

## **SCOPE AND CONTENT NOTE**

This collection, aside from the first image, is a group of prints from photographs taken at post WWII atomic bomb test sites. Most of the images in this collection have attached a caption which numbers the image and briefly describes the scene. The numbers on almost all of the prints are preceded by "AEC" which stands for Atomic Energy Commission. The Atomic Energy Commission was established after the Atomic Energy Act of August 1, 1946 was passed. The agency was responsible for managing research and development of nuclear weapons as well as alternate uses for nuclear energy. Most of its resources were used during the late 1940s and '50s to produce atomic weapons, but the agency also built a few small nuclear power plants. The AEC was disbanded in 1974 and its responsibilities are now split between the Department of Energy and the Nuclear Regulation Commission<sup>1</sup>. Images in this collection are ordered by the AEC numbers on their label or chronologically, if no number was available. Captions are enclosed in parentheses.

## **INVENTORY**

### **Box 1**

1: *Nagasaki, Japan. Smoke cloud billows up over Nagasaki, Japan after bombing by atomic bomb.* This photograph documents the second atomic bomb used by the United States to attack Japan during World War II. The event occurred on 9 August 1945<sup>2</sup>. (AEC-51-4028)

2: *Chalk River reactor building, Canada.* This was the first large scale nuclear reactor in Canada, becoming operational in July, 1947<sup>3</sup>. (AEC-51-4122)

3: *First atomic bomb test at Bikini Lagoon – Able Day, July 1, 1946. Lowering high over Bikini lagoon and still soaring high is the Able Day mushroom of the first atomic crossroads explosion.* Able Day was the first atomic test in the Marshall Islands<sup>4</sup>. (SC-259-359)

4: *Ship destroyed by atomic explosion at Bikini.* Displays the results from Able Day, an event designed to study nuclear effects on ships and equipment. There were also tests on live animals to study the effects nuclear energy exposure<sup>5</sup>.

5: *Atomic Test Site, Yucca Flat, Nevada, April 22, 1952. Mushroom cloud rises over Yucca Flat, as dust cloud begins to form below. In the foreground are some of the nearly 200 press, pictorial, radio, and TV representatives who observed the explosion.* This detonation was known as the Charlie Event, a part of Operation Tumbler-Snapper at the Nevada Proving Ground. Operation Tumbler-Snapper consisted of eight detonations between April and June, 1952. Troops that viewed the event were then tested by Human Resources to determine their psychological reactions<sup>6</sup>. (AEC-52-4479)

6: *Schenectady, NY. Huge concrete saucer, 179 feet in diameter and 42 feet deep, is the foundation for a 225 foot steel sphere, largest ever constructed, that will house an atomic power plant being built by the Atomic Energy Commission for the US Navy.* (AEC-52-4576)

**ATOMIC BOMB TESTING IMAGES,  
1945-1953**

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7: *Nevada Proving Ground. Demolished House #1 after the March 17, 1953 atomic detonation at Yucca Flat.* This is from the Annie Event of Operation Upshot-Knothole. The operation consisted of eleven detonations. It intended to determine if nuclear weapons should be added to US arsenals and what civil defenses would be needed in the event of nuclear attack<sup>7</sup>. (AEC-53-4568)

8: *Nevada Proving Ground. Atomic detonation on May 8, 1953 at the AEC's Nevada Proving Ground.* Photograph is from Encore Event of Operation Upshot-Knothole. Over 3,000 personnel took part in troop maneuvers, observer programs, and damage evaluations. Observers were placed 9,400 meters from the detonation site<sup>8</sup>. (AEC-53-4703)

9: *Cannon firing atomic shell at Nevada Proving Ground.* This photograph shows the first atomic cannon. It was shot on 25 May 1953 as the Grable Event in Operation Upshot-Knothole<sup>9</sup>.

10: *Atomic detonation – Nevada Proving Ground – date unknown.*

11: *Nevada Proving Ground. A high speed camera captures early stage of the fire ball of an atomic device, during the 1953 tests at the Nevada Proving Ground.* (AEC-53-4763)

12: *National Reactor Testing Station, Idaho. Interior of the EBR.* This photograph is from the National Reactor Station at Idaho Falls, Idaho, where the first atomic submarine was built. The EBR stands for Experimental Breeder Reactor and was used to generate usable electricity from nuclear energy in 1951<sup>10</sup>. (AEC-53-4759)

13: *National Reactor Testing Station, Idaho. A member of AEC's security patrol on duty at the Submarine Thermal Reactor site. The building housing the STR is in the background.* (AEC-54-4949)

14: *National Reactor Testing Station, Idaho. Special ventilation equipment installed at AEC's test facility where the world's first atomic submarine engine was built.* The person seen in the picture gives an idea of the scale. (AEC-54-4950)

15: No caption, undated. Atomic detonation off the coast of a Pacific beach.

16: No caption, undated. A point during the progression of a fire ball during atomic detonation.

**PROVENANCE NOTE**

This collection was a gift of John W. Landis '39 in October, 2010. Landis was sent to the AEC ca. 1953 to analyze the effects of atomic bomb blasts.

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<sup>1</sup> "Atomic Energy Commission." *Encyclopædia Britannica*. 2010. Encyclopædia Britannica Online. 01 Dec. 2010 <<http://www.britannica.com/EBchecked/topic/41669/Atomic-Energy-Commission>>.

<sup>2</sup> "Nagasaki." *Encyclopædia Britannica*. 2010. Encyclopædia Britannica Online. 01 Dec 2010. <<http://www.britannica.com/EBchecked/topic/401619/Nagasaki>>.

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<sup>3</sup> “1940s-1950s.” Canadian Nuclear Safety Commission. 08 Jan 2009. 01 Dec 2010. <<http://www.cnsccsn.gc.ca/eng/about/past/1940s/index.cfm>>

<sup>4</sup> “Operation Crossroads: Fact Sheet.” U.S. Defense Nuclear Agency. *Operation Crossroads, 1946*. Washington: Defense Nuclear Agency, 1984. 11 Aug 2002. 01 Dec 2010. <<http://www.history.navy.mil/faqs/faq76-1.htm>>

<sup>5</sup> “Operation Crossroads: Fact Sheet.” 01 Dec 2010.

<sup>6</sup> “Operation Tumbler-Snapper: Fact Sheet.” Defense Threat Reduction Agency. 01 Dec 2010. <[http://www.dtra.mil/documents/ntpr/factsheets/Tumbler\\_Snapper.pdf](http://www.dtra.mil/documents/ntpr/factsheets/Tumbler_Snapper.pdf)>

<sup>7</sup> Operation Upshot-Knothole, 1953: United States Atmospheric Nuclear Weapons Tests Nuclear Test Personnel Review. Defense Nuclear Agency. 01 Dec 2010. <<http://www.dtra.mil/documents/ntpr/historical/1953%20-%20DNA%206014F%20-%20Operation%20UPSHOT-KNOTHOLE%20-%20Shot%20BADGER.pdf>>

<sup>8</sup> Operation Upshot-Knothole.

<sup>9</sup> Operation Uphsot-Knothole.

<sup>10</sup> Schultz, Carisa. “INL History.” Idaho National Laboratory. U.S. Department of Energy. 01 Dec 2010. <[https://inlportal.inl.gov/portal/server.pt?open=514&objID=1311&parentname=CommunityPage&parentid=46&mode=2&in\\_hi\\_userid=200&cached=true](https://inlportal.inl.gov/portal/server.pt?open=514&objID=1311&parentname=CommunityPage&parentid=46&mode=2&in_hi_userid=200&cached=true)>