DOE F 1325.8 e Electronic Form Approved by CGIR - 01/20/95
(8-89)

United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: April 8, 2003

REPLY TO ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285/SA-144-Custer-Intalco #2)

TO: Don Atkinson
Natural Resource Specialist - TFN/SNOHOMISH

Proposed Action: Vegetation Management for portion of the Custer-Intalco #2 230 kV transmission line located from tower structure 1/1 to 7/5.

Location: Project location is in BPA Snohomish Region in Whatcom County, Washington.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to clear targeted vegetation within the right-of-way, along access roads and around towers that may impede the operation and maintenance of the subject transmission lines. See Section 1.4 of the attached checklists for a complete description of the proposed action.

Analysis: Please see the attached checklist for the resources present. Applicable findings and mitigation measures are discussed below.

Planning Steps:

1. Identify facility and the vegetation management need.

Work will take place along Custer-Intalco #2 230 kV transmission line. The project area includes the BPA right-of-way with an easement width of 125 feet between the Custer and Intalco substations, approximately 7 miles in length. The ROW is located in Whatcom County, Washington in the BPA Snohomish Region.

Tall growing vegetation of the types listed in Section 1.2 of the attached checklist are present in the ROW and will soon pose a hazard to the lines. Project involves clearing tall growing vegetation and treatment of the associated stumps and re-spouts with approved herbicides to ensure that the roots are killed.

Vegetation on access roads and around tower sites that impede the operation and maintenance of the transmission line will also be cleared and/or treated.

Cut-stump or follow-up spot herbicide treatments on species that re-sprout will be carried out to ensure that the roots are killed (follow-up treatment may take place during the next growing season). Herbicides will not be applied using high volume methods to ensure that non-target species are not treated.

2. Identify surrounding land use and landowners/managers and any mitigation.

The project area consists of Intalco Aluminum, industrial, rural residential, farms, grazing lands, and private lands.

Letters will be sent or personal contact made with landowners before and during the project. Door hangers may also be used to notify landowners of project work. The prescription/cut sheets will be modified as needed based on any input received during the project.

The Lummi Nation has a permit to use the BPA right-of-way (from tower 5/3 + 870 to 5/4 +40) where artifacts were deposited after being removed from a project in Blaine, Washington and placed on the ROW.

3. Identify natural resources and any mitigation.

Section 3 of the attached checklist identifies the natural resources present in the area of the proposed work. The following cites resources found along with applicable mitigation measures:

Riparian Habitat: Includes all wetlands, streams, creeks and ponds meeting the definition of riparian habitat. Riparian areas were identified which may include essential fish habitat. See Section 3.1 of the attached checklist for a complete listing of identified water resources.

Riparian Habitat Mitigation:

- No herbicides will be used within 200-feet of the stream or wetland. Vegetation control methods may include all manual, mechanical, and biological treatments, except grazing.
- On slopes less than 20% no ground disturbing mechanical equipment will be used within 35 feet of the stream or wetland. On slopes greater than 20% no ground disturbing mechanical equipment will be used within 200 feet of the stream or wetland.

Irrigation Source, Wells, or Springs: Includes water sources, springs, wells and other sensitive lands within 100 feet of sensitive riparian areas or water sources. See Section 3.2 of the attached checklist for a complete listing.

Irrigation Source, Wells, or Springs Mitigation:

- No herbicides will be used within 100 feet of irrigation sources, wells, or springs. Only herbicides that do not have a ground or surface water advisory will be used between 100 and 165 feet of wellhead. Approved herbicides include: glyphosate, imazapyr, tryclopyr, and escort.

T & E Species: A review of the software application TVIEW determined that there are no known endangered species found within the project area.

Cultural Resources: Per conversation with Don Atkinson of BPA, The Lummi Nation has a permit to use the BPA right-of-way (from tower 5/3 + 870 to 5/4 +40) where artifacts were deposited after being removed from a project in Blaine, Washington and placed on BPA's ROW. Larry Freeman of the Lummi Nation will be contacted in order to identify any vegetation management restrictions within this area.

Steep Slope: See Section 3.7 of the attached checklist for areas having a steep slope requiring vegetation management.

Steep Slope Mitigation:

- Manual, herbicide, and biological treatments are available for treatment. Ground disturbing mechanical equipment is not allowed to clear on slopes greater than 20% except for treatment on access roads and around structures.

4. Determine vegetation control and debris disposal methods.

Vegetation will be removed using manual, mechanical, and chemical methods.

