials analysis including:	
(A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation;	Exhibit G, Section 3.2
(B) The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills; and	Exhibit G, Section 3.3
(C) The applicant's plans to manage non-hazardous waste materials during construction and operation;	Exhibit G, Section 3.4
Second Amended Project Order	
The Department uses the materials analysis to identify any hazardous materials whose management and storage could affect the cost of site restoration because of the possibility of spills. The applicant shall include in the application any proposed fuel storage areas, vehicle maintenance areas, or other areas that will be utilized for activities that could result in a spill of a hazardous substance. Additionally, identify the expected storage locations and quantities of hazardous materials expected to be used during construction and operation of the facility.	Exhibit G, Section 3.3
The ODEQ Hazardous Waste program implements requirements of the EPA and is a federally-delegated program. The applicant shall comply with ODEQ regulations concerning the storage and management of hazardous materials and the clean-up and disposal of hazardous waste; however, note that compliance with federally-delegated programs is outside EFSC jurisdiction.	Exhibit G, Section 3.3

**ATTACHMENT G-1
TELEPHONE COMMUNICATION WITH CONCRETE AND AGGREGATE
SUPPLIERS**

Table G-1-1. Communication with Concrete and Aggregate Suppliers

County	Supplier	Material	Estimated Concrete (cu. yds.)¹	Estimated Aggregate (cu. yds.)¹	Adequate Supply?	Contact Person	Date Contacted by Phone
Morrow	Central Pre-mix of Oregon Boardman, OR	Concrete and aggregates (both)	12,000 to 12,500	17,500 to 18,000	yes	Pete Patrick (541) 922-3416	3/8/2012
Morrow	Rinker Materials Boardman, OR	Aggregate	Does not supply	17,500 to 18,000	yes	Tom Sayer (541) 481-9246	3/8/2012
Umatilla	Umatilla Ready Mix Pendleton, OR	Both	13,000	19,000 to 19,500	Yes	Dustin Scott (541) 276-2441	3/8/2012
Umatilla	Umatilla Ready Mix Hermiston, OR	Both	13,000	19,000 to 19,500	Yes	Dustin Scott (541) 276-2441	3/8/2012
Umatilla	Central Pre-mix of Oregon Hermiston, OR	Both	13,000	19,000 to 19,500	yes	Pete Patrick (541) 922-3416	3/8/2012
Umatilla	Hermiston Rock Products Hermiston, OR	Both	13,000	19,000 to 19,500	yes	Don Hampton (541) 567-7625	3/8/2012
Umatilla	Pendleton Ready Mix Pendleton, OR	Both	13,000	19,000 to 19,500	yes	Jayne Clarke (541) 276-6951	3/8/2012
Umatilla	Barnhart Rock Inc. Pendleton, OR	Aggregate	Does not Supply	19,000 to 19,500	yes	Carol Swanson (541) 276-4104	3/8/2012
Union	RD Mac Inc. La Grande, OR	Both	10,500 to 11,000	15,000 to 15,500	yes	Mike Good (541) 963-8601	3/9/2012
Baker	Britt Sand and Gravel Baker City, OR	Both	18,500 to 19,000	26,500 to 27,000	yes	Tony Britt (541) 523-4974	3/12/2012
Malheur	Clearwater Concrete Nyssa, OR	Both	19,500 to 20,000	28,000	yes	Ed Hatstrup (541) 271-6067	3/8/2012
Malheur	Clearwater Concrete Ontario, OR	Both	19,500 to 20,000	28,000	yes	Ed Hatstrup (541) 271-6067	3/8/2012
Malheur	Bellows Sand and Gravel Ontario, OR	Aggregate	Does not supply	28,000	yes	Duane Bellows (541) 889-5916	3/8/2012

¹ County concrete and aggregate estimates were made by noting the total engineer's estimate for these materials (see Table G-1) and assuming proportional amounts per county based on route length per county.

ATTACHMENT G-2
LETTERS TO CONCRETE AND AGGREGATE SUPPLIERS

March 15, 2012

Mr. Pete Patrick
Central Pre-Mix of Oregon
11919 Harris Rd
Pasco WA 99301

Subject: Availability of Concrete and Aggregate

Dear Mr. Patrick:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Morrow County, engineering estimates are for approximately 12,500 cubic yards (cu yds) of concrete for transmission tower foundations, and about 18,000 cu yards of aggregate, predominantly for facility pads or road surfacing. In Umatilla County, the quantities are estimated at 14,000 cu yards of concrete and 20,000 cu yards of aggregate.

You informed Tetra Tech that Central Pre-mix of Oregon has concrete and aggregate facilities in Boardman and Hermiston, Oregon. You stated that Central Pre-Mix would be willing to be placed in the permit as a potential supplier of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

A handwritten signature in cursive script that reads "Keith Georgeson".

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Tom Sayer
Rinker Materials
P.O. Box 1030
Boardman, OR 97818

Subject: Availability of Aggregate

Dear Mr. Sayer:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Morrow County, engineering estimates are for approximately 18,000 cubic yards (cu yds) of aggregate, predominantly for facility pads or road surfacing. In Umatilla County, the aggregate quantities are estimated at 20,000 cu yds.

You informed Tetra Tech that Rinker Materials in Boardman, Oregon would be willing to be placed on a list of potential suppliers of aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

Keith Georgeson

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Dustin Scott
Umatilla Ready Mix
PO Box 775
Hermiston, OR 97838

Subject: Availability of Concrete and Aggregate

Dear Mr. Scott:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Umatilla County, engineering estimates are for approximately 14,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 20,000 cu yds of aggregate, predominantly for facility pads or road surfacing. In Union County, the quantities are estimated at 11,000 cu yds of concrete and 16,000 cu yds of aggregate.

You informed Tetra Tech that Umatilla Ready Mix has concrete and aggregate facilities in Pendleton, Oregon and Hermiston, Oregon. You indicated that Umatilla Ready Mix would be willing to be placed on a list of potential suppliers of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

Keith Georgeson

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Don Hampton
Hermiston Rock Products
PO Box 218
Hermiston, OR 97838

Subject: Availability of Concrete and Aggregate

Dear Mr. Hampton:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Umatilla County, engineering estimates are for approximately 14,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 20,000 cu yds of aggregate, predominantly for facility pads or road surfacing. In Union County, the quantities are estimated at 11,000 cu yds of concrete and 16,000 cu yds of aggregate.

You informed Tetra Tech that Hermiston Rock Products has concrete and aggregate facilities in Hermiston, Oregon and aggregate facilities in Pendleton. You indicated that Hermiston Rock Products would be willing to be placed in the permit as a potential supplier of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

Keith Georgeson

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Ms. Jayne Clarke
Pendleton Ready Mix
PO Box 38
Hermiston, OR 97838

Subject: Availability of Concrete and Aggregate

Dear Ms. Clarke:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Umatilla County, engineering estimates are for approximately 14,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 20,000 cu yds of aggregate, predominantly for facility pads or road surfacing. In Union County, the quantities are estimated at 11,000 cu yds of concrete and 16,000 cu yds of aggregate.

You informed Tetra Tech that Pendleton Ready Mix has concrete and aggregate facilities in Pendleton, Oregon. You indicated that Pendleton Ready Mix would be willing to be placed in the permit as a potential supplier of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

Keith Georgeson

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Ms. Carol Swanson
Barnhart Rock Inc.
39929 Rieth Road
Pendleton, OR 97811

Subject: Availability of Aggregate

Dear Ms. Swanson:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Umatilla County, engineering estimates are for approximately 20,000 cubic yards (cu yds) of aggregate, predominantly for facility pads or road surfacing. In Union County, the quantities are estimated at 16,000 cu yds of aggregate.

You informed Tetra Tech that Barnhart Rock Products in Pendleton, Oregon would be willing to be placed on a list of potential suppliers of aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of aggregate products. If this letter accurately summarizes our telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

A handwritten signature in black ink that reads "Keith Georgeson". The signature is written in a cursive, flowing style.

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Mike Good
RD Mac Inc.
PO Box 1086
La Grande, OR 97850

Subject: Availability of Concrete and Aggregate

Dear Mr. Good:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Union County, engineering estimates are for approximately 11,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 16,000 cu yds of aggregate, predominantly for facility pads or road surfacing. In Baker County, the quantities are estimated at 19,000 cu yds of concrete and 27,000 cu yds of aggregate.

You informed Tetra Tech that RD Mac has concrete and aggregate facilities in La Grande, Oregon. You indicated that RD Mac would be willing to be placed in the permit as a potential supplier of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

Keith Georgeson

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Tony Britt
Britt Sand and Gravel
20164 South Airport Lane
Baker City, OR 97814

Subject: Availability of Concrete and Aggregate

Dear Mr. Britt:

On March 12, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Baker County, engineering estimates are for approximately 19,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 27,000 cu yds of aggregate, predominantly for facility pads or road surfacing.

