



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
AGR0920

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
RON PRICE 304-558-0492

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

SHIP TO

DEPARTMENT OF AGRICULTURE
 ADMINISTRATIVE SERVICES
 BUILDING 2, ROOM 106
 4720 BRENDA LANE
 CHARLESTON, WV
 25312 304-558-2221

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
03/05/2009				

BID OPENING DATE: 03/12/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
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<p>AERIAL APPLICATION OF INSECTICIDE</p> <p>OPEN END</p> <p>CONTRACT TO PROVIDE AERIAL APPLICATION OF INSECTICIDE OVER CERTAIN POPULATED AND NON-POPULATED FORESTED AREAS IN WEST VIRGINIA TO PREVENT DEFOLIATION OF HIGH-VALUE TREES BY THE GYPSY MOTH, LYMANTRIA DISPAR. THIS OPERATION WILL BE CONDUCTED AS SEPARATE PROJECTS (SEE SECTION 4 FOR DETAILS ON EACH PROJECT) CONTAINED IN ONE OR MORE CONTRACTS. THE TARGET INSECT, ACRES, AND TYPES AND CATEGORIES OF AIRCRAFT REQUIRED FOR EACH PROJECT ARE DETAILED IN SECTION 4. UNLESS OTHERWISE SPECIFIED IN SECTION 4, THE CONTRACTOR IS REQUIRED TO PROVIDE TH INSECTICIDE AND ITS COST MUST BE INCLUDED IN THE PER-ACRE BID.</p> <p>FOR MORE SPECIFIC INFORMATION ON THE TREATMENT AREA LOCATIONS, TOPOGRAPHY, ACREAGE, AIRCRAFT DESIGNATION, PROJECT LOGISTICS, AND OTHER DETAILS OF THE PROJECT TO REVIEW MAPS OF THESE AREAS, CONTACT THE FIELD PROJECT DOORDINATOR DESIGNATED IN SECTION 4.</p> <p>SPECIFICATIONS ARE ATTACHED:</p> <p>COST PER ACRE INCLUDING INSECTICIDE: \$.....</p> <p>COST PER ACRE INSECTICIDE PROVIDED BY DEPARTMENT OF AGRICULTURE: \$.....</p> <p>TO BE BASED ON 91 SPRAY BLOCKS AND APPROXIMATELY 38,502 ACRES.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS		
SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the **West Virginia Code** and the **Legislative Rules** of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the **West Virginia Code**.
8. Vendor preference will be granted upon written request in accordance with the **West Virginia Code**.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the **Legislative Rules** of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



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<p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p> <p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN</p>						

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<p>CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 04/11/2001</p> <p>PRICE ADJUSTMENTS WILL BE CONSIDERED AT TIME OF RENEWAL ONLY AND WILL BE IN ACCORDANCE WITH THE FOLLOWING:</p> <p>PRICE ADJUSTMENT PROVISION: THE STATE OF WEST VIRGINIA WILL CONSIDER BIDS THAT CONTAIN PROVISIONS FOR PRICE ADJUSTMENTS PRIOR TO THE ORIGINAL EXPIRATION OF THE CONTRACT, PROVIDED THAT SUCH PRICE ADJUSTMENT COVERS BOTH UPWARD AND DOWNWARD MOVEMENT OF THE COMMODITY PRICE, AND THAT ADJUSTMENT</p>						

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<p>IS BASED ON THE "PASS THROUGH" INCREASE OR DECREASE OF RAW MATERIALS AND/OR LABOR, WHICH MAKE UP ALL OR A SUBSTANTIAL PART OF A PRODUCT. ADJUSTMENTS ARE TO BE BASED UPON AN ACTUAL DOLLAR FIGURE, NOT A PERCENTAGE. ALL PRICE ADJUSTMENT REQUESTS MUST BE SUBSTANTIATED IN A MANNER ACCEPTABLE TO THE DIRECTOR PURCHASING, E.G. GOVERNMENTAL BENCH MARKS, GENERAL MARKET INCREASE, PUBLISHED PRICE LISTS. SUCH REQUESTS FOR AND INCREASE SHOULD BE RECEIVED IN WRITING BY THE DIRECTOR OF PURCHASING AT LEAST 30 DAYS IN ADVANCE OF THE EFFECTIVE DATE OF THE INCREASE. ANY TIME THE VENDOR REQUESTS A PRICE ADJUSTMENT, THE PURCHASING DIVISION MAY EITHER ACCEPT THE PRICE ADJUSTMENT AND AMEND THE CONTRACT ACCORDINGLY OR REJECT THE ADJUSTMENT IN ITS ENTIRETY AND CANCEL THE CONTRACT.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: RP-41</p>						

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RFQ. NO.: AGR0920
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 BID OPENING TIME: 1:30PM

PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY
 TO CONTACT YOU REGARDING YOUR BID:

 CONTACT PERSON (PLEASE PRINT CLEARLY)

***** THIS IS THE END OF RFQ AGR0920 ***** TOTAL

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SECTION 1: INTRODUCTION

Offers are solicited by the WEST VIRGINIA DEPARTMENT OF AGRICULTURE for the aerial application of insecticide over certain populated and non-populated forested areas in WEST VIRGINIA to prevent defoliation of high-value trees by the gypsy moth, *Lymantria dispar*. This operation will be conducted as separate projects (see Section 4 for details on each project) contained in one or more contracts. The target insect, acres, and types and categories of aircraft required for each project are detailed in Section 4. **Unless otherwise specified in Section 4, the Contractor is required to provide the insecticide and its cost must be included in the per-acre bid.**

For more specific information on the treatment area locations, topography, acreage, aircraft designation, project logistics, and other details of the project and to review maps of these areas, contact the field project coordinators designated in Section 4.

Further technical information concerning these Contract Specifications and bidding procedures may be obtained by contacting:

Ron Price , Senior Buyer
West Virginia State Purchasing Division
2019 Washington Street, East
Charleston, WV 25305
Phone: 304-558-0492
Fax: 304-558-4115
Email: Ron.N.Price@wv.gov

SECTION 2: GENERAL STIPULATIONS

- 2.1 BIDDER'S QUALIFICATIONS** - Contractor must be a Fixed-Base Operator or firm that is currently certified as a commercial aircraft operator with office, maintenance facilities, aircraft, employees, and qualified pilots and mechanics and have tools, equipment, and spare parts for the make and type of aircraft indicated in these specifications. The Contractor must be Federal Aviation Administration (FAA) certificated and must qualify under any Federal Aviation Regulations (FAR) including Part 137 as required to conduct the operations specified herein. Contractor must supply copies of all applicable certificates as contained in this document. It is preferred that this information be submitted with the bid.
- 2.2 SCOPE OF CONTRACT** - It is the purpose and intent of this document to provide specifications for aircraft, insecticide, equipment, application, and other operational requirements necessary for a properly prepared and executed Agreement and for securing properly certificated and approved aircraft, dispersal systems, service facilities, qualified ground personnel, and FAA certificated and qualified pilots capable of making a proper aerial application of insecticide and performing necessary related functions.
- 2.3 AREA TO BE TREATED** – Ninety one (91) spray blocks are proposed for treatment totaling **38,502** acres. Ownership consists of state owned, government-owned and privately owned lands in WEST VIRGINIA. More specific information is found in Section 4, and maps are in the appendices. The treatment areas consist of forested residential areas, forested recreational areas, privately owned forest stewardship lands, and/or publicly owned forestlands. In general, the areas are high-use areas, many of which contain permanent and/or seasonal residences, where proper and careful insecticide application is essential to prevent defoliation of high-value trees. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** reserves the right to treat land in any West Virginia county which qualifies for treatment at the same rate as stated in Appendix B. The Contractor will not be paid for any acreage treated outside the designated block boundaries.
- 2.4 ADDRESSES AND PHONE NUMBERS** – The names and addresses of the assigned field project coordinators for each project are given in Section 4.
- 2.5 APPLICATION PERIOD AND STARTING DATE** – The application period begins on the date when the Contractor is required to report on site and continues until the final acceptable application is made. It is our objective to get all applications applied consistent with program requirements and restraints in as short a period of time as possible. Weather conditions that influence insect hatch and tree foliage development determine the specific starting date of the application period in each project. Estimated starting dates, based upon previous experience, are given in Section 4. Each project is to be completed within **2 to 4** days per application depending upon weather and leaf and insect development. In the case of double applications there will be **3 to 7** days between applications. It is possible that the starting date could be one to 10+ days earlier or later than the estimated starting date given in Section 4. **Five** days' advance notice will be given to the Contractor of the date on which to report. In the event that final execution of

the contract agreement is delayed for any reason, the requirement for 5 days advance notice will be waived and the Contractor will begin work at once.

The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** reserves the right to start all the aircraft required in a project on the same date or to separate the starting dates for particular aircraft by several days.

2.6 AIRCRAFT RECALL - The Contractor is required to keep one aircraft, an approved pilot, ground-support equipment, and crew on recall status for a period of ten workdays (Monday through Friday, excluding federal holidays) after the final spray block in the project area is completed. This aircraft will be recalled on 48 hours' notice to treat any approved areas that were deleted by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** from the project but then experienced an unexpected outbreak, or to treat any areas that were missed, or to retreat areas because of faulty application, wash-off, or inadequate insecticide effectiveness. The Contractor will not be compensated for any recall spraying or respraying that result from misses or faulty application in excess of 2 percent of the total contracted acreage.

2.7 PAYMENT - Payment will be on a reimbursement basis for actual services performed, upon receipt of invoice(s) from the Contractor.

2.8 CANCELLATION – In the event that the Contract must be cancelled for any reason that is beyond the control of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** or the Contractor after the execution of the Contract and after the Contractor has made a documented significant financial investment in preparing for the operational phase of the project, the Contractor will be compensated as stated in Section 2.10. Such reasons may include, but are not restricted to, acts of God or of the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case, the failure to perform must be beyond the control and without the fault or negligence of the Contractor. Reimbursement must be made at the vendor's cost. Any reimbursement request must be accompanied by manufacturer's invoices for the material.

2.9 AVAILABILITY OF FEDERAL FUNDS FOR TREATMENT

FEDERAL FUNDING is not presently available for performance under this contract. The Government's obligation for performance of this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract, until funds are made available to the Contracting

Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

SECTION 3. AWARDING CONTRACT

3.1 NOTIFICATION OF LOWEST RESPONSIBLE BIDDER – The lowest responsible bidder to whom the project will be awarded will be identified and notified by the **WEST VIRGINIA PURCHASING DIVISION. (The Purchase Order is the notification.)**

3.2 CONDITIONS TO BE MET - In order for the contract to be properly executed and awarded, certain conditions must be met by the Contractor. The following items and information must be completely and accurately supplied to the designated person by the date indicated. Failure to meet this requirement may result in the disqualification of the vendor's bid.

- Evidence of insurance during the life of the contract in amounts specified (see Section 12). The insurance company must be authorized to conduct business in **WEST VIRGINIA.**

Evidence that successful contractor is registered with the **WEST VIRGINIA PURCHASING DIVISION.**

Bid Bond: A bid bond in the amount of \$100,000.00, payable to the State of West Virginia, shall be submitted with each bid as a bid bond. Bonds may be provided in the form of a certified check, irrevocable letter of credit, or bond furnished by a solvent surety company authorized to do business in the State of West Virginia. A letter of credit submitted in lieu of a bond will only be allowed for projects under \$100,000.00. Personal or business checks are not acceptable in lieu of the bid bond.

- **To Gypsy Moth Program Manager (see Section 4 for name and address) by April 1, 2009:**
 - A completed Application for Spray Aircraft Pilot Approval form for each spray pilot and each alternate spray pilot to be used on the project. If a Contractor has been awarded two or more of the projects, separate forms must be submitted for each project. The same pilots may not be submitted for two or more projects. **This form will be supplied by the WEST VIRGINIA DEPARTMENT OF AGRICULTURE** (see Appendix C). Along with the completed form, include photocopies of the pilot's current airman's certificate (i.e., pilot license), current medical certificate, proof of FAR Part 137 qualification, and pesticide applicator certificate.
 - A completed Aircraft Description Form for each spray aircraft, alternate spray aircraft, and any observation aircraft to be used on the project. If a Contractor

has been awarded two or more of the projects, separate forms must be submitted for each project. The same aircraft may not be submitted for two or more projects. **This form will be supplied by the WEST VIRGINIA DEPARTMENT OF AGRICULTURE** (see Appendix C). Along with the completed form, include photocopies of the logbook entries for the last annual on engine and airframe, airworthiness directives, and aircraft spec sheets.

