

# ***Update on Nuclear Test Personnel Review (NTPR) Program***

***Brief for: Veterans' Advisory Board on Dose  
Reconstruction***

***(VBDR)***

***Briefer: Paul K. Blake, Ph.D.***

***Time: 4:00 PM – 4:30 PM***

***Date: September 19, 2007***





# Briefing Outline

- Program update
- Technical report status
- Level II & III document status
- Expedited dose initiative
- Quality initiative: double-blind study
- VBDR-DTRA\* recommendation status
- The road ahead
  
- Projected Briefing Time: 30 minutes



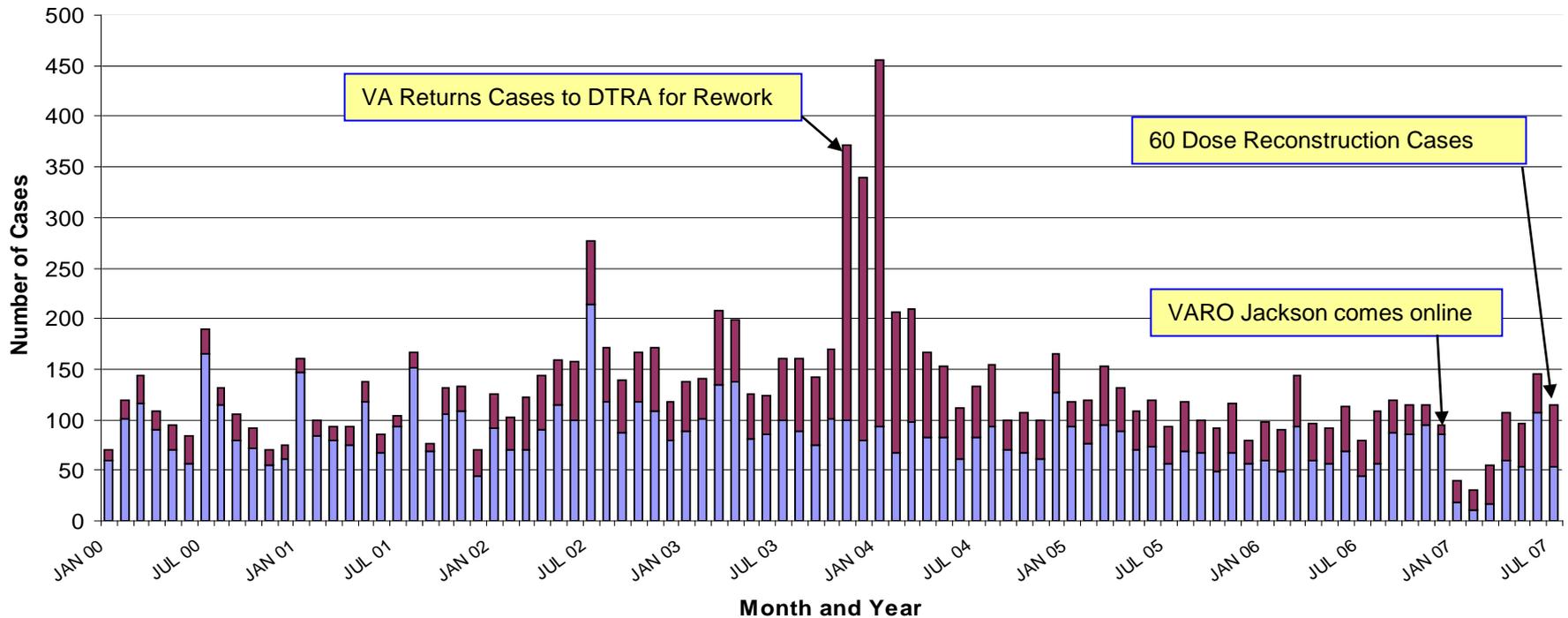
\*DTRA: Defense Threat Reduction Agency



# NTPR Incoming Case Load History

Historical Incoming Case Load (January 2000- July 2007)