You informed Tetra Tech that Britt Sand and Gravel has concrete and aggregate facilities in Baker City, Oregon. You indicated that Britt Sand and Gravel would be willing to be placed in the permit as a potential supplier of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

A handwritten signature in black ink that reads "Keith Georgeson". The signature is written in a cursive, flowing style.

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Ed Hattrup
Clearwater Concrete
PO Box 2270
McCall, ID 83638

Subject: Availability of Concrete and Aggregate

Dear Mr. Hattrup:

On March 12, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Malheur County, engineering estimates are for approximately 20,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 28,000 cu yds of aggregate, predominantly for facility pads or road surfacing.

You informed Tetra Tech that Clearwater Concrete has concrete and aggregate facilities in Ontario and Nyssa, Oregon. You indicated that Clearwater Concrete would be willing to be placed in the permit as a potential supplier of concrete and aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of concrete and aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

A handwritten signature in black ink that reads "Keith Georgeson". The signature is written in a cursive style with a large, prominent 'K' and 'G'.

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Duane Bellows
Bellows Sand and Gravel
527 Sunset Drive
Ontario, OR 97914

Subject: Availability of Aggregate

Dear Mr. Bellows:

On March 12, 2012 your business was contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Malheur County, engineering estimates are for approximately 20,000 cubic yards (cu yds) of concrete for transmission tower foundations, and about 28,000 cu yds of aggregate, predominantly for facility pads or road surfacing.

Your office indicated that Bellows Sand and Gravel in Ontario, Oregon would be willing to be placed on a list of potential suppliers of aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year interval.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,

Keith Georgeson

Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Jim Mendiola
Mendiola Gravel Products
3997 Kochsmeier Road
Vale, OR 97918

Subject: Availability of Aggregate

Dear Mr. Mendiola:

On March 8, 2012 our environmental contractor, Paul Spillers at Tetra Tech left a telephone message to inform you that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Malheur County, engineering estimates are for approximately 28,000 cubic yards (cu yds) of aggregate, predominantly for facility pads or road surfacing.

If Mendiola Gravel Products is interested in being added to the permit as a potential aggregate supplier for this project, please provide a written response to this letter stating your interest and your capability of supplying predominantly road mix-type aggregates for a project of this size.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,



Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Wayne Irwin
Irvco Asphalt and Gravel
5295 Highway 95
Fruitland, ID 83619

Subject: Availability of Aggregate

Dear Mr. Irwin:

On March 8, 2012 our environmental contractor, Paul Spillers at Tetra Tech left a telephone message to inform you that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Malheur County, engineering estimates are for approximately 28,000 cubic yards (cu yds) of aggregate, predominantly for facility pads or road surfacing.

If Irvco Asphalt and Gravel is interested in being added to the permit as a potential aggregate supplier for this project, please provide a written response to this letter stating your interest and your capability of supplying predominantly road mix-type aggregates for a project of this size.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,



Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

March 15, 2012

Mr. Troy Donoho
Donoho Inc.
PO Box 713
Payette, ID 83661

Subject: Availability of Aggregate

Dear Mr. Donoho:

On March 8, 2012 you were contacted by our environmental contractor, Paul Spillers at Tetra Tech to discuss that Idaho Power is in the permitting stage of a project to construct a transmission line in eastern Oregon, from approximately Boardman, Oregon into southwest Idaho. As a part of the permitting process, Idaho Power must demonstrate that construction materials are available within eastern Oregon in sufficient quantities to construct the project. In Malheur County, engineering estimates are for approximately 28,000 cubic yards (cu yds) of aggregate, predominantly for facility pads or road surfacing.

You informed Tetra Tech that Donoho Inc. has aggregate facilities for Malheur County sites via your facilities in Payette, Idaho. You indicated that Donoho Inc. would be willing to be placed in the permit as a potential supplier of aggregate products, and the quantities of materials discussed by telephone are within your capabilities, given that construction would be spread over a several year period.

We appreciate your interest in this project. IPC currently is seeking permits for the Project via Oregon's Department of Energy, Energy Facilities Siting Council (EFSC). Permitting requirements include providing evidence you are able to supply the required amounts of aggregate products. If this letter accurately summarizes the telephone conversation, it would be helpful to the permitting process to receive from you a written acknowledgement of your capabilities to provide the above mentioned materials and be placed in the permit as a potential provider.

We appreciate your attention to this matter. If you have questions or comments, please contact us at your convenience.

Respectfully submitted,



Keith Georgeson
Project Leader
Boardman to Hemingway Project
208-388-2034
kgeorgeson@idahopower.com

ATTACHMENT G-3
LETTERS FROM CONCRETE AND AGGREGATE SUPPLIERS

ANDERSON
ROD ANDERSON CONSTRUCTION, INC
4531 NW 'A' AVENUE
PENDLETON, OREGON 97801

April 10, 2012

Idaho Power
PO Box 70
Boise, ID 83707

Attention: Keith Georgeson

Re: Availability of Aggregate

Dear Keith:

This letter is in response to your letter written to Barnhart Rock Inc. dated March 26, 2012, regarding the availability of aggregate for the Boardman to Hemingway Project.

Barnhart Rock LLC a rock quarry located just outside of Pendleton Oregon is a subsidiary of Rod Anderson Construction, Inc. Barnhart Rock LLC is capable of supplying the approximate 20,000 cubic yards of aggregate needed for this project. Barnhart Rock LLC is willing to be placed on your list of potential suppliers for the aggregate material.

Rod Anderson Construction, Inc has other rock pits in the area of the new transmission line as well as a portable crusher. Rod Anderson Construction, Inc is also a full service excavation company and would be interested in any construction opportunities you may have regarding this project.

Sincerely,


Rodney L. Anderson
President





BRITT SAND & GRAVEL



FARWEST CONCRETE

P.O. BOX 966 BAKER CITY, OR 97814
(541) 523-4974 FAX: (541) 523-4204 CCB #91014

MAY 2, 2012

Idaho Power
Attn: Keith Georgeson
1221 W. Idaho St.
Boise, Idaho 83707

Dear Mr. Georgeson:

Regarding your letter of March 26, 2012 concerning the availability of Concrete and Aggregate for the permitting stages of the transmission line, I will give you a brief summary of the available resources that Britt Sand & Gravel, Farwest Concrete Company could provide.

Britt Sand & Gravel, Farwest Concrete Company appreciates the opportunity to provide an unsolicited proposal for the permitting process to Idaho Power for approximately 20,000 yards of concrete and 27,000 cu yards of aggregate for roads and facility pads.

COMPANY HISTORY

Britt Sand & Gravel, Farwest Concrete Company has been in business since 1980. Farwest Concrete Co began in 1982 and our company acquired it in 1998. Our company has approximately 400 acres of mining and mineral rights for extraction of aggregate products. Our office headquarters are located at 20164 S. Airport Lane, Baker City. This site has approximately 160 acres and our permanent concrete batch plant is located here. The Dept. of Geology (DOGAMI) and Mining ID for this site is 01-0063. Our other resource is known as The Grey Eagle Mine and the (DOGAMI) Mine ID for this site is 01-0085. It is located within three miles of our main resource. Britt Sand & Gravel was chosen Business of the Year in 2003 by the Baker City Chamber of Commerce. It is a family owned business and has generously donated back to the community in supporting youth programs, 4-H, FFA, and numerous community charities.

COMPANY RESOURCES

The concrete plant is equipped to provide 80-90 yards of concrete/hour. Our company has seven concrete mixers, six dump trucks and pup trailers, three heavy haul trucks with a Cozad Trailer capable of transporting 164,500#. Numerous off-road heavy haul trucks, excavators, dozers such as a Cat D7G, Cat D7H, John Deere 650H. Our company has a substantial amount of concrete ready mix designs that have been **certified** and **approved** on Oregon Dept. of Transportation (ODOT) highway projects. Our company can supply a plethora of fractured rock that meets these same ODOT specs, as well as city and county spec aggregate. There is an abundance of acreage at our office quarry if Idaho Power needs a staging yard for poles, transformers and/or other material.

PERSONNEL/COMMUNICATIONS

There are approximately eight full time employees; during the busy construction season 10-12 employees at our operation. All vehicles are supplied with a private two-way radio. Employees are scheduled from 7:00 am until 3:30pm. When needed our drivers are available at 5:00am or earlier to begin their concrete pours. Satisfaction to our customers and producing quality products are our number one priorities. All employees are certified with First-Aid, RT-130 Fire Suppression, and MSHA (Mining & Safety Health Administration) certification.