- **To Program Manager (see Section 1 for name and address) by April 1, 2009:**
 - A report on the Contractor's designated personnel and equipment to be used on the project. If a Contractor has been awarded two or more of the projects, a separate report must be submitted for each project. The same pilots and aircraft may not be submitted for two or more projects. The report must include all information as follows:
 - Project Number
 - Contractor:
 - Name of Contractor
 - Name of President or Owner (specify)
 - Address
 - Telephone Number
 - On-Site Project Supervisor:
 - Name
 - Address
 - Telephone
 - Spray Pilots:
 - Names
 - Alternate Spray Pilots:
 - Names
 - Insecticide Formulation:
 - Trade Name
 - Spray Aircraft:
 - Owner
 - Make/Model
 - FAA Registration Number
 - Spray System Make
 - Tank Capacity (Gallons)
 - Operating Load Capacity (Gallons)
 - Calibration Specifics
 - Application Air Speed
 - Nozzle Type/Size

Number of Nozzles
 Hours on Engine(s)
 Hours Remaining on Engine(s)
 Inspection Location
 Description of Ground-Support Equipment
 Make/Model of GPS Unit

- Alternate Spray Aircraft:
 - Owner
 - Make/Model
 - FAA Registration Number
 - Spray System Make
 - Tank Capacity (Gallons)
 - Operating Load Capacity (Gallons)
 - Calibration Specifics
 - Application Air Speed
 - Nozzle Type/Size
 - Number of Nozzles
 - Hours on Engine(s)
 - Hours Remaining on Engine(s)
 - Inspection Location
 - Description of Ground-Support Equipment
 - Make/Model of GPS Unit

3.3 CANCELLATION OF CONTRACT - If the conditions described in Section 3 are not fully and accurately met in a timely manner or if other contract specifications and deadlines specified elsewhere in these Contract Specifications are not fully and accurately met, the contract award may be cancelled and the contract awarded to the second lowest responsible bidder.

SECTION 4. INDIVIDUAL PROJECT SPECIFICATIONS

4.1 PROJECT NUMBER 1 (STATEWIDE)

(A) Counties Involved: Berkeley, Greenbrier, Hampshire, Hardy, Jefferson, Mineral Monroe, Morgan, Pocahontas and Preston

(B) Type of Areas to Be Treated: Private, State, and Federal lands

(C) Total Acres: 38,502 acres

(D) Number of Spray Blocks: 91

(E) Estimated Starting Date: May 1, 2009

(F) Estimated Completion Time: June 7, 2009

(G) Production Rate and Required Aircraft:

Four (4) Category B, Four (4) Category C aircraft, or a combination of two (2) Category B and two (2) Category C aircraft, or equivalent, such as a Turbine Airtractor, Turbine Thrush, Dromader M-18, Turbine Twin-Beech, or comparable capable of routine operation with a minimum of 400 gallon working capacity per aircraft or 400 acres per hour production capacity to be used for this project. Aircraft in this category must be certified to operate over congested areas. All aircraft must have DGPS guidance systems as outlined in Section 10.

(H) Materials:

- (1) **Btk-76B material– 20,867 total acres**
 (a) 25.3 CLU - undiluted spray volume of 1/3 of a gallon per acre.
 Contractor is responsible for purchasing the Btk 76B material.
- (2) **Dimilin 4L – 16,693 total acres**
 (a) 1oz. Dimilin (DFB) (0.5 AI) with 1 Oz. Adjuvant in ½ gallon of water per acre. WVDA will provide the Dimilin (DFB). Contractor is responsible for purchasing adjuvant Inplace.
- (3) **Gypcheck 942 total acres**
 (a) (Gypcheck will be provided by USDA-FS) ½ gallon per acre. Dose is 2×10^{11} OB/acre/appl for each of 2 applications. Contractor is responsible for purchasing carrier 038A. Contact OMNOVA and MICHELLE FRANK, pesticide Coordinator, Newtown Square, PA, FHP (610) 557-4113 mfrank@fs.fed.us.

(I) Adjuvants: Inplace or equivalent

(J) Program Manager:

Name: Quentin "Butch" Sayers
 Address: P.O. Box 9, New Creek, WV 26743
 Office Phone Number: (304) 788-1066
 Cell Phone Number: (304) 813-9625
 Fax Number: (304) 788-9011
 Email Address: qsayers@ag.state.wv.us

(K) Loading Zones: Work can probably be done from two airport. See Section 5.7 and Section 11 for details on deadlines and equipment/personnel requirements

SECTION 5. OBLIGATIONS OF THE CONTRACTOR

- 5.1 GENERAL** - The Contractor is obligated to furnish spray aircraft, observation aircraft, support equipment, and personnel necessary to produce an insecticide application in accordance with the Invitation for Bid, Contract Specifications, and the Contract. Other sections in these Contract Specifications give more specific information on the aircraft, equipment, and personnel required. **The Contractor maintains responsibility for an entire project even if another organization is providing part of the equipment and personnel.**
- 5.2 PESTICIDE APPLICATION BUSINESS LICENSE** – Within ten (10) days after notification of award of contract, the Contractor must provide the program supervisor (see Section 1 for name and address) with proof of a valid Pesticide Application Business License issued by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** in the category appropriate for aerial spraying of forests and residential areas.
- 5.3 PROOF OF INSURANCE** - The Contractor must provide proof of insurance as specified in Section 3 and Section 12 for all aircraft and other equipment owned, leased, rented, subcontracted, or otherwise utilized by the Contractor and for all personnel hired, subcontracted, or otherwise employed by the Contractor.
- 5.4 REGISTERING TO DO BUSINESS IN WEST VIRGINIA** - In accordance with West Virginia Code (§5a-3-12) which requires all vendors to have on file with the State Purchasing Division a completed Vendor Registration and Disclosure Statement and paid a registration fee of \$125.00. It is not required that vendors are registered in order to bid on this project; however, the successful vendor must become registered in order to receive an award.
- 5.5 FAA WAIVER FOR CONGESTED AREAS** - The Contractor is responsible for reviewing all spray block maps and for identifying congested areas that would require an FAA waiver in order to conduct low-level flights. The Contractor is responsible for filing the required plan and documentation with the appropriate FAA Flight Safety District Office for congested areas so identified, for obtaining the necessary waiver(s), and for providing proof of such to the Program Manager (see Section 4) **2** weeks prior to the start of the project.

COST ADJUSTMENTS – (I will delete this from this final document as it will be contained in the Purchasing language generated in the RFQ documents in our Purchasing system.)

EXHIBIT 6

PRICE ADJUSTMENT PROVISION:
 THE STATE OF WEST VIRGINIA WILL CONSIDER BIDS THAT
 CONTAIN PROVISIONS FOR PRICE ADJUSTMENTS PRIOR TO THE
 ORIGINAL EXPIRATION OF THE CONTRACT, PROVIDED THAT
 SUCH PRICE ADJUSTMENT COVERS BOTH UPWARD AND DOWNWARD

MOVEMENT OF THE COMMODITY PRICE, AND THAT ADJUSTMENT IS BASED ON THE "PASS THROUGH" INCREASE OR DECREASE OF RAW MATERIALS AND/OR LABOR, WHICH MAKE UP ALL OR A SUBSTANTIAL PART OF A PRODUCT. ADJUSTMENTS ARE TO BE BASED UPON AN ACTUAL DOLLAR FIGURE, NOT A PERCENTAGE. ALL PRICE ADJUSTMENT REQUESTS MUST BE SUBSTANTIATED IN A MANNER ACCEPTABLE TO THE DIRECTOR PURCHASING, E.G. GOVERNMENTAL BENCH MARKS, GENERAL MARKET INCREASE, PUBLISHED PRICE LISTS. SUCH REQUESTS FOR AND INCREASE SHOULD BE RECEIVED IN WRITING BY THE DIRECTOR OF PURCHASING AT LEAST 30 DAYS IN ADVANCE OF THE EFFECTIVE DATE OF THE INCREASE. ANY TIME THE VENDOR REQUESTS A PRICE ADJUSTMENT, THE PURCHASING DIVISION MAY EITHER ACCEPT THE PRICE ADJUSTMENT AND AMEND THE CONTRACT ACCORDINGLY OR REJECT THE ADJUSTMENT IN ITS ENTIRETY AND CANCEL THE CONTRACT.

PREFERRED TERMS:

IT IS PREFERRED THAT THE PRICES ON THIS CONTRACT ARE FIRM FOR LIFE OF THE CONTRACT, AS INDICATED IN THE LIFE OF CONTRACT CLAUSE CONTAINED HEREIN, NOT TO EXCEED ONE (1) YEAR.

5.6 SPRAY MATERIALS - The Contractor is responsible for the purchase of the insecticide Btk, Gypcheck carrier, and any adjuvant (including Inplace) used in this project unless otherwise specified in Section 4. The West Virginia Department of Agriculture will be responsible for the purchasing of DFB used on the Project. Specific details on insecticides and adjuvants are given in Section 7. The Contractor will not be compensated for any Contractor-supplied insecticide or adjuvant which is lost, spilled, dumped, or otherwise made unavailable.

5.7 LOADING ZONES OR AIRFIELDS - The selection of suitable airfields for use as loading zones is the sole responsibility of the Contractor. Use of the sites must not present problems from a legal aspect, and permission to use the site must be obtained by the Contractor. The Contractor must locate and secure permission for all airfields prior to the start of the project and be prepared to provide evidence of such permission to the WEST VIRGINIA DEPARTMENT OF AGRICULTURE. WEST VIRGINIA DEPARTMENT OF AGRICULTURE personnel will suggest potential loading zones. The Contractor must notify the Program Manager by 4 weeks prior to the start of the project of the loading zones selected for use. This notification must include the LZ location on a 7 1/2-minute USGS topographic map (photocopy is permitted) along with the name, address, and phone number of the landowner or airfield manager and the Contractor's signed attestation that permission has been granted by the landowner or airfield manager and that the area will be suitable and accessible for use at the time spraying operations are conducted. Enough suitable loading zones must be secured prior to 6 weeks before the start of the project so that locating additional or alternative sites is not necessary during the spray application period. The contractor must follow up

on its contact with the landowner 2 weeks prior to the anticipated start of operations to assure that the property is still available for use.

5.8 MAINTENANCE - The Contractor must maintain a readily available on-site inventory of commonly needed spare parts and spare equipment including, but not limited to, pumps, pump seals, and rotary atomizers to provide current maintenance on the spray system, the aircraft and its electronic guidance and tracking system, the pumping system, the support trucks, and the storage tanks and to provide for immediate replacement of critically needed parts and equipment. Scheduled maintenance must be conducted only at times that will not interfere with the spray operation. Non-scheduled maintenance may be conducted but not to interfere with spray operations for longer than a period of one hour. Only emergency repairs are permitted during scheduled spray hours. Care must be taken to prevent leakage of spray material at all times.

5.9 SECURITY – The Contractor must abide by any current regulations issued by the FAA with regard to aircraft and insecticide safeguarding and security, as well as any rules and/or recommendations that are issued by the National Association of Aerial Applicators, the USDA Forest Service, or any other responsible Department of Agriculture. At a minimum, the Contractor must provide the following:

- Chain-of-custody documentation from the point of manufacture to delivery to the Contractor for the insecticide utilized.
- All spray aircraft must be disabled when not in use so that they cannot be started by anyone other than authorized personnel.
- All insecticide holding containers, hoppers, mix tanks, pumps, hoses, and similar equipment must be flushed prior to the start of operations and must have all possible points of entry sealed and secured when not in use.
- All spray aircraft and any associated insecticide and insecticide-handling equipment must be attended or guarded at all times.
- Access to the insecticide loading and storage areas must be restricted to authorized personnel of the Contractor and **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.
- When guard service for the aircraft, insecticide, and/or support equipment is required, the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will provide the necessary personnel.