Manual control methods include cutting with shears, clippers, or chainsaws; and girdling by cutting a ring around the tree. Chainsaws will be used to cut conifers below the lowest live limb to eliminate continued growth of the lateral branches.

Mechanical methods include the use of brush mowers and feller bunchers. Ground-disturbing mechanical equipment will not be used on slopes over 20% or in riparian areas. Work will be done when the ground is sufficiently dry enough to sustain heavy equipment and minimize excessive rutting.

The herbicide treatments prescribed for the project area are spot stump treatment, localized basal treatment, and localized foliar treatment. Where possible the deciduous stumps will be treated to prevent resprouting. If the stumps cannot be treated during the project, a localized foliar treatment will be performed the next growing season. A localized basal treatment will be used in areas where the trees are less than 6 feet tall and the density is light.

Debris will either be disposed on-site or trucked off-site using either chip, lop and scatter, or mulch techniques as described in Section 5 of the attached checklist.

5. Determine revegetation methods, if necessary.

No ground disturbance or exposed soil is expected during the duration of this project. However, if soil disturbance occurs during the project, the area will be reseeded.

6. Determine monitoring needs.

The project area will be inspected during treatment. In addition, it will be reviewed during routine patrols by the line crew and within one year by the NRS.

7. Prepare appropriate environmental documentation.

Findings: This Supplement Analysis finds that 1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; 2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. This Supplement Analysis also finds the proposed actions will have no effect on threatened or endangered species. Therefore, no further NEPA or ESA documentation is required.

/s/ Aaron Shurtliff
Aaron Shurtliff
Physical Scientist

CONCUR:*/s/ Thomas C. McKinney* DATE:04/22/2003
Thomas C. McKinney
NEPA Compliance Officer

Attachment

cc:
L. Croff – KEC-4
T. McKinney – KEC-4
C. Leiter – KEP-4
J. Meyer – KEP-4
M. Martin – KEPR/Covington
P. Key – LC-7
D. Hollen – TF/DOB-1
A. De La Cruz – TFN/Snohomish
L. Alvarez - TFN/Snohomish
R. Sweet – TFNF/Snohomish
Environmental File – KEC-4
Official File – KEP (EQ-14)

Ashurtliff:as:4722:4/9/2003 (KEP-KEPR-4-W:\EP\2002 & 2003 FILES\EQ\EQ-14\FEIS-0285-SA-144-Custer-Intalco #2.doc)

Vegetation Management Checklist

Custer - Intalco No. 2
Sub to 7/5 mile

Prepared By: **Don Atkinson**
Natural Resource Specialist

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

See Handbook — **List of Right-of-way Components** for checkboxes and the requirements for the components **Rights-of-way**, **Access Roads**, **Switch Platforms**, **Danger Trees**, and **Microwave Beam paths**.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Custer - Intalco No. 2	Sub to 7/5 230kv	125’	Approx. 7 miles

Right Of Way:
Right-Of-Way – Clearing trees and brush within the right-of-way and treating with herbicides. The right-of-way will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Herbicide treatments will include spot treatment (stump treatment, basal treatment, and/or spot foliar), or localized treatments (including broadcast application and cut stubble treatments). The total project area consists of approximately 108.2 acres. It is estimated that approximately 103.7 acres of the project area will be cut.
Access Road Clearing – Approximately 7 miles of clearing using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. Note, when the access roads traverse a riparian area they will not be treated with herbicides.
Transmission Structures – Approximately 35 tower sites will be treated using selective and non-selective methods that include hand cutting, mowing and herbicide treatments. The herbicide treatments include spot (cut stump or basal treatment), localized and broadcast applications including cut stubble treatments. Structures located within riparian areas will not be treated with herbicides.
Clearing Requirements:

- Control all tree and brush species within about 30 ft. of transmission structures. Cut stumps are not to be taller than 2 – 4 inches.
- Pull all debris and slash out of the 30-ft. area around transmission structures.
- Access Road Clearing Requirements: - (there are approximately 7 miles of machine and hand cutting)
- Control all vegetation except grasses and forbs, to enable safe driving.
- The access road is to be 14 to 25 ft. wide with a 15-ft.- high clearance. Limbs should not hang down into the access road.
- Cut stumps are not to be taller than 2 – 4 inches in the roadbed.
- Cut stumps horizontal to the ground to prevent personal injuries and tire puncture.
- Trim limbs back as flush to the trunk as possible when trees are rooted outside of the access road.
- Pull all debris back from the access road as prescribed.
- Cut stumps horizontal to the ground to prevent personal injuries and tire puncture.
- Trim limbs back as flush to the trunk as possible when trees are rooted outside of the access road.
- Pull all debris back from the access road as prescribed.