I have enclosed a brief summary of projects that our company has done over the last five years. If you are in the area and would like a show me trip of our facility, please give me a call.

Sincerely,

A handwritten signature in blue ink that reads "Tony Britt". The signature is written in a cursive, flowing style.

Tony Britt
President
Cell-(541) 519-7282

BRITT SAND & GRAVEL FARWEST CONCRETE CO.

**P.O. Box 966
Baker City, OR 97814
CCB #91014**

**Phone: (541) 523-4974
Phone: (541) 523-5116
Fax: (541) 523-4204**

Prior Projects

2008	City of Baker City	Baker City, Or	5,000 ton Chip Rock
2008	Wildish Standard Paving- Pleasant Valley Bridge	Baker County, Or	20,000 ton Rock
2008-2010	Knife River- I-84 Pleasant Valley	Baker County, Or	1,500 cy Concrete/18,000 ton Rock
	Knife River- "D" Street	Baker City, Or	500 cy Concrete/12,000 ton Rock
	Knife River- Birch Street	Baker City, Or	500 cy Concrete/10,000 to Rock
	Knife River- Dewey Ave.	Baker City, Or	1,000 cy Concrete/3,000 ton Rock
2009	Kirby Nagelhout-Grant Co. airport	John Day, Or	900 cy Concrete
2009	ML Houck- Bridge Crk fish passg	Grant County, Or	600 cy Concrete
2009	Phoenix Ind.- Ash Grove Cement	Durkee, Or	800 cy Concrete
2009	Mike Becker General Cont.- Baker County Airport	Baker County, Or	4,000 ton ¾" St. Spec Rock
2010	ODOT-U.S. Hwy 86	Baker County, Or	20,000 ton Rip Rap Rock
2010	ODOT-Baker Maint. Bldg.	Baker County, Or	2,000 cy Concrete/10,000 ton Rock
2011	Oregon Mainline Paving- I-84 Baldock Slough	Baker County, Or	50,000 ton Rock
2011	Kerr Contractors-Baker City Airport	Baker County, Or	400 cy Concrete/20,000 ton Rock
2011	D.L. Edmundson-Chico Lane	Baker County, Or	300 cy Concrete/10,000 ton Rock
2011	Rick Franklin Corp.- Union Pacific Derailment		5,000 ton Rock
2011	Rick Lane Const.- Maverick Station	Baker City, Or	1,500 cy Concrete/4750 ton Rock

HERMISTON ROCK PRODUCTS, LLC
Randall B. Hampton & Kevin A. Hampton, Members
Construction Contractors Board #0109117
P.O. Box 218 – Phone (541) 567 ROCK (7625)
Hermiston, Oregon 97838

April 3, 2012

Idaho Power
1221 W. Idaho Street (83702)
PO Box 70
Boise, ID. 83707

Re: Availability of Aggregate and Concrete for Boardman to Hemingway Project.

Attn: Keith Georgeson Project Leader:

We received your letter dated March 26, 2012 regarding being contacted by Paul Spillers at Tetra Tech to discuss the availability of construction materials within Eastern Oregon.

I informed Tetra Tech that Hermiston Rock Products has aggregate and concrete materials in Hermiston, Oregon. In your letter it states that we also have aggregate facilities in Pendleton, OR, which is not the case. We do however have an aggregate and concrete facility located in La Grande, Oregon in Union County.

Rogers Asphalt and Paving/Redi-Mix Concrete is located at 10410 N. McAlister Road in La Grande, Oregon. We can be a potential supplier for aggregate and concrete products to your company in Union County. Rogers Asphalt Paving/Redi-Mix Concrete also has the capabilities to supply the materials and quantities discussed. In La Grande you may contact either Randall Hampton, or Kevin Hampton at 541-963-3633, P.O. Drawer K, La Grande, Oregon. rasphalt@oregonwireless.net

We appreciate your considering either one or both of our firms for your project.

Sincerely,



Don Hampton
Hermiston Rock Products, LLC
541-567-7625 (rock)

IRVCO ASPHALT & GRAVEL,INC.

5295 HWY.95—P.O.BOX 931
FRUITLAND,IDAHO 83619
208-452-5835 PHONE
208-452-5987 FAX
IDAHO REGISTRATION # RCE-14870
PUBLIC WORKS LICENSE # 13334-AAA-4 (02230,02720,02310,02740)
STATE OF OREGON LICENSE # 0116471

IDAHO POWER
KEITH GEORGESON
E-MAIL: kgeorgeson@idahopower.com

4-3-12

RE: CONSTRUCTION MATERIAL SUPPLY FOR BOARDMAN TO HEMINGWAY PROJECT

KEITH,

I APOLOGIZE FOR NOT RETURNING YOUR CALL, BUT I NEVER GOT THE MESSAGE.
YES, WE WOULD BE VERY INTERESTED IN SUPPLYING ROAD MIX FOR YOUR PROJECT.
WE HAVE A PIT IN VALE THAT WE COULD SUPPLY FROM. WE WOULD NEED TO
COORDINATE WITH YOU FAR ENOUGH IN ADVANCE TO GET THE MATERIAL CRUSHED.

PLEASE LET ME KNOW IF YOU NEED ANY MORE INFO.

THANKS,

GARY WALACE--MANAGER

ATTACHMENT G-4
SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

Spill Prevention, Control, and Countermeasures Plan

Boardman to Hemingway Transmission Line Project

Prepared by:



*1221 West Idaho Street
Boise, Idaho 83702*

September 2018

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ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
CI	Chief Inspector
Contractor	construction contractor
DOT	Department of Transportation
EI	Environmental Inspector
EPA	Environmental Protection Agency
ER Plan	Emergency Response Plan
IPC	Idaho Power Company
kV	kilovolt
MSDS	Material Safety Data Sheets
OAR	Oregon Administrative Rules
Project	Boardman to Hemingway Transmission Line Project
PVC	Polyvinyl chloride
SPCC	Spill Prevention, Control, and Countermeasures Plan
U.S.	United States
USFS	United States Forest Service

1.0 INTRODUCTION

Idaho Power Company (IPC) is proposing to construct, operate, and maintain an approximately 296.6-mile-long electric transmission line between the Longhorn Station near Boardman, Oregon, and the Hemingway Substation located in southwestern Idaho as an extension of IPC's electric transmission system. This length comprises approximately 272.8 miles in Oregon and 23.8 miles in Idaho. The Boardman to Hemingway Transmission Line Project (Project) is primarily a single-circuit 500-kilovolt (kV) electric transmission line, with 270.8 miles of new single-circuit 500-kV electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line into a new right-of-way. The Project includes ground-disturbing activities associated with construction of aboveground single- and double-circuit transmission lines involving towers, access roads, multi-use areas, pulling and tensioning sites and pulling and tensioning sites with light-duty fly yards, the station, communication sites, and electrical supply distribution lines. The Project crosses private land and public lands administered by the Bureau of Land Management (BLM), United States Forest Service, and the states of Idaho and Oregon.

IPC prepared this Spill Prevention, Control, and Countermeasures Plan (SPCC Plan) to be implemented during construction of the Project. This SPCC Plan is required by the Environmental Protection Agency (EPA) regulations contained in Title 40 of the Code of Federal Regulations, Part 112 (SPCC Rule). This Plan meets the requirements of the updated rule promulgated by the EPA on November 5, 2009. The State of Oregon does not have specific additional oil handling, operation, or design requirements. Hazardous waste management is regulated under Division 100 of the Oregon Administrative Rules (OAR); oil spill contingency planning under Division 141; and oil and hazardous materials emergency response requirements under Division 142.

This SPCC Plan outlines preventive measures and practices to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release. This SPCC Plan restricts the location of fuel storage, fueling activities, and construction equipment maintenance along the construction right-of-way and provides procedures for these activities. Training and lines of communication to facilitate the prevention, response, containment, and cleanup of spills during construction activities are also described. Additionally, this plan identifies the roles and responsibilities of key IPC personnel and contractors (i.e., primary and subcontractors) that will be involved in construction of the Project. This SPCC Plan will be included in construction bid and contract documents as contractual requirements to the contractor.

All contractor and subcontractor personnel working on the IPC right-of-way are responsible for implementation of the measures and procedures defined in this SPCC Plan.

1.1 Responsibilities Under this Plan

1.1.1 *Idaho Power Company Representatives*

The Chief Inspector (CI) will evaluate and approve each construction contractor's (Contractor) submittal under this SPCC Plan. The project Environmental Inspector(s) (EI) will oversee implementation of the SPCC Plan and of the Contractor's plans and submittals incorporated by reference. The EI will conduct regular inspections of Contractor activities and identify any issues that may require correction. The EI has the authority to stop construction to correct issues, if

necessary. The CI, Contractor, Subcontractor, and EI will be required to maintain a copy of this SPCC Plan on-site available to all personnel.