5.10 FIELD EXPENSES AND TRANSPORTATION - Costs incurred in the operation and maintenance of all contractor equipment are the responsibility of the Contractor. Expenses incurred by all Contractor personnel including arrangements for food, lodging, and transportation are the responsibility of the Contractor. The Contractor is responsible for providing a means of ground transportation for Contractor personnel.

5.11 SPILL CLEANUP EXPENSES - The Contractor is responsible for all cleanup activity and costs resulting from any contamination caused by the accidental or intentional spilling, leakage, or dumping of insecticide, fuel, oil, or any other contaminant from Contractor-supplied equipment.

5.12 SAFETY PLAN - The Contractor is required to conduct all operations in a safe manner and to abide by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** safety plan.

The Contractor must provide essential safety equipment including, but not limited to, properly sized and coded fire extinguishers and spill-containment materials and supplies. All Contractors and the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** personnel must be briefed by the Contractor in their use.

The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** safety plan will contain a written narrative explaining how the Contractor will deal with a major (100+ gallons) fuel or insecticide spill at the loading site **and** a major dump of insecticide in a residential spray block.

5.13 ATTENDING PREWORK BRIEFING - The Contractor and all subcontractors are required to attend a pre-work briefing as described in Section 6.2.

SECTION 6. OBLIGATIONS OF THE WEST VIRGINIA DEPARTMENT OF AGRICULTURE

6.1 WEST VIRGINIA DEPARTMENT OF AGRICULTURE PERSONNEL - The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will furnish personnel to supervise and direct the spray operation in the following capacities:

(A) PROGRAM MANAGER – The gypsy moth program manager for the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** is responsible for the overall operation of the suppression program and represents the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** in settling minor contractual matters. This individual will be selecting and training personnel for the operations, obtaining needed supplies, and acquiring and assigning equipment.

(B) AIRPORT SUPERVISOR – The airport supervisor will monitor all ground activities at the airport. This individual is also responsible for maintaining accurate records of spray materials mixed and will assure proper mixing of insecticides. Additional duties include recording spray materials used, maintain records on which aircraft is treating in a block, and log takeoff and return times.

(B) SAFETY OFFICER - The Safety Officer will assist the Airport Supervisor and also make sure that the contractor and the West Virginia personnel are following all pertinent safety guidelines. Reviewing the contractor's insurance to ensure they comply with West Virginia regulations. Investigate any misuse or misapplication of an insecticide, aircraft incidents or accidents, or any insecticide spill.

(C) INFORMATION OFFICER - The Information Officer will handle all incoming telephone calls. The Information Officer will be the liaison with law enforcement organizations, the media, and other agencies, regarding the status of the treatment operations. Maintain records on the number of acres treated by insecticide, county, and by project.

(D) MIXING AND LOADING OFFICER - These persons are **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** specialists who serve as the field liaison with the Contractor and are responsible for monitoring the mixing and loading of the insecticides. Maintain records for the amount of chemical mixed, aircraft loaded (kind and

identification number), time of aircraft take-off, time of aircraft return, and the block number treated. The mixing and loading records will be submitted at the end of each treatment day to the Project Manager. Mixing and loading will be done at one location for each operations site.

(E) GROUND SUPPORT PERSONNEL - These personnel are responsible for placing marker balloons if needed, monitoring larval and foliage development, and/or collecting weather data in the spray blocks. A crew consists of one or two persons equipped with a radio. The number of crews assigned to an aircraft is dependent upon the size of the aircraft and the scope of the project.

(F) DGPS GUIDANCE SYSTEM OFFICER - These persons are **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** specialists who serve as the field liaison with the Contractor and are responsible for downloading and organizing spray logs from the treatment aircraft, providing adjustments to flight logs, and reviewing flight logs to ensure proper coverage of the block.

(G) AERIAL OBSERVERS - These persons are **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** specialists who serve as the field liaison with the Contractor and are responsible for flying in the aerial observation planes and record the progress of treatment aircraft. Assist with identification and notification of aerial hazards such as: towers, power lines, other aircraft, and weather. Maintaining radio contact with spray aircraft, ground support and airport operations. Determining if wind is causing drift or air temperature is preventing the spray from reaching the target area. Inform the Operations Supervisor and the spray pilots on treatment conditions.

6.2 PRE-WORK BRIEFING - The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will conduct a pre-work briefing for all Contractors and any subcontractors at least **ONE MONTH** prior to the start of the project. All Contractors will be required to present their report on personnel and equipment as detailed in Section 3. The briefing will include the Contractors' and subcontractors' representatives, the Program Manager, and any other invited persons to discuss, among other things, contract specifications, project deadlines, and program safety. Participation at this meeting is required for all Contractors and subcontractors working on the project.

6.3 PRE-SPRAY MEETINGS – At a time, date and location agreeable to all parties, no later than one day prior to the scheduled start of the aerial application, representatives of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** and Contractor(s) shall meet and discuss the aerial application program. Topics for discussion shall include, but not limited to, logistics for aerial application and observation aircraft, assigning treatment blocks to application aircraft, assigning observation aircraft to application aircraft, the handling, mixing and application of the insecticides; aircraft capabilities, final selection of loading sites, safety precautions, etc. The Contractor(s) shall require all pilots that will be used on this project to attend this conference.

- 6.4 EVALUATION AND PLANNING:** Pilots are required to attend evaluation and planning meetings following each treatment session to review and evaluate the previous treatments. Planning of the next treatment session will also be discussed.
- 6.5 MAPS** - The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will supply for use by the spray pilot copies of spray blocks on 7½ minute USGS Quadrangles, showing treatment block boundaries, exclusion areas, and known hazards. Even though known aerial hazards are provided on maps by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, all application pilots are **RESPONSIBLE AND REQUIRED** for the reconnaissance of each area before treatment (Section 8.6).
- 6.6 GPS FILES** - Treatment site information will be provided to the contractor as ArcView/ArcInfo files for uploading treatment coordinates using a NAD 83 projection standard.
- 6.7 DAILY AIRCRAFT RECORD** - The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will keep, as the basis for Contractor payment, an accurate record of the insecticide solution metered into the aircraft and the acreage treated. A copy of the Daily Aircraft Record, signed by the Contractor or representative, will be provided to the Contractor. The Contractor will not be paid for any insecticide that is applied in unauthorized areas or is jettisoned accidentally or in emergencies. The signature indicates agreement with the data on the form. Payment is based upon agreed acreage treated, not gallons sprayed.
- 6.8 WAIVERS FOR RESTRICTED AND PROHIBITED (P-40) AREAS** – The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will obtain the necessary waivers from the FAA for flights into restricted and or prohibited airspace. A copy of each approved waiver will be provided to the contractor prior to the first flight into the restricted or prohibited area.

SECTION 7. INSECTICIDES AND ADJUVANTS

- 7.1 PURCHASING, STORAGE, AND TRANSPORTATION** - The Contractor must purchase the Btk and Gypcheck carrier used on this project, pay all applicable sales and use taxes, and arrange for delivery of the product to a suitable site where it will be secure and protected from damage. The Contractor must assure that adequate supplies of insecticide are strategically located in the project area at least 24 hours prior to the start of spraying in order to assure an efficient operation. The Contractor must also assure that its personnel and **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** personnel are aware of the locations of these supplies. The Contractor is also responsible for handling and transporting the insecticide from the storage site to the aircraft loading zone.
- 7.2 BUFFER ACREAGE** - The Contract will contain figures for the maximum number of acres to be treated—no buffer acreage will be included. Because of the contingent nature of utilizing the insecticide necessary for treating this additional acreage, the Contractor does not have to purchase and have on site the insecticide necessary to treat it. However, the Contractor must make arrangements so that the insecticide required to treat additional acreage can be made available on site within 48 hours.
- 7.3 MSDS** - The Contractor must keep a copy of the Material Safety Data Sheet available on site throughout the course of the project for any insecticide or other materials requiring an MSDS that are supplied by the Contractor for the project.
- 7.4 INSECTICIDES** - All spraying will be conducted with *Bacillus thuringiensis* subspecies *kurstaki* (Btk). Acceptable formulations for Btk are identified below. Section 4 provides details on the acres to be treated and the dilution rates to be used.
- 7.5 ACCEPTABLE FORMULATIONS** - All Btk will be applied undiluted as specified and at the rates given in Section 4. All Diflubenzuron will be applied as specified at the rates given in Section 4. Gypcheck recommended dose is 2×10^{11} OB/acre. The following formulations are acceptable:

PRODUCT	CLU/FTU PER GALLON OF PRODUCT	APPLICATION RATE (CLU/FTU PER ACRE)	PRODUCT NEEDED/ACRE (FLUID OUNCE)	ACRES TREATED PER GALLON OF PRODUCT
Foray 76B	76	25.3	42.6	3.0
Thuricide 76LV	76	25.3	42.6	3.0
Dimilin 4L	NA	NA	1.0	2.0
Gypcheck	NA	2×10^{11} OB/acre	64	2.0

(A) NOTES ON Btk PRODUCTS - To avoid confusion and to simplify logistics, all Btk used for initial treatments in any one project must be from the same manufacturer. Subsequent retreatments or touchups can be made with any approved formulation if the Contractor does not have adequate supplies of the original formulation readily available. All Btk products used in the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S** program must be new material manufactured within six months of date of application.

The Contractor may choose 55-gallon drums, minibulk, and/or bulk tanker deliveries for the Btk insecticide. Minibulk and bulk containers must be accurately labeled with regard to the volume of insecticide contained therein.

(B) Btk PURCHASING - For information on purchasing Btk products, contact the following:

(1) Foray and Thuricide Products

Stephen Nicholson
Forestry Sales Manager
Valent BioSciences
2704 Orser Road
Elginburg, Ontario
Canada K0H 1M0
613-376-1070
613-376-1069 (Fax)
stephen.nicholson@valent.com (E-Mail)

7.6 STICKER - No sticker will be used with any insecticide.

7.7 ADJUVANT – The use of the Adjuvant Inplace (or equivalent) will be supplied by the Contractor and applied as specified in Section 4.

7.8 OPERATIONAL PROBLEMS - The Contractor must determine what, if any, operational problems exist with any product. These problems may include handling, storage, transportation, and spraying difficulties. To the best of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S** knowledge at this time, no adverse characteristics exist with any of the listed products. It is the Contractor's responsibility to insure a trouble-free operation with the material purchased. If a delivered product presents operational problems, it must be immediately replaced.

7.9 CONTAINER DISPOSAL - The Contractor is responsible for the proper disposal of all insecticide and adjuvant containers as specified on the product label.

7.10 APPLICATIONS/RATES/SPRAY VOLUME - Specifics on the number of applications and application rates are given in Section 4. Final spray volumes per acre per application rate for the various Btk formulations are shown in the table in Section 7.5.

7.11 SAFETY - The Contractor must follow all safety procedures that apply to general pesticide handling and to the specific material being used.

SECTION 8. APPLICATION SPECIFICATIONS, CONDITIONS, AND RESTRICTIONS

8.1 SAFETY – WEST VIRGINIA DEPARTMENT OF AGRICULTURE and Contractor personnel are required to conduct themselves in a safe manner at all times. The WEST VIRGINIA DEPARTMENT OF AGRICULTURE will prepare a detailed safety plan that will be reviewed with all involved WEST VIRGINIA DEPARTMENT OF AGRICULTURE and Contractor personnel prior to the start of the spraying operations.

Caution must be exercised during spraying because of the frequent operation directly over residences. Some of the terrain is mountainous and irregular, and elevations up to 4300 feet above mean sea level may be encountered.

8.2 LOGISTICS - Once on site and under contract to the WEST VIRGINIA DEPARTMENT OF AGRICULTURE, each aircraft and its assigned pilot, ground-support equipment, and crew are under the logistical direction of the Program Supervisor. Although an effort will be made to distribute the workload equitably among all the aircraft assigned, such a distribution is not guaranteed.

8.3 WEATHER RESTRICTIONS - Using the following guidelines, the WEST VIRGINIA DEPARTMENT OF AGRICULTURE will determine when weather conditions are acceptable for spraying operations to be conducted. Information supplied by the WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S field personnel and the Contractor's pilot is used in making this decision.

