

NEPA-ESA Decision Summary for Permit 08-207-103r

Based on review of Permit 08-207-103r, the following determinations were made:

- This is a renewal permit of a previously planted trial with these trees (permit 06-172-01r). The applicant has submitted a trial update, which has been attached to the permit file. No unexpected or unintended effects have been noted during the trial period.
- Field trials have been performed with transgenic aspen trees under APHIS authority and APHIS is familiar with aspen biology and methods to manage confined aspen field trials. The species hybrid used (*Populus tremula X Populus alba*) does not readily reproduce from cuttings in the field.
- The gene of interest inserted into the aspen trees (cytochrome P450 from rabbit) has been tested in previous field trials. The gene is involved in metabolism of volatile organic compounds (e.g., benzene, chloroform, trichloroethylene, toluene, etc.) and is being tested in aspen trees to determine efficacy in removing these types of contaminants from soil/water.
- Trees also contain a gene (npt II from E. coli) for antibiotic resistance which facilitated laboratory selection of transformed aspen tissues and ultimately selection of these tree lines. This gene is commonly used for this purpose and can be found in a number of genetically engineered plant varieties that have been granted non-regulated status by USDA-APHIS. There is no significant safety issue associated with its use.
- The trials are being conducted in plastic lined test beds to manage water flow and measure plant uptake of contaminants. The planting bed design prevents possible root sprouting outside the trial area.
- The listed threatened and endangered species known to be present in Pierce County, WA are plant species and as such will not be exposed to the plants in this trial. Therefore these field trials will not have adverse or other significant effects on threatened or endangered species and consultation with the Fish and Wildlife Service is not required.
- These trees typically do not flower until 4-7 years (or longer) after planting. The flowering status of these trees will be monitored and these trees will not be allowed to produce viable pollen or seeds. If the trees do mature and show signs of flowering, they will be pruned to remove flowers and/or entire trees will be removed from the trial. Trees are currently less than 1 ½ years old and ~9 ft tall.
- Because all transgenic plant material will be removed from the test site and destroyed, there will be no foreseeable cumulative impacts resulting from multi-year field trials of these transgenic lines.
- The test bed site is fenced with locked gates that prevent public access.
- The proposed field trial is smaller than 10 acres. Trials of such small size are and have been easily monitored and confined to permitted areas.
- Aspen is capable of establishment in the wild, however, when the trials are concluded, the trees will be destroyed and not allowed to persist. Plant material will be chipped on site and allowed to dry prior to disposal. Chips will be

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analyzed for trichloroethylene (TCE) and other organic compounds and disposed of appropriately.

For the above reasons and those noted on the NEPA-ESA worksheet, APHIS has determined that (1) pursuant to 7 C.F.R. 372, the field trials proposed under permit #08-207-103r will not significantly affect the physical environment and (2) there are no applicable, extraordinary, or other reasonably foreseeable circumstances under which significant environmental effects could occur despite the protective and ameliorative measures specified above. Therefore, this field test is deemed confined within the meaning of 7 C.F.R. § 372.5.

Signed: _____/s/_____
Michael T. Watson

Date: ___9-15-05_____