Table 1-1. Boardman to Hemingway Project Idaho Power Representatives [To be completed prior to construction]

Function	Name	Location	Telephone Number
IPC Project Manager			
Chief Inspector			
Environmental Inspector			
Emergency Response Coordinator: Primary			
Emergency Response Coordinator: Secondary			
Emergency Response Contractors (Company/Responsibility)			
Spill Response			
Transportation Services			
Site Remediation			

1.1.2 Contractor Responsibilities

The Contractor will prepare plans and submittals under this SPCC Plan that will include activities of the Contractor and its Subcontractors. The Contractor will ensure that such documents are maintained current and complete, and that this SPCC Plan is fully implemented.

Table 1-2. Boardman to Hemingway Project Primary Contractor Representatives [To be completed prior to construction]

Function	Name	Location	Telephone Number
Contractor			
On-Site Foreman			
Emergency Response Coordinator: Primary			
Emergency Response Coordinator: Secondary			
Environmental Contact			
Safety Representative			

Table 1-3. Boardman to Hemingway Project Subcontractor Representatives [To be completed prior to construction]

Function	Name	Location	Telephone Number
Contractor			
On-Site Foreman			
Emergency Response Coordinator: Primary			
Emergency Response Coordinator: Secondary			
Environmental Contact			
Safety Representative			

Responsibilities identified as “Contractor” in subsequent sections of this SPCC Plan apply to each Contractor and Subcontractor.

2.0 SPILL PREVENTION PRACTICES

2.1 Site Selection

Site selection for project staging areas where hazardous materials and hazardous wastes may be present has considered and avoided environmentally sensitive areas. These sites are located at least 100 feet from streams (including intermittent and perennial), wetlands (including dry or seasonal wetlands) and other waterbodies (e.g., lakes, ponds and reservoirs); 200 feet from any private water well; and 400 feet from any municipal or community water supply well. Hazardous materials and wastes may not be sorted, handled, or used in an area that has not been approved for that purpose by the CI.

2.2 Hazardous Materials and Waste Management

Each Contractor is required to develop a detailed, site-specific Hazardous Materials Management Plan prior to construction. The Plan will identify the legal requirements that apply and Contractor requirements, and the best management practices for Project-specific spill prevention procedures, and other stipulations and methods to address spill prevention, response and cleanup procedures for the Project. A Hazardous Materials Management Plan Framework is included in Appendix A. Each Contractor is required to identify the hazardous materials that the Contractor will use and the wastes that the Contractor may generate during project activities. This information includes Material Safety Data Sheets (MSDS) or waste designation information, quantities, locations of storage and use, the container or tank used secondary containment, and inspection procedures. The Contractor must keep a copy of this plan on-site for the duration of all construction-related activities.

2.2.1 Hazardous Materials

No new hazardous material may enter the job site without an amendment to the Contractor's Hazardous Materials Management Plan and without the express approval of the EI.

Usable hazardous materials will be removed by the Contractor for future use upon completion of work on-site.

2.2.2 Wastes

Each waste generated will be evaluated by the EI for appropriate waste designation and appropriate disposal.

2.2.2.1 Rights-of-Way and Sites Owned or Leased by the Project

Wastes generated on the right-of-way and at sites owned or leased by IPC that have the potential of being hazardous waste will be returned to the approved staging point, whereupon the EI will be notified. As necessary, the Contractor will sample wastes and request assistance of the EI in waste management.

The Project EI is responsible for designation of hazardous waste, universal waste, special waste, or recyclable hazardous materials in accordance with applicable state and federal regulations, including OAR, Division 100.

Regulated wastes will be placed in IPC-approved containers, maintained in good condition, and appropriately labeled. Containers will be in an approved area and the EI will be notified of the waste activity. IPC representatives will arrange for appropriate disposal of regulated wastes.

2.2.2.2 Domestic Sewage

Domestic sewage will be handled during construction by means of portable self-contained toilets, which will be stationed at central locations and reasonable distances throughout the work area.

2.2.2.3 Waste Disposal On-Site Prohibited

In no case will any waste material be disposed of at the job site, right-of-way location, or adjacent property.

2.3 Spill Prevention

The Contractor will store, handle, and transfer fluids used during construction so as to prevent the release or spill of oil or other hazardous materials. Materials that are likely to be used in construction equipment include gasoline, diesel fuel, hydraulic fluid, and lubricating oils.

2.3.1 Tank and Container Specifications

Specifications for tanks and containers must meet generally approved standards (including but not limited to supplier's recommendations and specifications of the U.S. Department of Transportation (DOT)). In meeting these standards, tanks and containers must continuously be of integrity and condition to be acceptable for storage and transportation.

2.3.2 Dispensing and Transfer

Dispensing and transfer of hazardous materials and wastes must occur in accordance with nationally recognized standards. This includes bonding or grounding during transfer of flammable liquids. The Contractor will inspect transfers of hazardous materials and waste.

Transfer of liquids and refueling will occur only at approved locations that are at least 100 feet away from any wetlands or surface waters, 200 feet from any private water well, and 400 feet from any municipal or community water well, with certain exceptions noted below (see Section 2.3.4).

Crews must have adequate spill response equipment available at the dispensing or transfer location.

Repair/overhaul of equipment will not occur on the right-of-way or temporary work space except for emergency-type repair of short duration. Any liquids will be collected in suitable containers and appropriately disposed of.

When materials are transferred from a storage tank or container to a vehicle, the Contractor will:

- operate during daylight hours or where lighting is adequate to illuminate the area;
- monitor the transfer operations at all times;
- refuel at least 100 feet from wetlands or surface waters and at least 200 feet from potable water supplies, with certain exceptions noted below;
- keep sufficient spill control materials on-site; and
- in the event of a spill, implement the spill response procedures.

2.3.3 Materials Storage

When materials are stored in a fuel storage tank, the Contractor will:

- locate the tank at least 100 feet from wetlands, 200 feet from private water wells, and 400 feet from municipal water supply wells, with certain exceptions noted below (see Section 2.3.4);
- install a temporary earthen berm around the tank and line it with plastic to provide containment;
- inspect the tank, berm, and liner daily;
- inspect the tank after refilling;
- correct any conditions that could result in a spill, leak, or compromise the integrity of the secondary containment;
- plug or close all tank openings when not in use;
- remove any precipitation from the bermed area with a pump and spray in surrounding upland area (note: inspect precipitation for an oil sheen and, if sheen is present, collect the liquid for disposal); and
- keep sufficient spill control materials on-site.

When materials are stored in a container, the Contractor will:

- store containers at least 100 feet from wetlands and surface waters with certain exceptions noted below (see Section 2.3.4);
- use small containers that are in good condition (maximum capacity 55 gallons);
- protect the containers from the elements and physical damage;
- replace any leaking or damaged containers;
- close containers when not in use; and
- keep sufficient spill control materials on-site.

2.3.4 Setback Exceptions

The dispensing and transfer (e.g., refueling) setbacks identified above may not be practical for certain construction activities in certain locations. Exceptions may only be allowed for:

- areas such as rugged terrain or steep slopes where movement of equipment to refueling stations would cause excessive disturbances to the surface of the right-of-way;
- construction sites where moving equipment to refueling stations is impractical or where there is a natural barrier from the waterbody or wetland (e.g., road or railroad);
- locations where the waterbody or wetland is located adjacent to a road crossing from which the equipment can be serviced; and
- refueling and fuel storage for immobile equipment.

All exceptions to the required setbacks must be approved by the EI.

In these situations, the Contractor shall exercise extreme caution during fueling and lubrication of equipment and all other oil and hazardous materials transfers. Only a fuel truck with a maximum of 300 gallons of fuel may enter restricted areas to refuel construction equipment. Two trained personnel will be present during refueling to reduce the potential for spill or

accidents. Adequate spill containment equipment suitable to the refueling activities as described in Section 3.2.1.2 will be maintained at designated setback locations during refueling.

2.3.5 Other Material-Specific Measures

Paint containers will be tightly sealed and stored in a designated area. Excess paint will be properly disposed of according to manufacturer's instructions and federal, state, and local regulations. All paint tools will be cleaned in a designated area located at least 100 feet from all wetlands and surface waters.

Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water on the site in designated areas. The designated area will include sediment controls installed around the perimeter and will be located 100 feet away from wetlands or surface waters. After construction, the concrete washout area will be restored to pre-construction conditions.

2.3.6 Equipment for Safe Tank Operation

Tanks will be equipped with all standard safety equipment required for the specification packaging and its use.