(A) WIND VELOCITY - Wind velocity must be 10 mph or less when measured in or near the spray block with a hand-held wind gauge. If excessive drifting of the spray cloud occurs because of higher wind velocity above the forest canopy, spray operations must be suspended even though surface-level wind conditions are 10 mph or less. Caution must also be exercised when dead calm conditions exist because of the formation of temperature-inversion layers. Under such conditions, the smaller droplets in the spray cloud will remain suspended and will not settle into the forest canopy. Spray operations must be curtailed until such conditions clear.

(B) PROBABILITY OF PRECIPITATION - Probability of precipitation within six hours after the completion of spraying must be 50 percent or less. This probability of precipitation is provided by Flight Service Weather (1-800-992-7433), National Weather Service (use closest local source), or other contracted weather forecasting source. Any Btk block that incurs significant precipitation (.25 inch or more) within four hours of spraying must be evaluated and, if necessary, resprayed at the WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S expense.

(C) AIR TEMPERATURE AND RELATIVE HUMIDITY – when temperatures and relative humidity conditions are such that proper insecticide application may be hindered. Generally, applications of Btk will be halted when temperature exceeds 80 degrees Fahrenheit and/or relative humidity falls below 50%.

(D) WET FOLIAGE - Foliage must not be dripping wet from precipitation or overnight dew.

8.4 ACCURACY - The Contractor must guarantee a complete and accurate coverage of the designated areas within the spray block. The spray application is monitored for accuracy by **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** personnel who look for uniform coverage and acceptable droplet size in the designated areas. If any designated area is missed or improperly treated, it must be re-sprayed at the Contractor's expense.

Care must be exercised in keeping all spray material within the designated block boundaries and away from areas designated as being sensitive and/or where property owners object to the spraying. Within the designated block boundaries, the spray is to be applied to forested areas only and must be shut off over open fields and all open bodies of water. Care must also be exercised by the spray pilot in keeping spray drift out of open water.

Many of the treatment areas are residential. The most densely populated areas in the residential treatment block must be treated as early as possible when most people are indoors. Congregations of people, including children waiting for school buses, must be avoided at all times.

8.5 NAVIGATIONAL ASSISTANCE - Due to the scattered nature of the treatment areas, good navigation by the spray pilot is an essential factor in successfully completing the project. If the spray pilot has difficulty with navigation, the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** may supply observation aircraft (Section 10.2) with pilot and, if necessary, navigator (Section 9.4) to supply navigational assistance to the spray pilot.

Depending upon the workload, the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** may provide a person to act as a navigator in an approved observation aircraft **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** employees are not permitted to ride in any spray aircraft at any time for any purpose.

8.6 RECONNAISSANCE - In accordance with FAR Part 137, a reconnaissance flight is required by the spray pilot over each spray block prior to treatment to ascertain the block layout and to identify and avoid any flight hazards or congregations of people.

Where it is agreed to be advantageous by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** and the Contractor, the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** may provide a person familiar with the area to fly in an approved observation aircraft on certain reconnaissance flights to locate and delineate boundaries of the spray areas. Reconnaissance flights provided by the Contractor are not billed to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.

8.7 FERRY FLIGHTS - Ferry flights to and from the job or between loading zones in the project area are provided by the Contractor and are not billed to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**. This airtime must be limited to flights that are essential to job efficiency. Ferry flights must be avoided over sensitive areas, especially properties where the owners have objected to spraying.

8.8 SPRAY TIME POLICY – Because of the short spray window available, it is essential that advantage be taken of any acceptable spray weather within the limits imposed by insect and foliage development, pilot work-hour limits [Section 9.3(M)], certain time-of-spray restrictions (Section 8.10), and safety considerations. Therefore, spraying must take place whenever weather conditions permit, including evenings (until dusk), weekends, and holidays.

The first trip takeoff for morning sessions is scheduled for 30 minutes before sunrise while the first trip takeoff for an evening session is scheduled for a time mutually agreed upon by the Contractor and the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** on a daily basis.

8.9 TIME-OF-SPRAY RESTRICTIONS - Spraying must be curtailed at certain times in certain situations to avoid potential conflicts with land users.

- Spraying **is generally not** permitted in West Virginia, federal, or other parks and/or campgrounds from noon on Friday through Sunday or from noon the day preceding a holiday through the holiday **unless special arrangements** have been made with the park manager. These special arrangements must include a written waiver signed by the park manager attesting that persons utilizing that area are not being exposed to insecticide treatment against their will or without their knowledge.
- Evening spraying (1 p.m. until dusk) on Saturday, Sunday, or a holiday may be restricted to West Virginia forest land or other private land ownerships where potential conflicts would be minimal.
- No spraying may be conducted over school buses while they are actively picking up or discharging students or over any group of schoolchildren or other persons congregated within the spray block.

8.10 EVENING SPRAYING – Although spraying conditions in the evening generally last no more than two hours, evening spraying is permitted when the weather is favorable until dusk. However, evening spraying is a significant factor in producing fatigue for everyone working on the program. For this reason evening operations may be curtailed when the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** determines that fatigue is excessive.

Pilots accumulating more than six hours of flight time in the morning session are not required to conduct any evening spraying that day. The Contractor may request

cancellation of evening spraying following two consecutive evening operations if its employees need a rest to ensure continued safe operations.

8.11 AIRSPEED - An exact application airspeed will be designated by the pilot at the time of calibration verification.

8.12 APPLICATION ALTITUDE - Spray application lower than 50 feet over buildings is not permitted. Pilots must stay within 50 to 100 feet above treetops.

8.13 TURNS - The aircraft spray boom must be shut off at the end of spray runs and during the time when a turn is being made. Turns must be avoided over sensitive areas, including properties where the owners have objected to spraying.

SECTION 9. CONTRACTOR PERSONNEL

9.1 PROJECT SUPERVISOR - The Contractor must designate one of its personnel to serve as the on-site project supervisor and to represent the company in all contractual matters that require prompt attention. This person must be familiar with all equipment being used and, as necessary, must be certified or registered as required by the **WEST VIRGINIA Pesticide Control Act** rules and regulations of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**. If the project involves the use of no more than one loading zone at any given time, a spray pilot, observation pilot, or ground-support person may serve as the project supervisor. If the project involves the simultaneous use of two or more loading zones, the project supervisor must not be assigned to regularly fly an aircraft or serve as ground support for any aircraft. The project supervisor may, if qualified, be used as an alternate spray pilot if the regular pilot is debilitated or otherwise unavailable.

9.2 GROUND-SUPPORT PERSONNEL - The Contractor must supply sufficient numbers of properly trained and qualified ground-support personnel to drive all necessary support vehicles, handle insecticides, operate and maintain the equipment used to transfer insecticides, and properly fuel, service, and maintain each aircraft. All ground-support personnel must be familiar with the aircraft's spray system and knowledgeable of calibration techniques. The Contractor must provide adequately trained ground-support personnel. All personnel provided by the Contractor must understand and be fluent in English. All ground personnel involved with the handling of insecticide must be supervised, certified, or registered as required by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.

All ground-support personnel must be equipped and trained to take proper action in an emergency. These people must observe all safety precautions in handling the insecticides and in refueling the aircraft. The Contractor is required to replace any ground-support person who, in the opinion of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, does not demonstrate the knowledge and capability to perform his/her duties.

9.3 PILOTS

(A) FAA QUALIFICATIONS - The Contractor must provide pilots that are FAA qualified to operate the aircraft specified in the bid. Each spray pilot, whether in a primary or backup role, must be qualified under FAR Part 137 and must provide written evidence to the Program Manager.

(B) PILOT LIST - The Contractor must provide the Program Manager with a list of all pilots including alternate spray pilots slated for use on the project as designated in Section 3.2. The Contractor may not designate the same pilots for two or more projects. Each spray pilot slated for use on the project, whether in a primary or backup role, must complete an Application for Spray Aircraft Pilot Approval form supplied to the Contractor by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** and return it for review to the Program Manager (see Section 4) by April 1 as designated in Section 3.2. The form will be reviewed and approved/disapproved by the Program Supervisor.

(C) MAP COMPREHENSION - Each pilot must demonstrate proficiency at reading and navigating from the maps, photos, or other images used to identify and locate treatment areas. A test, which may include an in-flight assessment, may be conducted prior to the start of spray operations.

(D) PESTICIDE APPLICATOR CERTIFICATION - Each spray pilot must be certified in the appropriate category by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** for the type of spraying being done. In the event any pilot does not hold a current applicator license, it must be obtained within 10 days after notification of award of contract.

(E) GPS - Each pilot must demonstrate proficiency in the operation of the aircraft's GPS guidance system, and/or any other electronic tracking and guidance system required (See Section 10.6.1 d).

(F) RADIO PROGRAMMING - Each pilot must be trained in programming the required aircraft radio [Section 10.5(A)(2)] and must be capable of programming it in the field.

(G) EXPERIENCE - Each spray pilot must meet or exceed the following experience minimums as pilot in command:

- All aircraft..... 2,000 hours
- Night flying 10 hours
- Type (rotary/fixed) to be flown in project..... 200 hours
- Weight class (category) to be flown on project 100 hours
- Make, model, and series to be flown on project..... 50 hours
- Forest pesticide application in terrain typical of project area..... 50 hours

(I) CONTROLLED SUBSTANCE USE - Any pilot observed by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** using or in possession of any nonprescription, controlled substance such as, but not limited to, marijuana, hashish, cocaine, heroin, and/or amphetamines shall be immediately dismissed from the project. Such findings will be reported to the appropriate law enforcement agency and the FAA for action.

(J) ALCOHOL CONSUMPTION - A pilot may not consume alcohol or a nonprescription medication containing alcohol within 12 hours of scheduled flight time. Any pilot observed by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** consuming alcohol or exhibiting symptoms of alcohol intoxication or impairment or any other intoxication or impairment will not be authorized for flight for 24 hours. A second occurrence will result in dismissal from the project.

(K) WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S RIGHT TO REJECT - The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** reserves the right to reject the Contractor's use of any pilot who, in their opinion, has performed unsatisfactorily in previous operations whether in **WEST VIRGINIA** or elsewhere. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** reserves the right to permanently reject any pilot who, in their opinion, violates these Contract Specifications, is unsafe, or otherwise performs unsatisfactorily.

(L) PILOT RESPONSIBILITY - The spray pilot is responsible for the accurate and proper application of the insecticide spray to the designated site using good application delivery procedures as generally recognized as correct by professionals in the aerial application industry.

The pilot is responsible for being able to proficiently operate all of the aircraft's electronic equipment including, but not limited to, radios, GPS guidance system.

The pilot is responsible at all times for the safe operation of the aircraft. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will not require flying in fog, dense smoke, or under any other adverse conditions which a prudent pilot would avoid nor is the pilot required to operate from any site which the pilot considers unsafe.

The pilot is responsible for the identification and avoidance of all flight hazards en route to, from, and within the operation area. The pilot must make a reconnaissance flight over each spray block to identify and locate any such hazards or congregations of people prior to treating the block. The pilot must avoid spraying any congregation of people, including children waiting for school buses.

The pilot is responsible for maintaining radio communication with the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S** aircraft dispatcher. The pilot must contact, via radio, the aircraft dispatcher when the pilot begins spraying a block, when a block is finished, and when a spray load is finished.

(M) FLIGHT DUTY LIMITATIONS

(1) DEFINITION OF TERMS

- (a) FLIGHT TIME - Flight time is the accumulated-in-the-air time beginning daily with lift-off for the first load and ending with landing from the last load. Time involved in moving the aircraft to the worksite before spraying begins or away from the site after spraying is finished is also included.
- (b) DUTY TIME - Includes flight time, ground duty of any kind, and standby or alert status at any location.
- (c) DUTY DAY - Any calendar day (midnight to midnight) when more than four hours of duty time (non-flight) or more than one hour of flight time are accumulated.
- (d) REST DAY - Any day with less than four hours of duty time with no more than one of the hours being flight time.
- (e) STOP TIME - Thirty (30) minutes after sunset, or a time mutually agreed upon by the Contractor and the WEST VIRGINIA DEPARTMENT OF AGRICULTURE on a daily basis provided visibility is adequate for safe flight.

(2) DAILY FLIGHT TIME AND DUTY LIMITS

All flight crewmembers shall be limited to the following tours of duty and flight hours. All revenue producing flying time such as aerial work activities shall count toward the limitations.

