

Application and Review Checklist

The Application and Review Checklist are shown on the following pages.

SUMMARY DATA									
Name and Complete Mailing Address of the Applicant: DRAXIMAGE Inc. 16751 TransCanada Highway Kirkland, QC Canada, H9H 4J4	Name, Title, and Telephone Number of the Individual to Be Contacted If Additional Information or Clarification Is Needed by the NRC: Dr. Richard J. Flanagan Executive Vice-President Tel: (514) 630-7039 Fax: (514) 694-9295 Email: rflanagan@DRAXIMAGE.com								
The Applicant is (check one): <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px;"><input type="checkbox"/></td> <td>Custom User</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Manufacturer</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Distributor</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Manufacturer and Distributor</td> </tr> </table>	<input type="checkbox"/>	Custom User	<input checked="" type="checkbox"/>	Manufacturer	<input type="checkbox"/>	Distributor	<input type="checkbox"/>	Manufacturer and Distributor	If the Applicant Is Not the Manufacturer, Provide the Name and Complete Mailing Address of the Manufacturer: (agent) AAC Consulting Group 7361 Calhoun Place Suite 500 Rockville, MD 20855
<input type="checkbox"/>	Custom User								
<input checked="" type="checkbox"/>	Manufacturer								
<input type="checkbox"/>	Distributor								
<input type="checkbox"/>	Manufacturer and Distributor								
If the Applicant Is a Custom User, Provide the Name and Complete Mailing Address of the Distributor: n/a	Provide the Name, Complete Mailing Address, and Function of Other Companies Involved: (distributor) Cytogen Corporation (800) 833-3533 600 College Road East Princeton, NJ 08540								
Model Number: BrachySeed™ Pd-103 Model Pd-1	Principal Use Code (see Appendix F): (V) General Medical Use								
Name Used by the Industry to Identify the Product (e.g., Radiography Exposure Device, Teletherapy Source, Calibration Source, etc.): Brachytherapy source	For Use by: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px;"><input checked="" type="checkbox"/></td> <td>Specific Licensees Only</td> </tr> <tr> <td><input type="checkbox"/></td> <td>General Licensees Only</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Both Specific and General Licensees</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Persons Exempt from Licensing</td> </tr> </table>	<input checked="" type="checkbox"/>	Specific Licensees Only	<input type="checkbox"/>	General Licensees Only	<input type="checkbox"/>	Both Specific and General Licensees	<input type="checkbox"/>	Persons Exempt from Licensing
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Leak-Test Frequency: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px;"><input type="checkbox"/></td> <td>Periodic Leak-Testing is Not Required</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>6 Months</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Attached is justification for a leak test frequency of greater than 6 months</td> </tr> </table>	<input type="checkbox"/>	Periodic Leak-Testing is Not Required	<input checked="" type="checkbox"/>	6 Months	<input type="checkbox"/>	Attached is justification for a leak test frequency of greater than 6 months	Principal Section of the 10 CFR that Applies to the User (e.g., General Licensees under 10 CFR 31.5): 10 CFR 35 Radionuclides and Maximum Activities (including loading tolerance): Palladium-103, 100 milliCuries (total maximum contained activity in a single source)		
<input type="checkbox"/>	Periodic Leak-Testing is Not Required								
<input checked="" type="checkbox"/>	6 Months								
<input type="checkbox"/>	Attached is justification for a leak test frequency of greater than 6 months								
CERTIFICATION: THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30 AND 32 AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF. WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.									
Certifying Officer — Typed Name and Title									
Signature: original signed by Dr. Richard Flanagan, Exec. VP	Date: 4/24/2001								

CHECKLIST

Registration Certificate Holder: DRAXIMAGE Inc.