2.3.7 Separation of Incompatible Materials

Incompatible materials will be stored in areas separated in accordance with nationally recognized standards. Incompatible materials will not be consecutively placed into a container or tank. In addition, sources of ignition will be prohibited in hazardous materials areas and waste areas.

2.3.8 Labeling, Marking and Placarding

Each cylinder, container, and tank will be appropriately identified with contents as per Occupational Safety and Health Administration requirements (see samples in Appendix B). Containers and tanks used for transport of hazardous materials and wastes will be marked and labeled in accordance with DOT requirements (e.g., Proper Shipping Name, UN/NA Number, Hazard Class labels or placards). In addition, tanks will be labeled in accordance with National Fire Protection Association, where required by the local jurisdiction.

Approved areas for hazardous materials and waste will be secured against unauthorized entry and vandalism.

2.4 Secondary Containment

2.4.1 Approved Secondary Containment

Approved secondary containment will be provided for each tank and each container with a capacity of 5 gallons or more.

2.4.2 Minimum Standards for Secondary Containment

2.4.2.1 Containers

Secondary containment for containers with 5 or more gallons of capacity may include a temporary containment area with temporary earthen berms and contiguous 10 mil polyethylene containment; or it may consist of a portable containment system constructed of polyvinyl chloride (PVC) or other suitable material.

Secondary containment volume will be at least 110 percent of the volume of the larger tank of hazardous materials and wastes stored. If earthen berms are utilized, they will be constructed

with slopes no steeper than 3:1 (horizontal to vertical) to limit erosion and provide structural stability.

Polyethylene drum spill skids will be used for storage of 55-gallon drums of fuel or hazardous materials that may be placed temporarily in the immediate work area.

2.4.2.2 Tanks

Secondary containment for tanks will be provided that includes the tank and the dispensing area. Secondary containment volume will be 110 percent of the volume of the largest tank of hazardous materials and wastes stored. Tanks should be elevated a minimum of 2 feet above grade.

2.4.2.3 Contractor's Secondary Containment

Secondary containment provided by the Contractor must meet these minimum standards and must be implemented as proposed in the Contractor's Hazardous Materials Management Plan.

2.5 Regular Inspections

The Contractor will conduct daily inspections at locations where hazardous materials and wastes are stored, handled, and dispensed. The Contractor will also inspect aboveground tanks after refilling. Inspections will follow site-specific procedures in the approved Contractor's Hazardous Materials Management Plan. The source of any container or tank leak will be stopped immediately and residual wastes will be aggregated, designated, and properly disposed of. Any leaking container will be immediately overpacked.

All vehicles (e.g., trucks, side-booms, dozers, etc.) shall be:

- inspected daily for leaks or signs of deterioration that could result in a leak;
- repaired when defective tanks, hoses, fittings, etc. are found; and
- parked at least 100 feet from wetlands or surface waters, with certain exceptions noted above (see Section 2.3.4).

The EI will provide oversight to the Contractor's activities on hazardous materials and waste management.

3.0 EMERGENCY PREPAREDNESS

Each Contractor is required to develop a Contractor's Emergency Response Plan (ER Plan) (see Appendix C) for environmental emergency preparedness and response. The ER Plan is appropriate for the hazardous materials and wastes used and generated. The initial ER Plan will be approved by the Chief Inspector. This ER Plan will be maintained current; subsequent revisions may be approved by the EI.

The Contractor will maintain adequate resources, including:

- emergency response coordinators;
- fire-fighting equipment (such as portable fire extinguishers);
- spill control and cleanup equipment (absorbent materials such as pads, pillows, booms and socks, non-sparking shovels, etc.);
- appropriate personal protective equipment; and
- the Contractor's ER Plan.

3.1 Emergency Responders

The Contractor will designate personnel responsible for incident or emergency response, in the event of a release to the environment. The Contractor will ensure that emergency responders identified will have appropriate training in environmental emergency or incident preparedness, prevention, and response. The Contractor's emergency contact information will be maintained current.

In addition, IPC will designate primary and secondary Emergency Response Coordinators. IPC Emergency Response Coordinators will have the authority to commit necessary resources to respond to environmental releases and to conduct cleanup.

3.2 Emergency Response Equipment

3.2.1 Contractor's Spill Containment and Cleanup Resources

3.2.1.1 On-site Equipment

The Contractor will have available, adequate spill containment and cleanup resources that are appropriate to their activities and to the hazardous materials and wastes handled. Minimum standards are identified on Appendix C. The following additional materials will be available at a central location on each multi-use area and light-duty fly yards:

- boom(s);
- cleanup rags;
- 55-gallon DOT-approved containers;
- replacement parts and equipment for repair of tanks, hoses, nozzles, etc.;
- fire extinguisher, Type B, C;
- two bags of chemical sorbent material (e.g., kitty litter);
- three 17-inch x 17-inch chemical pillows;
- four 48-inch x 3-inch chemical socks;
- twenty 18-inch x 18-inch x 3/8-inch sorbent pads;
- twenty 30-gallon 6-mil polyethylene bags;
- two 30-gallon polyethylene open-head drums;
- 10 pairs of polypropylene gloves;
- two, each type, waste labels;
- two 8' x 10' polyethylene tarps;
- one cooler;
- one quart jar;
- one trowel; and
- 20 hay bales.

The Contractor will be prepared to clean up, characterize, and dispose of spill debris. IPC will have additional contractors available for associated emergency spill response, transportation, remediation, and disposal activities.

3.2.1.2 Vehicle Response Equipment

The Contractor will maintain a supply of spill materials as described below.

Any vehicle used to transport lubricants and fuel will be equipped with:

- one 20-pound fire extinguisher (Type: B, C);
- 50 pounds of oil absorbent (e.g., Speedy Dry or equivalent);
- ten 48-inch x 3-inch oil socks;
- five 17-inch x 17-inch oil pillows;
- two 10-foot x 4-inch oil booms;
- twenty 24-inch x 24-inch x 3/8-inch oil absorbent pads;
- twenty 30-gallon 6-mil polyethylene bags;
- one roll of 10-mil plastic sheeting;
- two shovels;
- 10 pairs of polypropylene gloves;
- one 55-gallon (or equivalent capacity) DOT-approved container; and
- two, each type, waste label.

All foremen's vehicles and heavy equipment will be equipped with:

- absorbent pads;
- heavy duty plastic bags; and
- one shovel.

3.2.2 Maintaining Emergency Response Equipment

The Contractor will inspect emergency response equipment weekly to ensure that all equipment identified in the Contractor's ER Plan is available in quantities and locations identified. After response to an incident or emergency release, any equipment used will be replaced or decontaminated and returned to inventory.

4.0 INCIDENT OR EMERGENCY RESPONSE

4.1 Environmental Release Notification

The Contractor will notify the IPC Emergency Response Coordinator on call in the event that a spill occurs during project activities. **There will be immediate notification in the event of a release of 1 pound or more of any hazardous material or any amount of hazardous waste.** The Contractor is required to complete the Spill Report Form (Appendix D) and submit the form to the Project Manager and EI. The Contractor will be considered the Waste Generator for all spills caused by construction.

If agency notification is required, IPC representatives will notify the Project Manager and appropriate agencies in accordance with IPC policies. IPC will provide 48-hour advance notification to surface water intake operators of public drinking water source areas regarding construction through the waterbodies where their intakes are located. Appendix E will contain a description of the Project, including maps, flow diagrams, and topographical maps as necessary, which will be updated prior to construction.

4.2 Incident Response

If an environmental release occurs and is an incident that can be handled with available resources, the Contractor may be requested to perform the following, under direction of the IPC Emergency Response Coordinator.

- Stop the source of release. This may mean plugging a container or tank, turning off a valve, etc.
- Remove all sources of ignition from the area.
- Contain the spill. Use an approved container, or create a lined, covered containment area.
- Collect spilled materials. Block off drains. Create/expand containment areas using available means. Use appropriate neutralizers, sorbents, pigs, and pads. Create barriers to protect sensitive areas. Personal protective equipment will be worn as recommended on the MSDS of the specific product.
- Remove all contaminated soil or other material and cover with a plastic sheet.
- Contain contaminated material and temporarily store in a secured area 100 feet away from any wetland or surface water.
- Perform any necessary sampling of waste material.
- Conduct preliminary cleanup of the site.

4.2.1 Wetland or Waterbody Response

Regardless of size, the following conditions apply if a spill occurs near or in a stream, wetland, or other waterbody.