Pilots may be removed from duty, by personnel authorized by the Program Supervisor, for fatigue, illness, or other causes created by unusually strenuous or severe duty before reaching the flight duty limitations.

The Contracting Office shall maintain a current record of their flight and duty time.

- (a) Duty shall include flight time, ground duty of any kind, and standby or alert status at any location. This restriction does not include "on call" status outside of any required rest or off-duty periods.
- (b) Flight time shall not exceed a total of 8-hours per duty day.
- (c) Assigned duty of any kind shall not exceed 14-hours in any 24-hour period.
- (d) Flight crewmembers accumulating 36-hours of flight time in any 6 consecutive days or less are required to have the following day off. Maximum cumulative flight hours shall not exceed 42 hours in any 6 consecutive days. After any one full day off, pilots begin a new 6-consecutive day duty period for purposes of this paragraph.

- (e) Within any 24-hour period, flight crewmembers shall have a minimum of 10-consecutive uninterrupted hours off duty immediately prior to the beginning of the next day.
- (f) During any 14-consecutive day period, flight crewmember shall be off duty for two 24-hour periods from the time of last duty. The 24-hour duty periods need not be consecutive.

(N) SPRAY PILOT PROTECTIVE GEAR - All spray pilots must wear the following Contractor-provided protective gear:

- Nomex flight suit
- Nomex gloves
- FAA-approved helmet with headset and microphone assembly
- Eight-inch leather boots
- 100 percent cotton undergarments and stockings

9.4 OBSERVATION AIRCRAFT PILOT/NAVIGATOR – If determined by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, the Contractor may be required to supply an FAA-qualified pilot to fly any required observation aircraft (see Section 10.2) for assisting spray pilots as specified in Section 8.5 and Section 8.6. If the observation aircraft pilot is not proficient in GPS operation, is not able to read and navigate from USGS 7.5-minute quadrangle topographic maps, aerial photos, or other images used, or is inexperienced in providing reconnaissance, orientation, and spray run alignment assistance to the spray aircraft pilot, then the Contractor may be required to provide an additional person who is so qualified to serve as navigator in the observation aircraft. The observation aircraft pilot and, if needed, navigator must aurally preview in detail any and all spray blocks scheduled for treatment so that they will be prepared on the day of spraying to readily assist the spray aircraft pilot with reconnaissance, orientation, and spray run alignment.

SECTION 10. AIRCRAFT

10.1 GENERAL SPECIFICATIONS AND OPERATIONAL LIMITATIONS

(A) AIRCRAFT DESCRIPTION - The Contractor must complete and submit to the Program Manager (see Section 4) an Aircraft Description Form for each spray aircraft, alternate spray aircraft, and observation aircraft slated for use on the contract by April 1 of the current project year as specified in Section 3.2. The Contractor may not designate the same aircraft for two or more projects.

- (B) AIRCRAFT SUBSTITUTION** - The Contractor is permitted to substitute designated aircraft with aircraft in the same or larger category 1 week prior to the start of a project with the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S** approval provided all applicable specifications and insurance requirements for the substituted aircraft are met at the time of substitution.
- (C) LICENSES** - Every aircraft furnished for this contract must be properly licensed under regulations of the Federal Aviation Administration.
- (D) CONDITION** - Each aircraft must be clean inside and outside and must fully comply with FAA directives and specifications and to any pertinent laws and regulations of the **WEST VIRGINIA**.
- (E) SAFETY** - Safety regulations prescribed by the FAA, the manufacturer of the aircraft, the Contractor, and the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** must be observed at all times. All Contractor-supplied aircraft must contain FAA-approved shoulder harnesses and lap belts for the pilot and front crew/passenger and lap belts for all rear seats. All Contractor-supplied aircraft must be equipped with a transponder with Mode C.
- (F) EQUIPMENT** - All equipment specified in these Contract Specifications for use in or upon any aircraft must be FAA approved or the Contractor must have an FAA field approval (FAA Form 337) from the FAA Flight Safety District Office serving the Contractor's home base of operations.
- (G) INSPECTION – WEST VIRGINIA DEPARTMENT OF AGRICULTURE** representative will inspect the Contractor's aircraft to determine if they meet the Contract Specifications. Performance tests, as necessary, will be conducted at a location mutually agreed upon by **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** representative and the Contractor. The Contractor must assume all expenses incident to operation of the aircraft and the pilot's time during these tests. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** may request this inspection be held as many as sixty (60) days prior to the scheduled start of spraying. On-site inspection on the reporting date may be acceptable if approved in advance by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.
- (H) EXCLUSIVE ASSIGNMENT TO WEST VIRGINIA DEPARTMENT OF AGRICULTURE** - Once an aircraft, its assigned pilot, ground-support equipment, and support crew report on site they are under contract to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**. No substitutions may be made unless the aircraft, equipment, or person becomes incapacitated. While an aircraft is under contract to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, the aircraft, its assigned pilot, ground-support equipment, and crew are not permitted to do any other spraying. If a delay caused by a lack of insect and/or foliage development of two or more days in the spraying operation is anticipated as determined by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, the Contractor may be issued a written temporary release by the Program Manager. The temporary release will include any or all aircraft, personnel, or

support equipment. The Contractor will be required to return on site at a specified time and date, provided a minimum of 24 hour notice is given. All aircraft and support equipment must be configured and calibrated according to original specifications, and all spray systems and support equipment properly cleaned. Upon completion of their work on this contract, aircraft will be released by written consent of the Program Manager with verbal confirmation by the Contractor designated Program Supervisor.

- (I) INCAPACITATION** - In the event that any aircraft under contract becomes incapacitated, it must be repaired within 24 hours of the original breakdown. If the aircraft cannot be repaired and returned safely to full operation, it must be replaced with an aircraft of similar capabilities subject to all of the provisions of these Contract Specifications.
- (J) ENGINES** - Each aircraft engine must meet FAA specifications and must be in first class operating condition. Engine and airframe logs must be present at time of inspection.
- (K) AIRCRAFT REFUELING** - Any refueling of the aircraft while the engine is running and/or the rotor spinning must be done by hose line and nozzle only. Fueling from containers will be permitted only during complete engine shutdown. Proper aircraft/fuel truck bonding procedures as approved by the National Fire Protection Association must be followed while refueling.
- (L) RESERVE FUEL** - A minimum 20-minute reserve fuel supply over the amount needed for the planned round trip is required for each flight.
- (M) LOADING** - The pilot is responsible for the proper loading of the aircraft. Loading is under the pilot's direction and must be inspected by the pilot before takeoff. The weight must not exceed the maximum gross weight specified by the aircraft manufacturer. The pilot must compensate for altitude, temperature, landing zone conditions, and any adverse flying conditions.
- (N) VISIBILITY** - The aircraft windshield or bubble must be kept clean.

10.2 OBSERVATION AIRCRAFT - As specified in Section 8.5 and Section 8.6, the Contractor may be required to supply two high-wing, fixed-wing aircraft (no less than an 180-185 hp Cessna 182), pilot, and, if necessary, navigator (see Section 9.4) for every one to two spray aircraft provided (i.e., 1:1, 1:2, 2:3, 2:4, 3:5, etc.). The Contractor may be required to use this aircraft, as needed, to provide reconnaissance, navigational, and swath alignment assistance to the spray pilot. As specified in Section 9.4, the observation aircraft and its associated crew must be on site in time for the crew to aerially preview all spray blocks scheduled for treatment.

If the Contractor wishes to provide additional observation aircraft for any purpose, it may do so at no cost to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.

WEST VIRGINIA DEPARTMENT OF AGRICULTURE personnel may fly in the observation aircraft if the aircraft, its pilot, and the insurance coverage (see Section 12) are approved by the Program Manager.

10.3 AIRCRAFT CATEGORIES - The specific numbers of aircraft needed for each project are given in Section 4 using the spray aircraft category designations A through D. Aircraft in a larger-size category as listed in Section 10.3(A) and Section 10.3(B) may be substituted with the written approval of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**. Specifics on the aircraft slated for the contract must be provided to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** as indicated in Section 3.2 in order for the Contract to be awarded. Because of logistical planning by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, the Contractor is not permitted to substitute aircraft less than **1** week prior to the start of the project [see Section 10.1(A)].

The following tables list examples of acceptable aircraft for each category along with maximum allowable lane separations for the required nozzle systems. The actual lane separation for the specific aircraft to be used on the project will be assigned at the time of calibration verification based upon the best available information [Section 10.4(C)]. Aircraft not listed may be considered if they are of similar capability to those listed in that category and if the request to use them is approved prior to bid opening.

(A) HELICOPTERS

CATEGORY	EXAMPLES OF ACCEPTABLE AIRCRAFT	MAXIMUM LANE SEPARATION (FEET) ROTARY ATOMIZERS
A	Bell 204	150
	Bell 205	150
	Bell 212	150
	Bell 214	150
C+	Bell OH58	125
C	Bell 206B	100
	Bell/Soloy 47G-3B	125
	Hughes 500D	75
D+	Hiller/Soloy 12E	75
D	Bell 47G	100
	Hiller 12E	75

(B) FIXED WING

CATEGORY	HORSE-POWER	HOPPER CAPACITY (Gallons)	EXAMPLES OF ACCEPTABLE AIRCRAFT	MAXIMUM LANE SEPARATION (FEET)	
				HYDRAULIC NOZZLES	ROTARY ATOMIZERS
A	Turbine >1100	>750	Air Tractor 802	200	-
B	Turbine 750 – 1100	500 - 750	Air Tractor 502	125	150
			Air Tractor 602	125	150
			Dromader M18	125	175
			Thrush T-34	125	150
			Thrush T-41	125	150
			Thrush T-45	125	150
			Thrush 660	125	150
C	Turbine 600 - 750	300 - 500	Thrush G-10	125	150
			Air Tractor 400	125	150
			Air Tractor 500	125	150
			AgCat King C	100	125
			AgCat Turbo	100	125
			Thrush R1820	100	125
D	Piston 600 – 750	300 - 500	Thrush T-15	100	125
			Air Tractor 301	100	125
			Air Tractor 301A	100	125
			Air Tractor 302	100	125
			Air Tractor 401	100	125
			AgCat Super B	100	125
			Thrush 600	100	125
Thrush T-11	100	125			

10.4 AIRCRAFT SPRAY SYSTEM**(A) GENERAL SPECIFICATIONS**

(1) TANKS - Leakproof, corrosion-resistant tanks with exterior filler openings must be used. The location and size of tanks must be so as to not impair airworthiness by overloading or displacing the center of gravity beyond acceptable limits. Filler openings or necks must be large enough to prevent surging during filling. Tanks must be vented to the outside of the fuselage.

(2) EMERGENCY DUMP SYSTEM - Each aircraft must be equipped with an emergency jettisonable load-dumping system or emergency non-leaking dump valves of adequate capacity and adequately vented to dump the load and installed so as to prevent blowback into the fuselage. In no case must the ratio between gallons carried and the surface area of the dump-valve opening as measured in square inches be greater than 7.65 to 1. Exposed valve-control linkage must be protected to prevent unintentional opening of the valve in any

manner. The control lever must be substantially mounted in the cockpit within easy reach of the pilot when properly wearing the shoulder harness.

(3) PUMPING SYSTEM - The pumping system must be securely attached and capable of maintaining the pressure required to insure the even distribution of the insecticide. All plumbing and pumps must be large enough to handle the required flow. All parts, including pump seals, must be chemically and abrasively resistant to the spray material being used.

(4) PRESSURE GAUGE - An accurate liquid-filled spray pressure gauge must be located so that the pilot can easily read it.

(5) SHUTOFF - To avoid contamination of areas not scheduled for treatment, the entire spray system must be leakproof and have a positive shutoff mechanism capable of eliminating dripping from the nozzles.

(6) SYSTEM CLEANING - The aircraft spray system, including tanks, must be cleaned of all foreign material and flushed with water prior to the start of the spray operation. The spray system must be flushed following spraying on a daily basis to prevent drying of spray material from becoming a problem. The Contractor must daily clean all screens, check for leaks and clogs, verify pump pressure, and monitor flow rate.

During the spray project the spray system must be flushed with water if a switch from diflubenzuron to Btk is made.