Reclaim ("C") Trees – C trees will be cut as part of this project.

Danger Trees (off right-of-way): – All off-right-of-way trees (danger trees) that are marked as potentially unstable, or trees that are identified during the project, that would fall within the minimum approach distance (MAD) or into the safety zone of the power line, may be cut as part of this project. Danger trees may be treated with herbicides to prevent resprouting.

1.2 Describe the vegetation needing management.

See handbook — **List of Vegetation Types**, **Density**, **Noxious Weeds** for checkboxes and requirements.

Vegetation Types:

Western Red Cedar

Douglas fir

Grand fir

Hemlock

Alder

Willows – mid span or where ground to conductor clearance is low

Cottonwoods

Wild Cherry

Scotchbroom – along access roads and around structures or mid span where ground to conductor clearance is low

Blackberries - along access roads and around structures or mid span where ground to conductor clearance is low

Density: The density is variable through the project and ranges from Low (50 stems or less per acre) to as High (250 + stems per acre).

1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why.

See Handbook — for requirements and checkboxes.

Vegetation that will grow tall will be selectively eliminated *before* it reaches a height or density to begin competing with low-growing species. Desirable low-growing plants will not be disturbed. Only selective vegetation control methods that have little potential to harm non-target vegetation will be used.

Cut-stump or follow-up spot herbicide treatments on species that re-sprout will be carried out to ensure that the roots are killed (follow-up treatment may take place during the next growing season). Herbicides will not be applied using high volume methods to ensure that non-target species are not treated.

1.4 Describe overall management scheme/schedule.

See Handbook - **Overall Management Scheme/Schedule**.

Description of the Proposed Action: The project consists of clearing unwanted vegetation within the right-of-way, around structures, and along access roads that may impede the operation and maintenance of the subject transmission line. All work will be in accordance with the National Electrical Safety Code and BPA standards. It is the goal of this project to remove the tall growing vegetation that is currently or will soon be a hazard to the transmission line. The overall goal is to develop low-growing plant communities within the right-of-way.

Initial entry – Using hand cutting or mechanical mowers, BPA will complete brush management activities on the right-of-way, access roads and towers sites, chemically treat stumps and stubbles with herbicides (spot and localized treatments) to ensure that the roots are killed preventing new sprouts and selectively eliminating vegetation that prevents access to the power lines. Areas may be replanted or re-seeded with low-growing vegetation or grasses if there is limited vegetation for re-establishment of the site. Cut, lop and scatter, and stump treatment (where possible to prevent re-sprouting) are the preferred methods on State and Private lands. Areas where densities are high, or that have a lot of Scotch Broom and /or blackberries will be mowed using a track mounted mowing head. Access roads and structure sites will also be mowed and chemically treated.

Subsequent entries – Follow-up/re-treatment, within the right-of-way, around structure sites, and along access roads, is planned within the next growing season. This will be done with herbicides in areas that were not treated due to adverse weather conditions, there was not a good kill, or that were not treated in the initial entry.

Future cycles – This area is being managed on a 3 to 5 year maintenance free cycle for brush and danger trees. During routine patrol, the right-of-way will be examined for tall growing trees on the right-of-way and danger trees (DT's) off the right-of-way. The overall vegetation management scheme will be to cut and treat all encumbering vegetation on the right-of-way using a combination of manual, mechanical and herbicide treatments as outlined in the initial treatment every 3 to 5 years.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

2.1 List the types of landowners and land uses along your corridor.

See Handbook — **Landowners/Managers/Uses** for requirements, and **List of Landowners/Managers/Uses** for a checkbox list.

The project area consists of Intalco Aluminum, rural residential, farms, grazing lands, and private lands.

2.2 Describe method for notifying right-of-way landowners and requesting information (i.e., doorhanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.

See Handbook — **Methods for Notification and Requesting Information** for requirements.

Letters or Personal contact by BPA and/or the Contractor along with door hangers. This will be done before and during the project. The Prescription/Cut Sheets will be modified as needed based on any input received during the project.

2.3 List the specific land owner/land use measures — determined from the handbook or through your consultations with the entities — that will be applied.

See handbook — **Requirements and Guidance for Various Landowners/Uses** for requirements and guidance, also **Residential/Commercial**, **Agricultural**, **Tribal Reservations**, **FS-managed lands**, **BLM –managed lands**, **Other federal lands**, **State/ Local Lands.**.