■ All Other Incoming ■ Non Presumptive Incoming



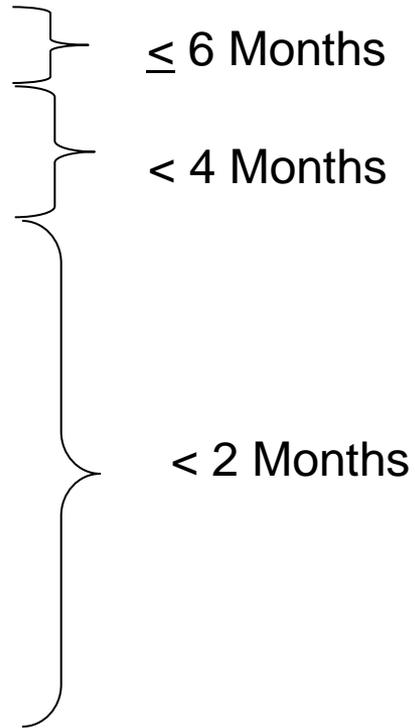


# NTPR Case Load

## Type of Case

Non-Expedite (~7/month) VA Non-Presumptive
Expedite-SPARE* Required (~28/month) VA Non-Presumptive
Expedite-SPARE Not Required (~13/month) VA Non-Presumptive
Department of Veterans Affairs (VA) (~28/month) Presumptive
Department of Justice (DOJ) (~21/month) Presumptive
Veteran (~24/month) Personal Verification and/or Dose

## Time to Complete (Goal)



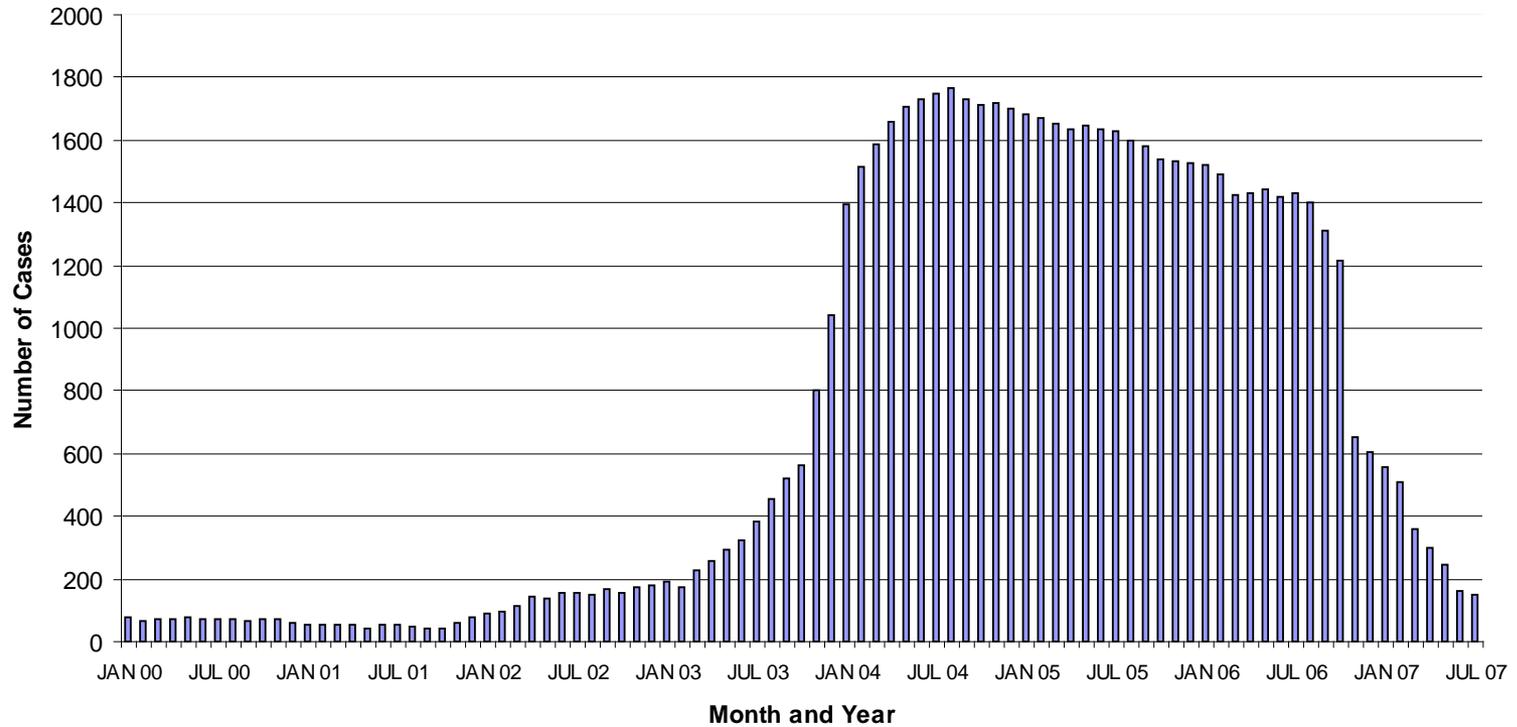
**TOTAL 121 Incoming Cases/month (Average, May-Jul 2007)**