(7) STRAINER - Each aircraft must be equipped with an in-line strainer (no finer than 30 mesh) to filter all material before it enters the spray boom.

(8) SPRAY TIMER - Each aircraft must be equipped with an electronic flow-metering system, such as a CropHawk®, that is activated automatically when the spray switch is operated.

The system must be capable of providing an accurate measurement of the cumulative spray time in minutes and tenths or minutes and seconds as well as an accurate measurement of the volume of spray material dispensed.

(9) BOOM SYSTEM - Each aircraft must be equipped with an FAA-approved boom system of the type most commonly employed for the delivery system being used. This system must have:

- (a) Nozzles located so as to minimize or eliminate the spraying of insecticide onto any part of the ship's structure.
- (b) All nozzles rigidly attached to the boom without flexible dropper hoses.

- (c) Bleeder lines installed at the ends of the boom feeding back to the outboard nozzle if that nozzle is installed more than five inches from the boom end.

(10) PUMP PRESSURE - The pump must have an effective operating pressure range of 20-50 PSI.

(11) AUTOMATIC ON/OFF OF SPRAY BOOM – The aircraft spray system should be equipped with an automatic on/off of spray boom that is controlled by the aircraft's GPS guidance system. The ability to manually over-ride the automatic on/off system must be available.

(12) AUTOMATIC FLOW CONTROL – The aircraft spray system must be equipped with automatic flow control that is controlled by the aircraft's GPS guidance system.

(B) NOZZLES - Rotary atomizers (4-8 units per aircraft) are required for spray aircraft. The nozzle systems must meet the following specifications.

(1) ROTARY ATOMIZERS

- (a) TYPE - Micronair®, Beecomist®, or similar **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**-approved rotary atomizers are acceptable provided that the units have the capability of adjusting the screen rotation speed in order to change the droplet size. All rotary atomizers on an aircraft must be of the same type.
- (b) NUMBER AND SIZE - Sufficient numbers of the proper size and type rotary atomizer must be provided for the particular aircraft being utilized in order to produce a uniformly dispersed spray cloud with a droplet volume median diameter (VMD) of 150 microns for Btk application. The number of rotary atomizers required is shown in Section 10.3. Deviations from the required number may only be made with approval of the Program Manager with supporting data provided by the Contractor for the specific make, model, and series of spray aircraft being utilized.
- (c) INSTALLATION/ADJUSTMENT/CALIBRATION - The installation, adjustment, and calibration of the rotary atomizers, including the number installed per aircraft, must be made in strict accordance with the manufacturer's recommendations to permit the application of the specified spray volume per acre. The flow rate for each individual rotary atomizer installed on a boom must not deviate ± 10 percent from the average flow rate for all rotary atomizers installed on the boom. Any rotary atomizer that deviates by more than ± 10 percent must be replaced. All used units must be properly cleaned and serviced and be in good working condition. All new or

rebuilt units must be properly broken in according to the manufacturer's recommendation before reporting on site for calibration verification.

(C) CALIBRATION/CHARACTERIZATION - The Contractor's spray aircraft must arrive on site properly calibrated for the insecticide and rate of application specified. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will verify the calibration by checking the flow rate of each aircraft prior to the start of the operation. If the calibration is incorrect, the Contractor must correct it immediately without causing any delay in the start of operations.

Dependent upon the delivery system and the dilution rate of the insecticide being used, calibration verification will be made using either water or the insecticide slated for application. The flow rate from the spray system will be monitored periodically during the spray operation and must be maintained within 5 percent of the desired flow rate.

Flights over card lines to characterize spray swath and droplet size may be required prior to the start of spray operations for certain aircraft as determined by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**. Standardized characterization techniques, including the use of a nonpermanent dye in the spray material, will be utilized. There will be no separate additional charge to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** for flights or for the insecticide used in making calibration or characterization checks.

10.5 ELECTRONIC RADIO, GPS, AND TELEPHONE EQUIPMENT

(A) EQUIPMENT - Prior to being approved by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**, all spray and observation aircraft must be equipped with electronic communications and guidance equipment as described herein. The Contractor's project supervisor must also be supplied by the Contractor with a programmable portable or vehicle installed radio which meets the same specifications as given in Section 10.5(A)(2). All Contractor-furnished communications and guidance equipment for use in aircraft must be of types currently approved by the FCC and the FAA. The aircraft must be bonded and shielded so as to allow optimum radio communications. The following are required for all spray and observation aircraft.

- (1) VHF COMMUNICATIONS – The Contractor must equip each spray and observation aircraft with an operating VHF (FAA frequencies) communications system consisting of equipment currently approved by the FCC and FAA. Channels must include the tower and ground control frequency (including 720 channel) most often used in the Contractor's area of operation while under agreement to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.

The receiver for the VHF communications system must not be part of a navigational system.

Each ground-support crew must be equipped with a mobile or portable VHF transmitter/receiver that will permit communication with the spray and/or observation aircraft.

- (2) FM RADIO - Each spray and observation aircraft must be equipped by the Contractor with a field-programmable, rack-installed or portable FM radio transmitter-receiver (5-10 watts output with a range of 148.0 MHz to 174.0 MHz), compatible externally mounted antenna designed for aircraft use, and a compatible crash helmet microphone/headset assembly for the pilot and each operating crewmember (microphone/headset assembly required for observation aircraft pilot and crewmembers--helmet optional).
- (3) SELECTOR SWITCH - Each spray and observation aircraft must be equipped with a three-position selector switch that permits the pilot to simultaneously monitor both the VHF and FM systems in one position, monitor and transmit on the VHF system in another position, and monitor and transmit on the FM system in a third position.
- (4) GPS - Each spray and observation aircraft must have installed, according to the manufacturer's specifications, a GPS guidance system with digital readout of a type approved by the FAA.
- (5) TRANSPONDER - Each spray and observation aircraft must have installed, according to the manufacturer's specifications, a TRANSPONDER WITH mode C of a type approved by the FAA.

(B) INSPECTION - The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will inspect all radio and guidance system installations before the spray aircraft is approved. Installations and facilities that are substandard electrically or mechanically will not be approved. All radio systems must undergo an air-to-ground check to assure that clear and understandable communications exist. Any radio system that does not perform adequately in the opinion of the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** must be repaired or replaced by the Contractor before spray operations will be permitted to start.

(C) RADIO PROGRAMMING - The Contractor's pilots must be trained in programming the radio provided and must be capable of programming it in the field.

(D) COMMUNICATION AND GUIDANCE MAINTENANCE - The Contractor must provide evidence that the communication and guidance equipment furnished has been serviced, as required, by a qualified electronics maintenance shop. It is the responsibility of the Contractor to maintain in good working order all communications and guidance equipment it is required to furnish.

(E) CELLULAR TELEPHONE AND PAGER - The Contractor must supply the project supervisor, each pilot, and each ground crew with a cellular telephone or pager complete with activation for the area of **WEST VIRGINIA** in which they will be working.

10.6 NAVIGATIONAL AIDS: All aircraft will be equipped with a working navigation/tracking, differentially corrected, global positioning system (GPS). The pilot must have a working knowledge of the GPS system installed in the aircraft. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** will be responsible for determining the coordinates of each spray block for uploading to the treatment aircraft's GPS system. Each day after spraying is completed; the recorded flight files will be downloaded for analysis by the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**.

(A) AIRCRAFT GPS SPECIFICATIONS: The make of the GPS will be specified in the contract offer. Certain electronic guidance systems may not meet program requirements. Guidance systems that meet the following criteria are acceptable:

- (1) Contractor will provide GPS system with software designed for parallel offset in increments equal to the assigned swath width of the application aircraft. A course deviation indicator (CDI) or a course deviation light bar must be installed on the aircraft and must be located in a position that will allow the pilot to view the indicator with direct or peripheral vision. Differential correction shall be provided by satellite using L-band frequencies.
- (2) The guidance system being used will allow the flight log to be downloaded to an on-site computer for post-flight analysis and review. The flight log must show the entire flight of the aircraft from takeoff to landing and differentiate between spray on and spray off when viewed on the computer monitor. The software must have the capability to zoom to any portion of the flight for viewing in greater detail and a method to determine distance between each flight lane. The system must be able to calculate and show total acres treated during the flight. The software must be compatible with color printers and differentiate between spray on and spray off on the printed copy.
- (3) The GPS (*make and model, e.g Satloc or AgNav*) proposed must have been operated successfully in a similar type aerial application program, and demonstrated success prior to the last 12 months. Provide name and phone number of previous clients or other users of the system who can validate the GPS capabilities.
- (4) Pilot proficiency or evidence of prior experience with the proposed GPS system must be demonstrated to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** prior to award. To demonstrate proficiency the contractor must provide a copy of data (printed map and electronic format) downloaded from GPS proposed for use which was 1) conducted in the same type aircraft proposed for the use on this project, 2) flown in similar topography and aircraft altitude (generally below 200 feet AGL), and 3) collected within the last 12 months. The printed map must display the spray block boundary, the flight path of the aircraft and clearly differentiate between spray on and spray off.
- (5) If at any time the GPS is not working properly the pilot must report this to the Program Supervisor. If the GPS is not working properly during application, the pilot must return immediately to the airport.

(B) ELECTRONIC GUIDANCE AND SUPPORT FURNISHED BY THE CONTRACTOR

- (1) The guidance equipment shall be capable of accurately guiding the aircraft, while flying at application altitude, along parallel flight lines equal to the assigned swath width of the application aircraft, in blocks designated by **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**. The system shall be sufficiently sensitive to provide immediate deviation indications and sufficiently accurate to keep the aircraft on the desired flight path. The guidance system shall be capable of updating current position at a minimum rate of five (5) times per second.
- (2) During operation, differentially corrected signal must be accurately recorded at least 95% of the operational time.
- (3) Post-flight processing computer and software capable of displaying track, altitude and groundspeed of aircraft during flight, with differentiation between standard flight and flight when the application system is on. Export file format must be compatible with Arc View systems and must be on a standard High Density 1.44 MB 3.5 inch floppy disk or other mutually acceptable data storage medium.

(C) Salient characteristics required for the GPS system. The equipment offered must possess the following features:

- (1) Precision GPS guidance with pilot-selected cross-track error readout adjustable down to one (1) foot.
- (2) Easy to operate, user-friendly pilot's control keypad, with swath advance and decrement function.
- (3) Visual display monitor: 1) capable of displaying swath width over flight path; 2) mounted in the aircraft in a location that will allow the pilot to view the screen with direct or peripheral vision without looking down; 3) shall display in real time or be available for in-flight access immediately after application has ceased.
- (4) Shall have variable swath width entry.
- (5) Record logging of application at a minimum rate of one-second intervals. Full record includes position, time, altitude, speed, cross-track error, track, application system on/off, aircraft tail number, pilot, job name or number, and differential correction status.
- (6) System memory capable of storing up to 8 hours of continuous flight log data.
- (7) Capability to accept pre-loaded reference waypoints (A-B Line). Must be able to store and retrieve, in-cockpit, at least 50 individual treatment blocks, each containing up to 50 points. Capability to link blocks together for combined treatment.

- (8) Feature which alerts pilot when he/she is about to enter or exit a specific treatment block or an exclusion area within a block. A method to display nested polygons to indicated sensitive or no-spray areas within treatment blocks.
- (9) A course deviation indicator (CDI) or light bar which displays both cross-track error and intercept angle to desired heading must be installed on the aircraft in a location that will allow the pilot to view the indicator with direct or peripheral vision without looking down.
- (10) HOME navigational feature that provides instant range and bearing to home base airport of helibase.
- (11) MARK feature which allows return to point in any swath before or after equipment shutdown.
- (12) Warning method to indicate GPS or Differential Correction failures.
- (13) Pilot-adjustable intensity lighting for light bar, keypad, and moving map display.
- (14) Capability to end log files, rename, and start new logs in flight.

SECTION 11. GROUND-SUPPORT EQUIPMENT

11.1 INSPECTION - In order to execute the Contract, the Contractor must supply the WEST VIRGINIA DEPARTMENT OF AGRICULTURE with specifics on the ground-support equipment the Contractor will provide as specified in Section 3.2. The Contractor is not permitted to substitute ground-support equipment 1 week prior to the start of the project. Any substitutions before that date must be with ground-support equipment of similar or greater capability. WEST VIRGINIA DEPARTMENT OF AGRICULTURE personnel may inspect this equipment and, at the Contractor's expense, conduct performance tests, as necessary, at a mutually agreed-upon site 60 days or less prior to the start of spraying operations.