No specific landowner measures needed. Note – not all areas within the project area will be treated with herbicides. Riparian areas and areas where the landowners do not want herbicides used, will not be treated.

2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.

See handbook — **Landowner Agreements** for requirements.

None know within the project area.

2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure's to take due to the informal use.

See handbook — **Casual Informal Use of Right-of-way** for requirements.

The Lummi Indian Nation has a permit to use the ROW where remains of their ancestors were deposited after being removed from a project in Blaine and deposited there.

2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.

See handbook — Other Potentially Affected Publics for requirements and suggestions.

Lummi Indian Nation – Letter to be sent.

3. IDENTIFY NATURAL RESOURCES

See Handbook — **Natural Resources**

3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.

See Handbook — Water Resources for requirements for working near water resources including buffer zones.

Custer - Intalco No. 2 (See attached maps for locations)

Span		Waterbody	T&E?	Treatment Zone	Herbicide	Application Technique	Buffer
From	To						
1/1 + 400	1/1 + 1225	California Creek	No	Riparian	See below	See below	See below
1/4 + 120	1/4 + 500	Wetland	No	Riparian	See below	See below	See below
1/6 + 100	1/6 + 390	Well & Pump Ho	No	Riparian	See below	See below	See below
1/6 + 740	2/1 + 310	Creek	No	Riparian	See below	See below	See below
2/2 + 280	2/2 + 770	Creek	No	Riparian	See below	See below	See below
2/3 + 240	2/4 + 120	Creek & Ponds	No	Riparian	See below	See below	See below
3/3 + 890	3/4 + 60	Wetland	No	Riparian	See below	See below	See below
4/1 + 350	4/1 + 750	Creek	No	Riparian	See below	See below	See below
4/2 + 150	4/3 + 60	Fingalson Creek	No	Riparian	See below	See below	See below
4/3 + 400	4/4 + 500	Fingalson & Terrell Creek	No	Riparian	See below	See below	See below

4/4 + 620	4/4 + 900	Septic System	No	Riparian	See below	See below	See below
5/3 + 980	5/4 + 240	Wetland	No	Riparian	See below	See below	See below
6/2 + 80	6/2 + 490	Wetland	No	Riparian	See below	See below	See below
6/2 + 570	6/2 + 1230	Creeks	No	Riparian	See below	See below	See below
7/2 + 500	7/2 + 680	Well	No	Riparian	See below	See below	See below
7/2 + 910	7/2 + 1310	Creek	No	Riparian	See below	See below	See below

Riparian	**RIPARIAN**: County or private lands, within 61 m (200 ft.) of a stream or open water. Available: all manual, mechanical, and biological treatments, except grazing. On slopes less than 20% there will be no disturbance within 35ft. of the stream or wetland. On slopes greater than 20% there will be no disturbance within the buffer. **Herbicides**: No herbicides within the buffer zone.

3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).

See Handbook — **Herbicide Use Near Irrigation, Wells or Springs** for buffers and herbicide restriction

Custer - Intalco No. 2 (See attached maps for locations)

Span		Wells, Irrigation or Springs	Treatment Zone	Buffer
From	**To**			
1/6 + 100	1/6 + 390	Well & Pump Ho	Non Herbicide Area	100 ft. radius around well head & pump ho
4/4 + 620	4/4 + 900	Septic System	Non Herbicide Area	100 ft. radius around septic system
7/2 + 500	7/2 + 680	Well	Non Herbicide Area	100 ft. radius around well head

NON-HERB	**NON-HERBICIDE AREAS** Water sources, springs, wells and other sensitive lands within 100 feet of sensitive Riparian areas or water sources. Hand Cutting Methods only, no Herbicides allowed. WELLS: No herbicides allowed within 100 feet of well head. Use only herbicides that do not have ground or surface water advisories between 100 and 165 feet of wellhead. Approved herbicides include: glyphosate, imazapyr, tryclopyr, Escort,

3.3 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any BAs, T&E maps, or letters from US Fish and Wildlife.

See Handbook — **T&E Plant or Animal Species** for requirements and determining presence.

A review of the software application TVIEW determined that there are no known endangered species found within the project area.

3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.
See Handbook — **Protecting Other Species** for requirements.

None mapped. Machines will not be used with the high water level of the creeks or within the wetlands. Shrubs along the creeks will be maintained to provide shade and debris.