**\*SPARE: Scenario of Participation And Radiation Exposure**



# NTPR Pending Case Load History

Historical Actual Non-Presumptive Pending Case Load (January 2000- July 2007)





# NTPR-VA Non-Presumptive Case Status

- VA Non-Presumptive cases – 27 Aug 2007: 146
  - Expedite-SPARE\* Required: 59
  - Expedite-SPARE Not Required: 53\*
  - Hiroshima & Nagasaki: 27
  - Non-Expedite: 7
- VA Non-Presumptive cases > 6 mo: 21
- VA Non-Presumptive cases < 50 days: 90

\*: includes 41 cases pending verification



# NTPR Other Case Status

- Other cases (27 Aug 2007): 119
  - Verification VA: 26
  - Verification DOJ: 28
  - Verification Personal: 38
  - Dose Assessment-Personal: 27
- Other cases > 6 mo: 31



# DTRA Technical Report Status

Title	Status
Neutron Dose Upper Bounds	Published: DTRA-TR-07-3
Probability of Causation Screening Dose	Published: DTRA-TR-07-4
Bounding Analysis of Fallout Radionuclide Fractionation	Published: DTRA-TR-07-5
Fallout Inhalation and Ingestion Dose (FIIDOS)	Published: DTRA-TR-07-11
Plutonium Bioassay Results	Final Review: DTRA-TR-07-27
Nevada Test Site Inhalation and Resuspension Dose	At NCRP for peer-review
Dermal Contamination Dose	At NCRP for peer-review

Reports available at: <http://www.dtra.mil/> (see “Veterans”)



# Document Hierarchy

1. Policy and Guidance documents
  - a. External: Code of Federal Regulations, National Research Council reviews, VBDR recommendations
  - b. Internal: Policy and Guidance Manual
2. Program Planning documents
  - a. Quality Plan
  - b. Program Management Plan
3. Implementing documents
  - a. Procedures
  - b. Technical guidance
  - c. Training materials
4. Operating documents
  - a. Worksheets
  - b. Forms



# Level II & III Document Status

<b>Level II &amp; III Documentation</b>	<b>Draft Date</b>	<b>Final Date</b>
<b>Quality Plan</b>	<b>30-Mar</b>	<b>Done</b>
<b>NTPR Quality Assurance Procedures</b>	<b>31-May</b>	<b>Done</b>
<b>Program Management Plan</b>	<b>30-Apr</b>	<b>30-Sep</b>
<b>Program Standard Operating Procedures</b>		
<b>Veteran Assistance</b>	<b>29-Jun</b>	<b>31-Oct</b>
<b>Case File Management</b>	<b>30-Mar</b>	<b>Done</b>
<b>Dose Reconstruction</b>	<b>31-May</b>	<b>31-Oct</b>
<b>Records Research and Support</b>	<b>15-Jun</b>	<b>30-Sep</b>
<b>Information Management - Library</b>	<b>31-Jul</b>	<b>31-Oct</b>
<b>Information Management - Network</b>	<b>31-Jul</b>	<b>31-Oct</b>
<b>Program Management</b>	<b>31-Oct</b>	<b>31-Dec</b>
<b>External Agency Support</b>	<b>30-Nov</b>	<b>31-Dec</b>
<b>Process Improvement</b>	<b>30-Nov</b>	<b>31-Dec</b>



# SC5 Expedited Dose Initiative

- In May 2007, the VBDR recommended that DTRA develop screening and expedited dose assessment (where scientifically justified) for cancers not already being expedited.
- DTRA embraced this initiative and published an NTPR point paper. Expedited processing was initiated shortly thereafter.