- For spills in standing water, floating booms, skimmer pumps, and holding tanks shall be used as appropriate by the Contractor to recover and contain released materials in the surface of the water.
- For a spill threatening a waterbody, berms and/or trenches will be constructed to contain the spill before it reaches the waterbody. Deployment of booms, sorbent materials, and skimmers may be necessary if the spill reaches the water. The spilled product will be collected and the affected area cleaned up in accordance with appropriate state or federal regulations.
- Contaminated soils in wetlands must be excavated, and placed on and covered by plastic sheeting in approved containment areas a minimum of 100 feet away from the wetland or surface water. Contaminated soil will be disposed of as soon as possible in accordance with appropriate state or federal regulations.

4.2.2 Emergency Response

The Emergency Response Coordinator will act as Incident Commander, overseeing emergency release response actions taken.

If additional resources are needed, the IPC Emergency Response Coordinator will retain emergency response contractors and/or request assistance of local emergency responders (including fire, police, hazardous materials teams, ambulance or hospitals, and highway patrol) and will coordinate all emergency response activities. As necessary, the IPC Emergency Response Coordinator will signal evacuation of site personnel.

Where site cleanup is necessary, IPC Emergency Response Coordinator will coordinate cleanup actions with appropriate agency representatives. IPC Representatives will provide guidance on appropriate waste management and disposal.

The Oregon Office of Emergency Management (1-800-452-0311) serves as the coordinator of spill response in the State of Oregon. The Office of Emergency Management determines the severity of spills and contacts the appropriate agency.

5.0 TRAINING

IPC will require that all Contractor employees involved with transporting or handling fueling equipment or maintaining construction equipment be required to complete spill training before they commence work on the Project. IPC will audit Contractor compliance with this requirement. Spill training will also be required for Contractor supervisory personnel prior to commencement of work. These training sessions will provide information concerning pollution control laws; inform personnel concerning the proper operation and maintenance of fueling equipment; and inform personnel of spill prevention and response requirements. Measures, responsibilities, and provisions of this SPCC Plan, and identification of response team individuals, will be incorporated into the training.

Training of other workers will be provided through ongoing weekly safety meetings. Topics will include spill handling and personal responsibility for initiating and adhering to appropriate procedures, and the required spill containment supplies to be maintained with each construction crew. These weekly sessions will be held by the Contractor as crew “tailgate” meetings. IPC will audit the Contractor compliance with this requirement to ensure the meetings are conducted.

**APPENDIX A
CONTRACTOR'S HAZARDOUS WASTE MANAGEMENT
FORMS**

APPENDIX B
LABELS FOR WASTE CONTAINERS

“RECYCLABLE MATERIAL/WASTE” CONTAINER LABEL

Boardman to Hemingway Project	
RECYCLABLE MATERIAL/WASTE LABEL	
Facility Name:	_____
Address:	_____
State/Zip:	_____
Contact:	_____
Type:	<input type="checkbox"/> USED OIL

	UNIVERSAL WASTE:
	<input type="checkbox"/> Universal Waste – Batteries
	<input type="checkbox"/> Universal Waste – Lamps
	<input type="checkbox"/> Universal Waste – Mercury Thermostats
	<input type="checkbox"/> SPECIAL WASTE
	<input type="checkbox"/> RECYCLABLE MATERIAL
Description:	_____
Accumulation Date:	_____
DOT Proper Shipping Name:	_____

UN/NA Number:	_____

HAZARDOUS WASTE "WORKPLACE ACCUMULATION CONTAINER" LABEL

WORKPLACE ACCUMULATION CONTAINER

Proper D.O.T Shipping Name: _____

UN/NA# _____

Generator: _____

Facility: _____

Address: _____

Phone: _____ City: _____

State: _____ Zip: _____

EPA ID No: _____

Workplace Accumulation

Start Date: _____

HAZARDOUS WASTE

STATE AND FEDERAL LAW

PROHIBITS IMPROPER DISPOSAL.

IF FOUND, CONTACT THE NEAREST

POLICE OR PUBLIC SAFETY

AUTHORITY, THE

U.S. ENVIRONMENTAL PROTECTION

AGENCY, OR THE OREGON

DEPARTMENT OF

ENVIRONMENTAL QUALITY

HANDLE WITH CARE!

Composition: _____

Physical State of Waste:

Solid _____ Liquid _____

Hazardous Properties: Toxic

Flammable

Corrosive

Reactivity

Other _____

EPA Waste No. _____

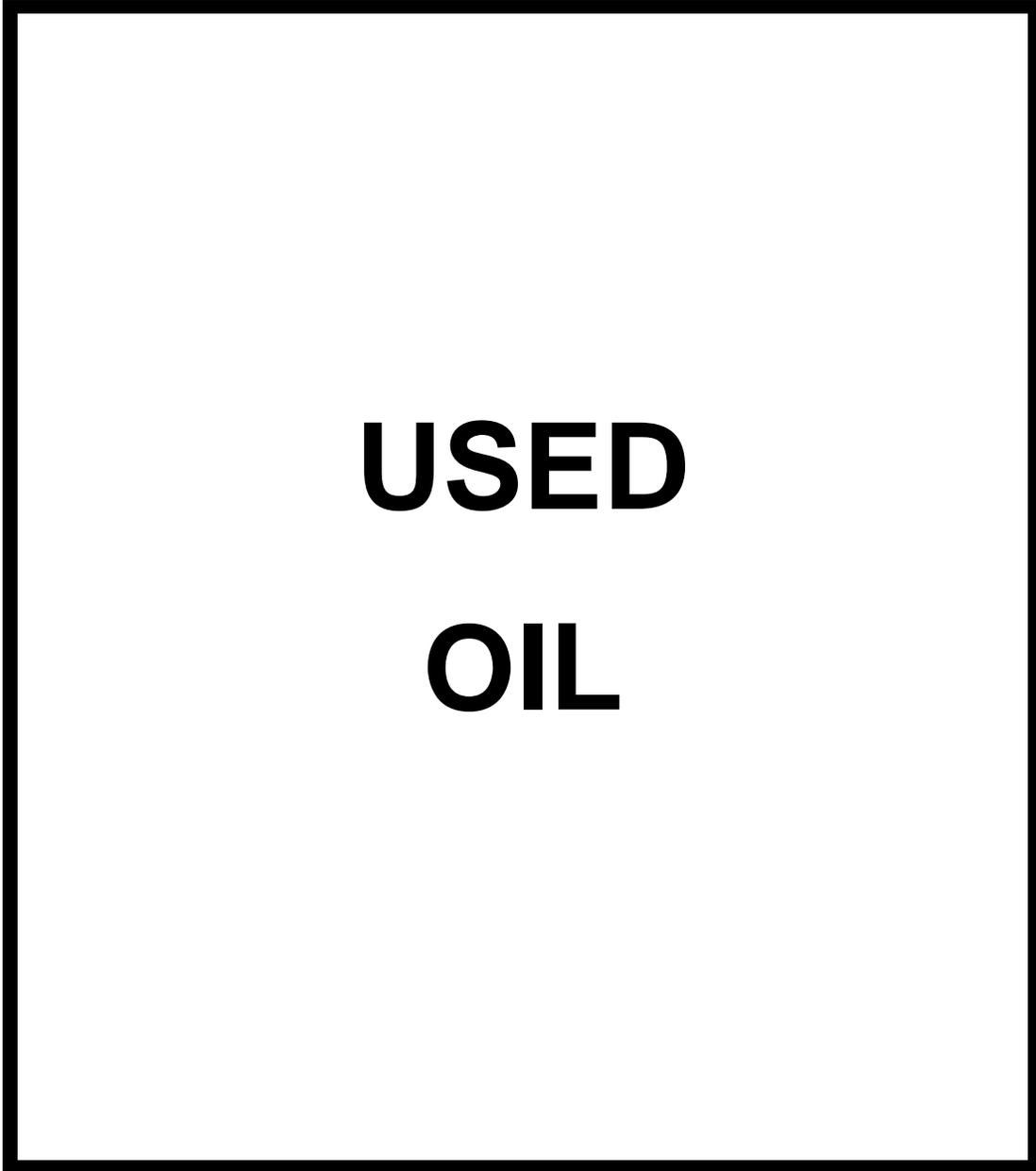
CA Waste No. _____

Date Placed in Hazardous

Waste Storage Area: _____

Manifest Document Number: _____

“USED OIL” CONTAINER LABEL



APPENDIX C
CONTRACTOR'S EMERGENCY RESPONSE PLAN FORM

CONTRACTOR'S EMERGENCY RESPONSE PLAN

IPC SPCC/Emergency Response Plan Reviewed: (Y/N)