3.5 List any visually sensitive areas and the measures to be taken at these areas.
See Handbook — **Visual Sensitive Areas** for requirements.

None known within the project area.

3.6 List areas with cultural resources and the measures to be taken in those areas.
See Handbook – **Cultural Resources** for requirements.

See 2.5 – Need to contact the Lummi Nation before cutting.

3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.
See Handbook – **Steep/Unstable Slopes** for requirements. See attached maps for exact locations.

Custer - Intalco No. 2 (See attached maps for locations)

Span		Describe sensitivity	Method/mitigation measures
From	**To**		
2/1 + 270	2/1 + 390	Steep slope	See below
2/2 + 400	2/2 + 580	Steep slope	See below
4/2 + 290	4/2 + 370	Steep slope	See below
Resource	**Treatment Alternatives**		
SS	BPA Fee owned, State DNR, or private lands where a steep slope or visual resources precludes mechanical treatments except on access roads and around structures. Available: all manual and biological treatments. All herbicide treatments including cut-stubble treatment following a mechanical treatment on access roads and structure sites. Herbicides: glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and broadcast treatments. 2,4-d amine can be added to the list to control noxious weed species. See Table 111-1: Buffer width to Minimize Impacts on non-target Resources. (Transmission Vegetation Management EIS)		

3.8 List areas of spanned canyons and the type of cutting needed.
See Handbook – **Spanned Canyons** for requirements.

None known within the right-of-way.

4. DETERMINE VEGETATION CONTROL METHODS

See Handbook — **Methods**

4.1 List Methods that will be used in areas not previously addressed in steps above.

See Handbook — **Manual**, **Mechanical**, **Biological**, **Herbicides** for requirements for each of the methods.

MANUAL: Manual control methods include the following: cutting with shears, clippers, or chainsaws; and girdling by cutting a ring around the tree. When chainsaws are used cut conifers below the lowest live limb to eliminate continued growth of the lateral branches and cut all stumps flat where possible.

MECHANICAL: Mechanical methods include the use of brush mowers and feller bunchers. Ground-disturbing mechanical equipment will not be used on slopes over 20% or in riparian areas (Refer to 3.1). Work will be done when the ground is sufficiently dry enough to sustain heavy equipment and minimize excessive rutting.

HERBICIDES: The herbicide treatments prescribed for the project area are spot stump treatment, localized basal treatment, and localized foliar treatment. Where possible the deciduous stumps will be treated to prevent resprouting. If we are unable to treat the stumps during the project, we will wait until the next growing season and do a localized foliar treatment. In areas where the trees are less than 6ft. tall and the density is light we may do a localized basal treatment.

PROPOSED HERBICIDES*:* Glyphosate, triclopyr (Garlon 3A and 4), imazapyr, and dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used for spot foliar and broadcast treatments. 2,4-d amine may be added to the list to control Noxious weed species. See Tables 111-1: Buffer width to Minimize Impacts on non-target Resources, and 5-7: Herbicide Ecological Toxicities and Characteristics. (Transmission Vegetation Management EIS).

SEE CUT SHEET FOR CONTROL METHODS

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

5.1 Describe the debris disposal methods to be used and any special considerations.

See Handbook — **Debris disposal** for a checkbox list and requirements.

Mulching/Mowing – This will be done on access roads and around structure sites.

Lope and Scatter – These areas are identified in the VEGETATION CONTROL PRESCRIPTION as Cut, Lope, and Scatter.

Some areas may require that the brush be chipped. These areas are identified in the VEGETATION CONTROL PRESCRIPTION as cut and treat as needed, and will depend on the requirements of the landowners.

5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

See Handbook — **Reseeding/replanting** for requirements.

Not planned at this time. However, if soil disturbance occurs during the project the area will be reseeded.

5.3 If not using native seed/plants, describe why.

Native seed will be considered in all mixes. Introduced species may be more competitive against invading tree species and protecting against erosion.

5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

Not planned at this time. However, if reseeding is necessary it will take place in the fall just before the fall rains.

6. DETERMINE MONITORING NEEDS

See handbook — **Monitoring** for requirements.

6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.

The project area will be inspected during treatment. In addition, it will be reviewed during routine patrols by the line crew and within one year by the NRS.

6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.

Will review during line patrol by the line crew and within one year by the NRS.

7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

See handbook — **Prepare Appropriate Environmental Documentation** for requirements.

7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are "substantial".

Effects are expected to be the same or less than the description provided in the EIS.

7.2 Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.

No