11.2 ACCESSORY EQUIPMENT - All accessory equipment, including any vehicles necessary for transporting the insecticide from storage or from one operational site to another, is the responsibility of the Contractor. Accessory equipment supplied by the Contractor includes, but is not limited to, trucks, insecticide storage and/or mixing tanks (equipped for agitation and recirculation), pumps, hoses, metering devices, and similar equipment necessary for handling the insecticide and loading the spray aircraft. The Contractor must also supply readily accessible and properly sized and coded fire extinguishers at each loading zone.

If contract logistics require it, the Contractor must supply sufficient accessory equipment so that each aircraft can work independently of each other [see Section 4 and Section 11.4(B)].

11.3 EQUIPMENT CLEANING - All equipment which comes in direct contact with the insecticide must be kept thoroughly clean and free of residues and foreign particulate matter.

11.4 FIELD TRUCKS

(A) LIGHT-DUTY TRUCK - The Contractor must supply a vehicle for each ground crew to use for transporting personnel, moving insecticides, running for parts, and similar duties. If the Contractor-provided nurse truck is unsuitable for conducting these errands in an expeditious manner, the Contractor must provide a pickup truck or other acceptable vehicle. **WEST VIRGINIA DEPARTMENT OF AGRICULTURE**-owned vehicles may not be used for these purposes.

(B) NURSE TRUCKS - A truck or trucks equipped for transporting insecticide are required for each independently working spray aircraft or a group of spray aircraft working from a single loading zone. Truck and trailer combinations are acceptable if they meet all requirements of the **West Virginia Department of Transportation**, do not exceed local road and bridge weight limits, and do not present maneuverability problems at the designated field worksites. Each independently working spray aircraft or group of spray aircraft working from a single loading zone must have sufficient ground-support equipment and personnel to providing adequate service without causing production delays.

The field truck or trucks supplying each aircraft must be designed to separately carry the insecticide concentrate, water, additives, and aircraft fuel to the worksite. The quantities transported to the worksite must be sufficient to supply aircraft working from that site for five hours of spraying without exceeding the truck or road legal weight limits.

All trucks transporting aircraft fuel or other hazardous materials must be placarded and supplied with shipping papers as required under the U. S. Department of Transportation's Hazardous Materials Regulations (HAZMAT).

Each mix truck must be supplied with drum wrenches if barrels are being used.

11.5 TANK FARM - If working from a limited number of loading zones, the Contractor may, in lieu of the nurse trucks specified, set up a tank farm, subject to all of the equipment specifications contained in Section 11, at each loading zone selected for the project area. This tank farm must be of sufficient capacity to supply and service all spray aircraft working from the loading zone. Sufficient equipment must be supplied so that each loading zone will be set up and operational far enough in advance of need so that no operational spraying time will be lost by any spray aircraft. If contract logistics require it, sufficient equipment must be provided so that each aircraft can be stationed and/or worked independently of each other.

11.6 FUEL TRUCKS - When aviation fuel must be transported.

(A) MAINTENANCE - Fuel trucks shall be properly maintained, clean and reliable. Tanks, pumping, filters, and other required equipment shall be free of rust, dirt, and other contaminants.

(B) CAPACITY - The Fuel Truck(s) shall be capable of transporting sufficient fuel to operate the application aircraft for a minimum of 8 hours.

(C) WEIGHT LIMITS - The Fuel Truck(s) manufacturer's gross vehicle weights (GVW) shall not be exceeded. Barrels are not acceptable fuel containers.

(D) FILTERING SYSTEM - The filtering system shall be equipped with a differential pressure monitoring system or fueling systems with which the pump produces more than 25 psi. Spare filters, fuses, seals, and other components on the fuel truck filtering system shall be stored in a clean, dry area. A minimum of one set is required.

(E) TANK DESIGN - All tanks shall be securely fastened to the truck bed and shall have a sump or sediment settling area of adequate capacity to provide uncontaminated fuel to the filter.

(F) HOSES - All hoses shall be properly secured and safeguarded when not in use. Only hoses designated for dispensing of fuel will be used. Hoses must be at least 50 feet in length. Fuel nozzle shall include a 100 mesh or finer screen, a dust protective device and a bonding clip or plug.

(G) GROUNDING SYSTEM - Fuel Truck(s) shall have tow bonding and ground cables, one to attach to a ground stake and one to attach to the aircraft.

(H) SIGNS - Markings: "NO SMOKING" signs with three-inch minimum letters visible for both sides and rear of the truck. Each fuel-servicing vehicle shall be conspicuously and legibly marked to indicate the nature of the fuel. Fuel truck(s) must be placarded in accordance with 49 CFR 172.

11.7 TANKS

(A) GENERAL - All tanks used to transport insecticides must be leakproof and corrosion resistant. Filler openings and air vents must be adequate to prevent surging during filling. All tanks must be equipped with properly fitting covers or hatch plates that must be kept closed except when filling or circulating to reduce the chance of contamination with foreign materials.

(B) CLEANING - All tanks must be thoroughly cleaned and free of rust, residues, and particulate matter, such as grit and sand. The **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** must inspect all tanks before they are filled with insecticide or water.

11.8 PUMPS

(A) WATER PUMP - Each truck used to transport water must be equipped with a pump capable of drafting water a vertical distance of at least ten feet. The truck must be equipped with a noncollapsing suction hose, an anti-siphon device or check valve, a coarse screen, and a bucket. The configuration must be such that water being taken into the truck can be metered if needed, and it must pass through a strainer no coarser than 50 mesh.

(B) CIRCULATION PUMP - The pump used for circulation and loading must produce a sufficient flow rate to fill the aircraft it supplies in a maximum of three minutes without producing high pressures.

(C) INSECTICIDE PUMP - The pump used for drafting the undiluted insecticide from a 55-gallon drum must be capable of repeatedly emptying a drum in less than three minutes.

(D) NUMBER OF PUMPS - The same pump may be used for all purposes if a single truck is used for mixing and for transporting water and insecticide, provided all requirements are met. If a separate truck is used for any of these purposes, it must have its own pump.

(E) PUMP SEALS - All pump seals must be chemically and abrasively resistant to the spray material being used.

(F) PROHIBITED PUMPS - No high-pressure piston pumps or hand pumps are permitted.

11.9 METERING DEVICES

(A) GENERAL - The insecticide-handling system must be designed to accurately meter water and insecticide concentrate. If the system or insecticide storage system is designed such that air could be sucked into the lines and cause erroneous meter readings, the meter must be equipped with an air eliminator.

A strainer no finer than 30 mesh must be installed in line to screen the solution prior to entering the meter.

The meter must be capable of safely handling the flow rate necessary for loading the aircraft.

Meters with lighted digital displays must be shaded so that they are not difficult to see in direct full sunlight.

(B) CALIBRATION - The Contractor must provide evidence that all metering devices employed have been inspected and calibrated by a licensed inspector within two months prior to the start of the spraying operation. At or before the time the Contractor's aircraft are calibrated, the Contractor must supply the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE'S** field project coordinator with a copy of the inspector's calibration report for each meter used in the project.

All meters used to measure the volume of insecticide at any time during the operation must be calibrated and certified using the insecticide formulation to be used on the project or the meter must be calibrated and certified as capable of accurately measuring various materials, each with a different viscosity without being recalibrated for each material.

SECTION 12. INSURANCE

12.1 INSURANCE

(A) GENERAL REQUIREMENTS - The Contractor shall purchase and maintain, at its expense, the following types of insurance, issued by companies acceptable to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE for the life of this contract.** The Contractor must provide the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** with current Certificates of Insurance. These certificates shall contain a provision that coverage afforded under the policy shall not be canceled until at least thirty (30) days prior written notice has been given to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE.**

(B) COVERAGES AND LIMITS - The required insurance must include the following coverages and minimum limits:

- (1) AIRCRAFT LIABILITY - \$1,000,000 single limit for each occurrence for bodily injury and property damage combined.
- (3) AIRCRAFT PASSENGER LIABILITY - \$1,000,000 single limit for each occurrence. Required for observation aircraft only.
- (4) CHEMICAL LIABILITY – Restricted Chemical category coverage at limits not less than:
\$100,000 bodily injury per person, \$300,000 bodily injury per occurrence and \$100,000 property damage per occurrence. Must include coverage for treating residential areas.
- (5) AUTOMOTIVE LIABILITY - \$1,000,000 single limit for each occurrence for bodily injury and property damage combined.
- (6) AIRPORT/PREMISES LIABILITY - \$1,000,000 single limit for each occurrence for bodily injury and property damage combined.
- (7) WORKER'S COMPENSATION INSURANCE - Limits sufficient to cover all of the employees of the Contractor working to fulfill this contract.

(C) SUBCONTRACTORS'/LEASED EQUIPMENT - If any work under this contract is subcontracted or otherwise performed by anyone other than the Contractor or performed with equipment subcontracted or leased by the Contractor, the Contractor must provide

evidence that the specified liability insurance for any persons and/or equipment so subcontracted or leased is provided for under a policy(s) maintained by the subcontractor.

(D) INDEMNITY - The applicator (contractor) shall indemnify and save and keep harmless the State of West Virginia and the USDA - Forest Service against all loss, cost, damage, claim, expense or liability whatsoever, because of accident or injury to persons or property of others in connection with the operation under this contract.

SECTION 13. AGREED DAMAGES FOR FAILURE TO PERFORM

13.1 INTRODUCTION - Due to the behavior of the gypsy moth and other forest insect pests, the amount of time during which successful treatment can be made is limited. For this reason delays caused by the Contractor during periods of acceptable spray conditions are potentially damaging to the outcome of the program. In addition, such delays are costly to the **WEST VIRGINIA DEPARTMENT OF AGRICULTURE** and therefore subject to the assessment of agreed damages for failure to perform. Repeated occurrences of failure to perform actions are sufficient grounds for contract termination and removing the Contractor's name from the list of acceptable bidders for future projects.

The Contractor is not liable for agreed damages if the failure to meet the terms of the contract arises out of causes beyond the control and without the fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the State of West Virginia in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case, the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

Any incident in which a Contractor is assessed damages as described in this section must be documented in writing by the Program Manager and submitted to the Program Supervisor for approval. A copy of this report will be given to the Contractor. All approved reports will be subject to the appropriate provisions, and assessed costs will be deducted from the final payment made to the Contractor. The burden of proof to dispute these assessments is upon the Contractor.

The following items are considered failure-to-perform acts subject to the specified monetary assessment.

13.2 LATE ARRIVAL - Notice will be given to the Contractor of a time and location to have its equipment assembled for the program start (Section 2.5). This is usually a day or two before actual spraying, and is needed for calibration checks, characterization flights, final inspection, and pilot briefing. At that time, the aircraft, its equipment, and ground-support equipment must be ready and operating according to Contract Specifications. Also, pilots and ground-support personnel must be on site and ready to perform as required by the Contract Specifications. Failure to arrive within two hours of the agreed time on the specified day may be assessed against the Contractor at the rate of \$1,000

per aircraft per day. Arrival on time but failing to have all the equipment and personnel on site and/or operational and which causes a delay in calibration checks of two hours or more may be assessed against the Contractor at the rate of \$1,000 per aircraft. Failure to arrive on the specified day or a delay that makes it impossible to properly calibrate on the scheduled day may be assessed at the rate of \$5,000 per aircraft per day.

13.3 TARDINESS - The first trip takeoff for morning sessions is scheduled for 30 minutes before sunrise while the first trip takeoff for an evening session is scheduled for a time mutually agreed upon by the Contractor and the WEST VIRGINIA DEPARTMENT OF AGRICULTURE on a daily basis (Section 8.9). The Contractor's personnel must be at the worksite far enough in advance of the first trip takeoff time to have the aircraft checked, engines warmed up, and insecticide properly agitated and loaded ready for takeoff when conditions are acceptable. If it becomes necessary to move the aircraft from the operational worksite to another overnight location for security or other reasons, care must be exercised to avoid selecting a fog or "frost pocket" location that could postpone takeoff and thereby delay or cancel the operation for the following day. A delay in the first trip takeoff due to tardiness when conditions are acceptable for spraying may be assessed against the Contractor at a rate of \$1,000 per hour or portion thereof per aircraft per session.