Emergency Response Coordinator

Name	Title	Telephone (Office/Job Site)	Address
Primary			
Secondary			

Incident/Emergency Response Equipment

Emergency Response Equipment	Type	Capability	Quantity	Location
Fire Fighting	Fire Extinguishers	Type: B, C?		Jobsite Crew Staging Area
Incident Response Kit	Chemical sorbent material (e.g., kitty litter)	Chemical Spill Response	2 bags	Project Staging Area
	17" x 17" chemical pillows	"	3	"
	48" x 3" chemical socks	"	4	"
	Sorbent pads 18" x 18" x 3/8"	"	20	"
	6 mil polyethylene bags	"	20, 30-gal.	"
	Polyethylene open-head drum	"	2, 30-gal.	"
	Polypropylene gloves	"	10 pair	"
	Waste Labels	"	2 Each	"
	8' x 10' Polyethylene Tarp	"	2	"
Release Response Kit	48"x3" oil socks	Fuel/Oil Spill Response	10	Each Fuel/Oil Truck
	17" x 17" oil pillows	"	5	"
	10' x 4" oil boom	"	2	"
	24" x 24" x 3/8" oil mats	"	20	"
	6 mil polyethylene bags	"	20, 30-gal.	"
	Polypropylene Gloves	"	10 pair	"
	Propylene open-head drum	"	1, 55-gallon	"
	Waste Labels	"	2 Each	"
Sample Kit	Cooler, Quart Jars, Trowel	Sampling of solids	1	Project Staging Area
Spill Containment	8' x 10' Polyethylene Tarp	Contain Spill Debris	2	Project Staging Area
	Hay Bales	"	20	"

Evacuation Procedures

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Distribution:	Original:	Informational Copies:	Revision Date (by Contractor):
	Chief Inspector/IPC File	IPC Environmental Inspector: _____	
		Safety-Training: _____	
		Others: _____	

APPENDIX D
SPILL REPORT FORM

**Boardman to Hemingway
Spill Report Form**

General Information

Date/time of spill: _____

Date/time of spill discovery: _____

Name and title of discoverer: _____

Milepost/Legal Description: _____

Spill Source and Site Conditions

Material spilled/Estimated volume: _____

Unique qualifier, if relevant, such as manufacturer: _____

Media in which the release exists: (circle: sand, silt, clay, upland, wetland, surface water, other):

Topography and surface conditions of spill site: _____

Proximity to wetlands and surface waters (including ditches): _____

Proximity to private or public water supply wells: _____

Directions from nearest community: _____

Weather conditions at the time of release: _____

Describe the causes and circumstances resulting in the spill: _____

Describe the extent of observed contamination, both horizontal and vertical (i.e., spill-stained soil in a 5-foot radius to a depth of 1 inch): _____

**Boardman to Hemingway Project
Spill Report Form**

Spill Control and Clean-up

Describe immediate spill control and/or cleanup methods used and implementation schedule:

Location of any excavated/stockpiled contaminated soil:

Describe the extent of spill-related injuries and remaining risk to human health and environment:

Name, company, and telephone number of party causing spill (e.g., contractor):

Current status of cleanup actions:

Contact Information

Name and company for the following:

Construction Superintendent (Contractor):

Spill Coordinator:

Environmental Inspector:

Chief Inspector (IPC)

Landowner notified (if appropriate):

Date: _____

Form completed by:

Date: _____

Government agency notified **(to be completed by IPC or IPC's Representative)**: _____

Date: _____

Spill Coordinator must complete this form for any spill, regardless of size, and submit the form to the IPC Representative and Environmental Inspector within 24 hours of the occurrence.

APPENDIX E
PROJECT DESCRIPTION AND SITE MAPS

[Site maps will be provided prior to construction]

**ATTACHMENT G-5
FRAMEWORK BLASTING PLAN**

Framework Blasting Plan

Boardman to Hemingway Transmission Line Project

Prepared By



*1221 West Idaho Street
Boise, Idaho 83702*

September 2018

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ACRONYMS AND ABBREVIATIONS

CIC	Compliance Inspection Contractor
IPC	Idaho Power Company
ODOE	Oregon Department of Energy
POD	Plan of Development
Project	Boardman to Hemingway Transmission Line Project
U.S.	United States

1.0 INTRODUCTION

The Blasting Plan Framework outlines methods to mitigate risks and potential impacts associated with blasting procedures that may be required for construction of the Boardman to Hemingway Transmission Project (Project). Also included in this section is a preliminary outline for the Blasting Plan to be prepared by the Construction Contractor(s) and submitted to Idaho Power Company (IPC) if blasting is required. The Compliance Inspection Contractor (CIC) and the appropriate agencies will be notified in advance of any required blasting so the area can be cleared. If blasting is to occur on federal lands, IPC will submit the Blasting Plan to the federal land-management agencies for final review and approval.

1.1 Plan Framework Updates

This plan framework will support the Project sufficiently to complete and execute the Oregon Department of Energy (ODOE) site certificate. This plan framework serves as baseline document to guide development of the complete Blasting Plan developed with the Plan of Development before issuance of the site certificate and commencement of construction. The complete Blasting Plan will be developed by the Construction Contractor(s) in consultation with IPC as detailed engineering design of the Project is completed and will contain the detailed information necessary for site-specific guidance. This plan framework provides Project-specific guidance for development of the complete Blasting Plan by identifying treatments and measures required to avoid, minimize, and mitigate Project-related impacts; prevent unnecessary degradation of the environment; ensure blasting activities comply with federal, state, or other agency requirements; and meet any stipulations of the Site Certificate. The Construction Contractor(s) will be responsible for preparing and implementing the complete Blasting Plan.

1.2 Blasting Plan Purpose

Once completed, the Blasting Plan will provide construction crews, the CIC, and environmental monitors with Project-specific information concerning blasting procedures, including the safe use and storage of explosives. The objective of the Blasting Plan is to prevent adverse impacts on human health and safety, property, and the environment that could potentially result from the use of explosives during Project construction.

Blasting may be needed in certain areas with rocky terrain to excavate tower footings, prepare station pads, and to construct access roads. Blasting will be used only in areas where traditional excavation and earth-moving equipment and practices are unable to accomplish the excavation. If hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Precise locations where blasting is expected will be identified based on a site-specific geotechnical investigation carried out as part of detailed design. In addition, the Construction Contractor(s) may elect to use implosive sleeves during line-stringing activities to fuse conductor wire together.

2.0 REGULATORY COMPLIANCE AND PROCEDURES

The Construction Contractor(s) will be responsible for preparing and implementing the Blasting Plan and must comply with all applicable federal, state, and local laws and regulations. No blasting operations will be undertaken until approval and appropriate permits have been obtained from the applicable agencies. Failure to comply with such laws could result in substantial financial penalty and/or imprisonment.

The Construction Contractor(s) will use qualified, experienced, and licensed blasting personnel who will perform blasting using current and professionally accepted methods, products, and procedures to maximize safety during blasting operations. Blasting procedures will be carried out according to, and in compliance with, applicable laws and will be closely monitored by the CIC.

3.0 BLASTING PLAN GUIDANCE

Prior to blasting, the Construction Contractor(s) shall prepare a Blasting Plan for review and approval by IPC, ODOE, CIC, and any other relevant jurisdictional organization, as applicable. The plan will address safety as well as design for production and controlled blasting. The Blasting Plan also will contain the full details of the drilling and blasting patterns, as well as the controls the Construction Contractor proposes to use for both controlled and production blasting. Review of the plan by the parties shall not relieve the Construction Contractor(s) of the responsibility for the accuracy and adequacy of the Blasting Plan when implemented in the field. A minimum of 2 weeks should be allowed for review and approval of the Blasting Plan by ODOE and other appropriate agencies. If at any time changes are proposed to the Blasting Plan, the Construction Contractor(s) shall submit them to IPC, who will then submit the proposed changes to ODOE and other appropriate agencies and the CIC for review and approval.

3.1 Overview of Blasting Principles

3.1.1 Locations

The Construction Contractor(s) will avoid blasting in potential rockslide/landslide areas to the maximum extent possible and will consult with a geologist before blasting in such areas. A common practice for fusing conductor wire together is the use of implosive sleeves, which use explosive materials. The Construction Contractor(s) should be knowledgeable about this practice and should coordinate with the CIC, particularly with regard to the locations of these practices.

3.1.2 Materials

The Construction Contractor(s) will determine the specific materials needed for blasting operations. These materials will be included on the hazardous materials list for the Project, and their use and storage will comply with applicable federal, state, and local laws and regulations.