Model: BrachySeed™ Pd-103 Model Pd-1 source assembly

DESCRIPTION	OK/DEF	COMMENTS
DESCRIPTION/CONSTRUCTION		
If registration certificate holder is requesting to register more than one source/device on a certificate, are designs similar enough to do so?	NA	
Device/source design with complete engineering drawings (dimensions, tolerances, list of materials)	OK	
Assembly methods (screw, welds, etc.); verify integrity	OK	
Source mounting (size and integrity) and security	NA	
Is source ANSI classification sufficient (from ANSI N542-1977): Radiography - Unprotected 43515 Radiography - In Device 43313 Medical - Radiography. 32312 Medical - γ Teletherapy 53524 γ Gauges - Unprotected 43333 γ Gauges - In Device 43232 β Gauges, Low Energy γ Gauges, or X-ray fluorescence 32222 Oil Well Logging. 56522 Portable Moist/Density. 43333 Neutron Applications 43323 γ Irradiators (II, III, IV) 43424 γ Irradiators (I) 43323 Static Eliminators 22222 Smoke Detectors 32222	OK	ISO 2919-1999(E) recommended classification for Brachytherapy is C53211. This source tested to ISO/99/C53211.
Definition of shutter operation (locked in Off position, not locked in On position), Fail safe, spacing and tolerances	NA	
On-Off indicators (description, qty., location)	NA	
Safety interlocks, guards, etc. to prevent access to beam or high radiation levels	NA	
Corrosion between unlike materials (e.g., aluminum & steel, depleted uranium & steel, etc.)	OK	platinum and titanium
Shielding efficiency and integrity	NA	
For medical devices: Was a 510(k) provided? (provide written notification to FDA)	OK	510(k) #: K011119 BrachySeed Pd-103
Well logging sources must be nondispersible and nonsoluble. (see Appendix B for a list of approved well logging sources as of November 1991)	NA	
See "ANSI and Other Standards" list for references for particular source/device designs (e.g. radiography, Brachytherapy, etc.)	OK	ISO 2919 ISO 9978

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DESCRIPTION	OK/DEF	COMMENTS
LABELING		
Copy of label	OK	
Materials, dimensions, colors (note on registration certificate if labeling is exempt from the color requirements of 10 CFR Part 20)	OK	specified in RAI response
Permanent attachment and location(s) - visible to users?	OK	seeds labeled by package
Contents: Model#, Serial#, Isotope, Activity, Manufacturer, Date of Assay, Trefoil, "CAUTION - RADIOACTIVE MATERIAL" (Depleted Uranium information must be included)	OK	
CONDITIONS OF USE		
Expected working life of the source/device (years, operations)	OK	six months, half-life limited
Actions to be taken when product reaches end of its working life.	OK	Disposal
Maximum allowable temperature, vibration, shock, corrosion, etc. (during use, handling, storage, and transport)	OK	Use in hospital settings.
How the device will be used	OK	
Meets dose limits of Part 32 for distribution general licensees or persons exempt from licensing	NA	
PROTOTYPE TESTING/HISTORICAL USE		
Tests methods and conditions (for source and device)	OK	
Tests results	OK	
Years of use (incidents, failures, etc.)	NA	new source
Similarities to other sources/devices if they are used as basis.	OK	very similar to DraxImage LS-1 iodine-125 source
RADIATION PROFILES		
Survey instrument used (type, window thickness, sensitivity, etc.)	NA	Monte Carlo calculation
Conditions: including environments, scatter (product in beam), and use of guards and shields	NA	
Distance from source/surface (per ANSI 538-1979)	OK	
Shutter Open and Closed/Source Shielded	NA	
Verify radiation surveys for γ radiation meet inv^2 law.	OK	
Verify radiation surveys for non- γ radiation have not been calculated using inv^2 law.	NA	

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DESCRIPTION	OK/DEF	COMMENTS
QUALITY ASSURANCE		
Materials, subassemblies, services	OK	
Assembly methods (screws, welding, etc.)	OK	
Dimensions and tolerances	OK	
Activity, radiation levels, leak tests	OK	
QA Manual and comparison of manual to Regulatory Guide 6.9	OK	
INSTALLATION		
Fixed, portable, movable, fixed installation but portable source housing	NA	
Inherent shielding, inaccessibility	NA	
Beam access: size of air gap/opening to beam and use of interlocks, locks, additional shielding or barriers	NA	
Mounting integrity	NA	
SAFETY INSTRUCTIONS		
Operation, maintenance, calibration, damage/failure, specific warnings, leak test, and radiation surveys	OK	package insert provided
ACCOMPANYING DOCUMENTATION		
Leak tests results and radiation surveys	OK	
Transportation documents	OK	
Operation, maintenance, calibration, damage/failure, specific warnings, leak test, and radiation survey instructions if applicable	OK	
For Distribution to General Licensees: Verify NRC Regions and Agreement State listing is up-to-date and copies of all pertinent regulations	NA	

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DESCRIPTION				OK/DEF	COMMENTS
SERVICING					
The following activities may be performed by the persons indicated:				OK	Source is a seed intended for implant into patients at licensed medical facilities. Damage seeds are not used. Seeds are not re-used.
Activity	by a General Licensee	Only by a Specific Licensee	Will be Offered by the Applicant		
Installation		✓			
Relocation	NA	NA	NA		
Maintenance	NA	NA	NA		
Repair	NA	NA	NA		
Source Exchange	NA	NA	NA		
Calibration	NA	NA	NA		
Leak Testing		✓	✓		
Radiation Survey		✓	✓		
Training		✓			
FOREIGN VENDORS					
Drop ship				NA	
Who and where is source installed				OK	
Leak test and radiation surveys				OK	
QA in the U.S.				OK	

William R. Ward
10/30/2001

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