# Expedited Dose Initiative (cont.)

- In addition to skin, prostate, and posterior sub-capsular (PSC) cataracts the following cancers/sites were determined to be scientifically eligible for expedited processing:
  - Oral cavity and pharynx
  - Colon and rectum
  - Pancreas
  - Bladder
  - Nervous system
  - Lung, respiratory tract (other than lung)
  - Bone and red marrow
  - Eye
  - Thyroid, endocrine glands (other than thyroid)
- These sites account for ~50% of expedited doses



# Expedited Dose Initiative (cont.)

- The impact of the collective expedited process has been the virtual elimination of full radiation dose assessments (RDAs).
- RDAs are currently performed for cases involving multiple operations and/or a cancer/condition not on the expedite list.
  - In these cases, it is appropriate to perform a full RDA due to the complexity and uniqueness of the veteran's exposure scenario. However, to provide maximum benefit of the doubt and fairness to the veteran, the higher doses (expedited or RDA) are reported to VA.



# Expedited Dose Initiative (cont.)

- In summary, VBDR expedited dose recommendations have allowed DTRA to:
  - Provide faster responses to our veterans and VA
  - Enable a significant increase in favorable service-connection outcomes for veterans with skin and cataract claims
  - Reduce the NTPR backlog of VA Non-Presumptive cases
  - Free up funds to support our troops:
    - CY2006: 882 expedited cases (DTRA savings: \$10.0M)
    - CY2007: 475 expedited cases (DTRA savings: \$5.2M)
- VBDR recommendations are win-win for veterans and DTRA



# Double-Blind Studies

- NTPR dose reconstruction contractors initially performed independent RDAs on identical cases in Mar 2007
- The second round of independent NTPR RDA comparisons occurred in Aug 2007:
  - NTPR and VBDR reviewed the results of the double-blind dose reconstructions.
  - The independent contractors responded to technical questions from NTPR and VBDR.



# Double-Blind Studies (cont.)

- Mar 2007 - results differed primarily due to differences in supporting materials provided to contractors
- Aug 2007:
  - RDAs briefed at VBDR sub-committee (#1) meeting on 30 Aug 2007.
  - Results were significantly better than Mar 2007, reflecting the continuing improvement in the NTPR RDA Standard Operating Methods and Procedures.



# Double-Blind Studies (cont.)

- Documentation provided to consultants:
  - 32 CFR 218
  - NTPR Policy & Guidance Manual
  - Dose Reconstruction Draft Procedures
  - DTRA Technical Reports
  - NAS/NRC Publications
  - SAIC Memos
  - Ship Deck Log Excerpts
  - NTPR Software

(CD-ROM contained 321 files in 49 folders)



# VBDR-DTRA Recommendation Status

2006 Jul Recommendations:	Status
1. Develop expedited procedures for skin RDAs	Done
2. Develop expedited procedures for prostate RDAs	Done
3. Publish an analysis of beta dose uncertainties	Ongoing
4. Develop a quality plan; develop a comprehensive SOP that includes QA elements/metrics	Ongoing
2006 Dec Recommendations:	
1. Initiate double blind RDA analysis by 2 independent analysts; assessment of results by pre-defined metrics	Ongoing
2. Provide VBDR key QA tracking results	Ongoing
2007 Mar Recommendations:	
1. Develop a detailed SOP that ensures appropriate treatment of upper bounds	Ongoing
2. Provide VBDR final drafts of SOPs and quality plan	Ongoing
3. Develop expedited procedures for PSC cataract RDAs	Done
4. DTRA and VA agree on a process regarding competent medical authority for non-radiogenic conditions.	No progress
2007 May Recommendations:	
1. Develop expedited procedures for most other cancers, where scientifically justified	Done
2. Complete development of templates; improve annotation of calculations and equations	Ongoing
3. Minimize information requested of veteran	Done



# The Road Ahead

- 2<sup>nd</sup> Half 2007:
  - Complete scheduled report and documentation publication
  - Complete older cases and ensure all future cases are completed within six months
- 2008:
  - Update 32 CFR 218, "DTRA Dose Reconstruction Policy"
  - Complete work on VBDR recommendations to DTRA