3.2 Blasting Plan Components

The Blasting Plan prepared by the Construction Contractor(s) shall contain the following minimum information in the following format:

1. Purpose
2. Scope of the Blasting
3. Definitions
4. Responsibilities
 - 4.1 Management Organization
 - 4.2 Authority Responsibility
 - 4.3 Blaster in Charge (licensed in Idaho and Oregon)

5. Location of Blasting Area

5.1 Description of Blasting Area

5.2 Description of Bedrock and Geological Problems

5.3 Description of Adjacent Utility Facilities

6. Environmental Considerations

7. Safety Considerations

7.1 General

7.2 Warning Signs and Signals

7.3 Procedures around Adjacent Utility Facilities

7.4 Traffic Control

7.5 Emergency Blast Initiation

7.6 Safety Publications

7.7 Fire Prevention

7.8 Safety Hazards

7.9 Emergency Services and Communication

7.10 Minor or Nonemergency Medical Care

7.11 First Aid

8. Risk Management

8.1 Protection of Adjacent Utility Facilities

8.2 Lightning

8.3 Flyrock (Note: Flyrock will be controlled with blasting mats.)

8.4 Carbon Monoxide

8.5 Ground Vibrations

8.6 Seismically Sensitive Receptors

8.7 Preblast Survey and Inspection

8.8 Blast Damage Complaints

8.9 Airblast

9. Blast Design Concept

9.1 Station limits of proposed shot

9.2 Plan and section views of proposed drill pattern, including free face, burden, blasthole spacing, blasthole diameter, blasthole angles, lift height, and sub-drill depth

9.3 Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming

9.4 Initiation sequence of blastholes, including delay times and delay system

9.5 Manufacturers' data sheets for all explosives, primers, and initiators to be employed

10. Procedures

10.1 Delivery of Explosives

10.2 Storage of Explosives and Blasting Agents

10.3 Blast Hole Drilling

10.4 General Handling of Explosives

10.5 Blast Hole Loading

10.6 Notification

10.7 Initiation of Blast

10.8 Misfire Management

10.9 Test Blasting

11. Records

12. Attachments

3.3 Safety Procedures

Safe storage and use of explosive materials will be a top priority during construction. The safety measures discussed in this section are intended to prevent theft and/or vandalism of the explosive materials, protect against fire, and prevent personal injury and property damage. These measures are intended as general guidelines and specific safety requirements will be identified by the construction contractor prior to construction.

3.3.1 Storage

Explosives must be stored in an approved structure (magazine) and kept cool, dry, and well-ventilated. IPC's Construction Contractor(s) will provide the respective states' Bureau of Alcohol, Tobacco, Firearms, and Explosives office with a list of dates and locations for the explosives and blasting-agent storage facilities to be used on the Project at least 14 days before the establishment of such storage facilities.

At a minimum, the following storage requirements will be implemented:

- Explosives must be stored in an approved structure (magazine), and storage facilities will be bullet, weather, theft, and fire resistant.
- Magazine sites will be located in remote (out-of-sight) areas with restricted access; will be kept cool, dry, and well ventilated; and will be properly labeled and signed.
- Detonators will be stored separately from other explosive materials.

- The most stringent spacing between individual magazines will be determined according to the guidelines contained in the Bureau of Alcohol, Tobacco, Firearms, and Explosives publication or state or local explosive storage regulations.
- Both the quantity and duration of temporary onsite explosives storage will be minimized.

The Construction Contractor(s) will handle and dispose of dynamite storage boxes in accordance with relevant federal, state, and local laws.

3.3.2 Blasting Notification and Safety Procedures

The Construction Contractor(s) will obtain a permit from the appropriate county as needed, for the period when blasting may occur and will comply with the following requirements developed by the federal land-management agencies:

- The holder shall publish a proposed blasting schedule in the local newspaper 1 week prior to any blasting taking place. The schedule shall identify the location, dates, and times blasting will occur. No blasting shall occur outside of the published schedule, except in emergency situations.
- The holder shall post warning signs at all entry points for the Project. Warning signs shall include information on blasting, including the general hours blasting might take place, and audible signals to be used warning of impending blasting and to indicate the site is all clear.
- Access points to areas where blasting will take place will be blocked to prevent access by the public at least 30 minutes prior to blasting. The site shall be swept 5 minutes prior to blasting to ensure no unauthorized personnel have wandered onto the site. An audible warning signal, capable of carrying for 0.5 mile, shall be used at least 2 minutes prior to blasting. An "all-clear" signal will be given once it has been determined the area is safe.
- Blasting in the vicinity of pipelines will be coordinated with the pipeline operator and will follow operator-specific procedures, as needed.
- Damages that result solely from the blasting activity will be repaired or the owner fairly compensated.

A determination that the blasting area is all clear of danger will be derived once the blasting area has been inspected for undetonated or misfired explosives. The blasting area also will be inspected for hazards, such as falling rock and rock slides. Once the area has been inspected and these issues have been addressed, the all-clear signal as described above will sound and persons will be able to safely re-enter the blast zone. Additional safety precautions will be developed to address site-specific conditions at the time of the blast. Special attention will be given to preventing potential hazards in the blasting area resulting from flying rock, destabilized walls or structures, presence of low flying aircraft, and dispersion of smoke and gases.

3.3.3 Fire Safety

The presence of explosive materials on the Project site could potentially increase the risk of fire during construction. Special precautions will be taken to minimize this risk, including the following:

- Prohibiting ignition devices within 50 feet of explosives storage areas
- Properly maintaining magazine sites so they are clear of fuels and combustible materials, well ventilated, and fire-resistant
- Protecting magazines from wildfires that could occur in the immediate area

- Posting fire suppression personnel at the blast site during high-fire danger periods
- Prohibiting blasting during extreme fire danger periods

3.3.4 Transportation of Explosives

Transportation of explosives will comply with all applicable federal, state, and local laws, including Title 49 of the Code of Federal Regulations, Chapter III. These regulations are administered by the United States (U.S.) Department of Transportation and govern the packaging, labeling, materials compatibility, and safety of transported explosives, as well as driver qualifications. In general, these regulations require vehicles carrying explosive materials be well-maintained, properly marked with placards, and have a non-sparking floor. Materials in contact with the explosives will be non-sparking, and the load will be covered with a fire- and water-resistant tarpaulin. Vehicles also must be equipped with fire extinguishers and a copy of the Emergency Response Guidebook (U.S. Department of Transportation 2008). Every effort will be made to minimize transportation of explosives through congested or heavily populated areas.

Prior to loading an appropriate vehicle for carrying explosives, the vehicle shall be fully fueled and inspected to ensure its safe operation. Refueling of vehicles carrying explosives shall be avoided. Smoking shall be prohibited during the loading, transporting, or unloading of explosives. In addition, the following specific restrictions apply to transport of other items in vehicles carrying explosives:

- Tools may be carried in the vehicle, but not in the cargo compartment.
- Detonation devices can, in some cases, be carried in the same vehicle as the explosives, but they must be stored in a specially constructed compartment(s).
- Batteries and firearms shall never be carried in a vehicle with explosives.
- Vehicle drivers must comply with the specific laws related to the materials being transported.

Vehicles carrying explosives shall not be parked or left unattended except in designated parking areas with approval of the State Fire Marshall. When traveling, vehicles carrying explosives will avoid congested areas to the maximum extent possible.

3.4 Design Features of the Project for Environmental Protection

This section will serve as the baseline measures for inclusion in the complete Blasting Plan to be developed by the Construction Contractor(s). Design features of the Project for environmental protection are applied Project-wide and will address many of the concerns associated with blasting. Design Features of the Project for Environmental Protection are developed in accordance with ODOE and other appropriate agency standards. Following is a description of design features of the Project for environmental protection that relate to blasting during the construction and operation of Project facilities.

Design Feature 14. State standards for abandoning drill holes will be adhered to where groundwater is encountered.

Design Feature 21. Hazardous material will not be discharged onto the ground or into streams or drainage areas. Enclosed containment will be provided for all waste. All construction waste (i.e., trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials) will be removed to a disposal facility authorized to accept such materials within 1 month of Project completion, except for hazardous waste which will be removed within 1 week of Project completion.

Refueling and storing potentially hazardous materials will not occur within a 200-foot radius of all identified private water wells, and a 400-foot radius of all identified municipal or community water wells. Spill prevention and containment measures will be incorporated as needed.

Design Feature 32. Watering facilities (tanks, natural springs and/or developed springs, water lines, wells, etc.) will be repaired or replaced if they are damaged or destroyed by construction and/or maintenance activities to their predisturbed condition as required by the landowner or land-management agency. Should construction and/or maintenance activities prevent use of a watering facility while livestock are grazing in that area, then the Applicant will provide alternate sources of water and/or alternate sources of forage where water is available.

3.5 Literature Cited

U.S. Department of Transportation. 2008. Emergency Response Guidebook. Available at <http://www.ehso.com/hmerg.php>.