13.4 DELAYS - The number of personnel (Section 9) and the quantity and quality of insecticide, water, and aircraft fuel at the loading site must be sufficient to keep each aircraft in full production for a minimum period of five consecutive hours (Section 11.4). A shutdown or delay caused by a shortage of qualified personnel and/or a lack of acceptable insecticide, water, or fuel when spraying conditions are acceptable during this five-hour period may be assessed against the Contractor at the rate of \$1,000 per hour or portion thereof of acceptable spray time lost per aircraft per occurrence.

Any other Contractor-caused delay including, but not limited to, failure to supply the required aircraft, equipment failures, aircraft problems, failure to have an approved FAA waiver for the treatment of congested areas, or spray pilot difficulties with navigation, spray block reconnaissance, spray block orientation, and/or electronic equipment operation may be assessed against the Contractor at the rate of \$1,000 per hour or portion thereof of acceptable spray time lost per aircraft per occurrence.

Only one delay of up to 15 minutes that results in the loss of acceptable spray time, for any reason, is permitted per aircraft per day.

13.5 LOADING ZONES - Failure to have an adequate number of loading zones designated 6 weeks prior to the start of the project as specified (Section 5.7) may be assessed against the Contractor at the amount of \$5,000. Additional or alternative worksites used during the operation that were not designated by the due date may be assessed at the rate of \$500 per site.

If locating additional sites results in a loss of acceptable application time, damages will accrue as specified in Section 13.4 and may be assessed as specified.

13.6 IMPROPER SPRAYING - A uniform application at the proper droplet size and rate per acre within the designated area is essential for a successful program (Section 10.4). Where faulty application makes it necessary to respray areas not satisfactorily covered by the Contractor, the Contractor must respray such areas. The Contractor will not be compensated for such respraying that is in excess of 2 percent of the total contracted acreage (Section 2.6). The Contractor will not be paid for any acreage treated outside the designated block boundaries (Section 2.3).

Spraying insecticide at concentrations other than those prescribed in these Contract Specifications (Section 4) may be assessed against the Contractor at the rate of \$5,000 per incident. These same damages may be assessed against a Contractor who uses Btk products over six months old without prior permission [Section 7.5(A)].

13.7 OTHER SPRAYING - The equipment and personnel under contract to the WEST VIRGINIA DEPARTMENT OF AGRICULTURE are not permitted to do any other spraying for individuals, companies, or agencies while the contract is in effect without a written release [Section 10.1(G)]. Violation of this restriction may be assessed at the rate of \$5,000 per incident.

13.8 INSECTICIDE LOSSES, SPILLS, AND DUMPS - The Contractor will not be compensated for any Contractor-supplied insecticide which is lost, spilled, dumped, or otherwise made unavailable (Section 5.6).

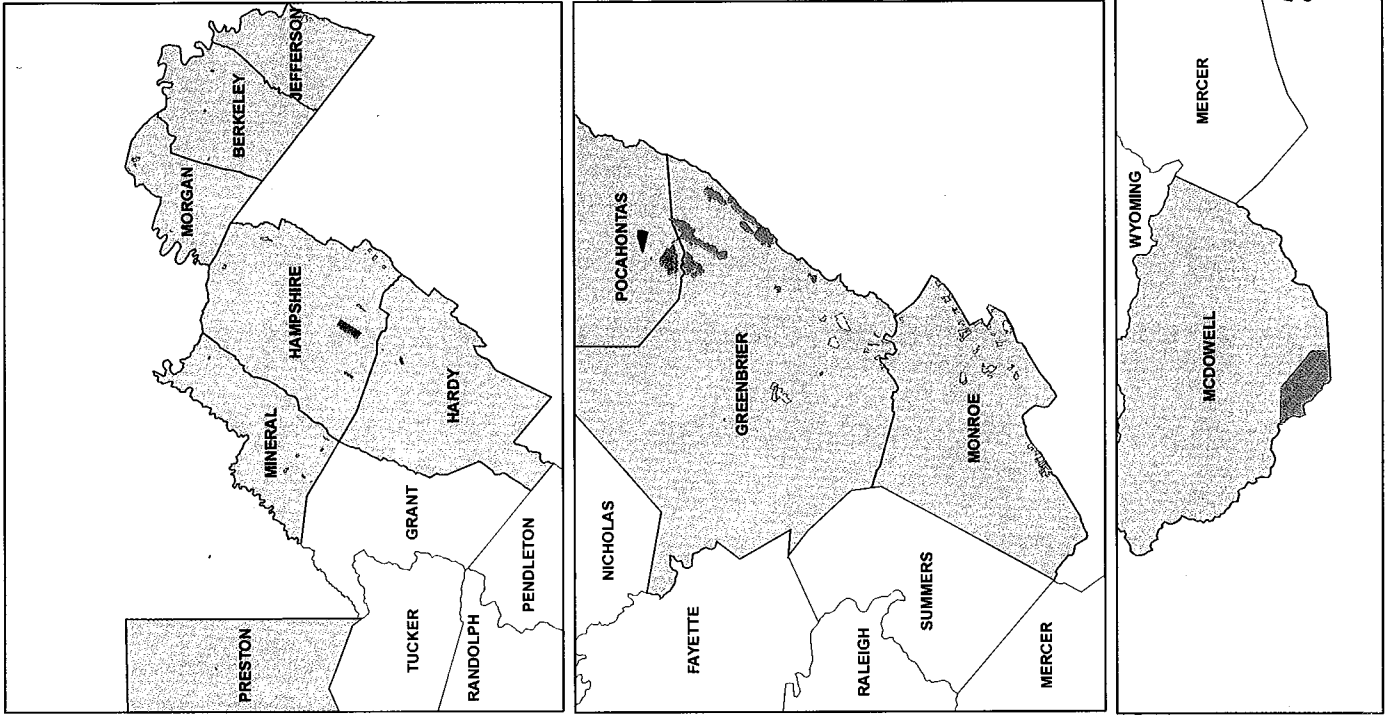
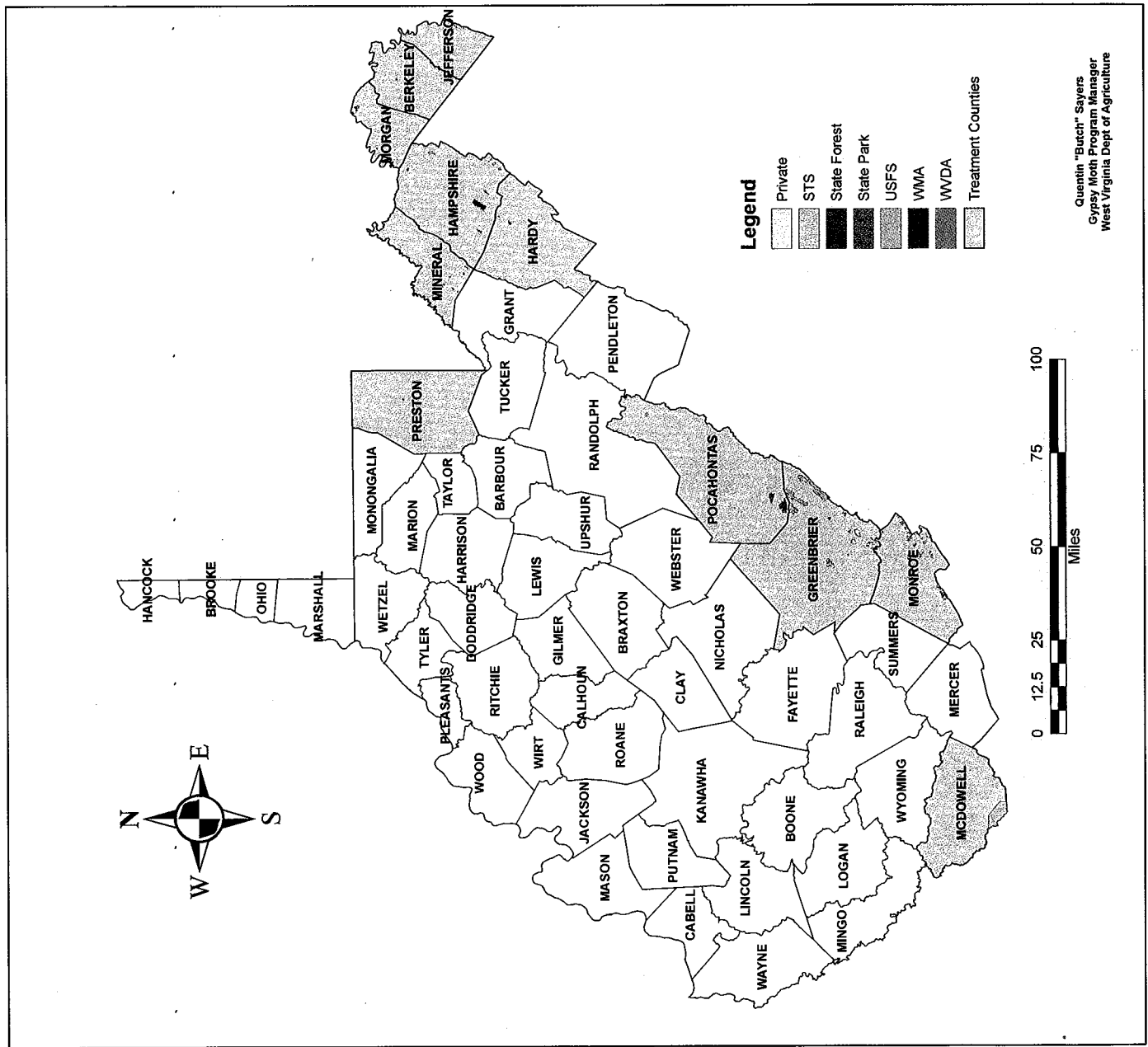
If any insecticide loss, spill, or dump results in a loss of acceptable spray time, damages will accrue as specified in Section 13.4 and may be assessed as specified.

13.9 POOR PILOT PERFORMANCE - The WEST VIRGINIA DEPARTMENT OF AGRICULTURE reserves the right to permanently reject any pilot, who, in its opinion, violates these Contract Specifications, is unsafe, or otherwise performs unsatisfactorily (Section 9.3). In such an event, the Contractor must furnish a replacement pilot within 24 hours who is capable and qualified to safely fly and properly perform the application. Failure to furnish a replacement pilot within the specified time may be assessed against the Contractor at the rate of \$5,000 per day. In addition, damages as specified in Section 13.4 will accrue from the time of grounding and may be assessed as specified.

13.10 AIRCRAFT MALFUNCTION - It is understood that aircraft will occasionally malfunction even with proper maintenance (Section 10). No assessment will be charged to the Contractor for the first such malfunction if the aircraft can be made operational within 24 hours. After the 24-hour period, damages may be assessed at the rate of \$1,000 for each hour or portion thereof of acceptable spray time lost. Only one 24-hour, no-assessment period will be granted for each aircraft during the course of the spraying operation. If an aircraft suffers from frequent mechanical problems, the WEST VIRGINIA DEPARTMENT OF AGRICULTURE will notify the Contractor that the aircraft must be replaced with an aircraft of similar capability within 24 hours. The replacement aircraft must be covered by the Contractor's insurance policies. Failure to provide an acceptable replacement within the allotted time may be assessed against the Contractor at the rate of \$5,000 per day. In addition, damages as specified in Section 13.4 will accrue from the end of the allotted time and may be assessed as specified.

13.11 GPS DATA – Failure to provide the data collected daily by the spray aircraft's GPS [Section 10.6(A)] may be assessed at the rate of \$500 per incident.

West Virginia Department of Agriculture United States Department of Agriculture - Forest Service 2009 Gypsy Moth Program Treatment Areas



Quentin "Butch" Sayers
Gypsy Moth Program Manager
West Virginia Dept of Agriculture

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

- 1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
- 2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
- 3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
- 4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
- 5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
- 6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____ Signed: _____

Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code**. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the **West Virginia Code** may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (**West Virginia Code §61-5-3**), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: _____

Authorized Signature: _____ Date: _____