

# ELM

Environmental Life-Cycle Management

## Sandia Implements NightWatchman® to Save Energy

Sandia Corporation (Sandia) is committed to environmental protection with its mission and recognizes that the environment must be protected and preserved for future and current generations. Sandia takes this responsibility seriously and in an effort to reduce energy use, NightWatchman®, a desktop power-management system, has been implemented. The system allows Sandia's Information Technology (IT) services to manage the power consumption of Windows 7 desktops by sending them into automatic standby (or "sleep") during non-standard work hours. To accommodate non-standard work hours, as well as telecommuting and other offsite computing requirements, NightWatchman® has a "Web Wake-Up" feature, which allows a computer to be remotely "woken up" from anywhere and at any time.

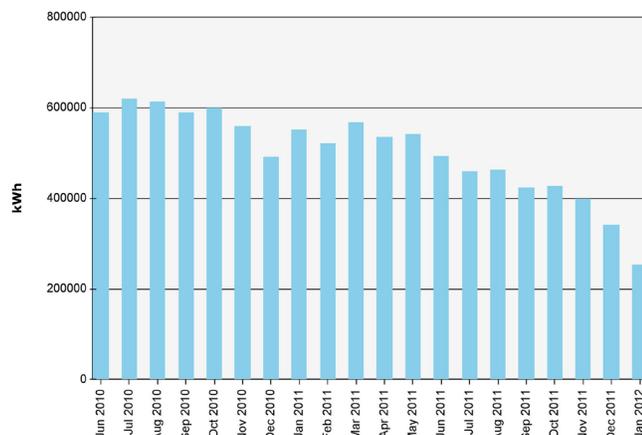
In January 2011, NightWatchman® implementation became part of Sandia's corporate policy. Throughout the spring and summer of 2011, owners of Windows 7 desktops at Sandia National Laboratories (SNL), New Mexico, California and Tonopah Test Range received an installation package with the NightWatchman® power policy. The policy places Windows 7 desktops into standby at 6:00 p.m. every day. NightWatchman® operates on all SNL Windows 7 desktop computers, except those with Desktop Management Software exemptions.

Sandia estimated that during nonworking hours, up to 13,000 computers are left on during the week and up to 9,000 during the weekend. Employing the standby or hibernate conditions when a computer is not in use reduces energy consumption by 93 percent during the week and 100 percent on weekends, respectively. The figure below shows the reduced monthly power consumption of computers using NightWatchman®. Based on the year-to-year energy reduction results for August and September in FY10 and FY11 (157,451 and 160,287 kWh, respectively), the system will save nearly two million kilowatt hours and almost 1,400 tons of carbon dioxide per year. These savings will increase in FY12 with the migration of Vista desktops users to Windows 7, adding approximately 2,000 additional desktops eligible for NightWatchman® deployment.

*Sandia National Laboratories  
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**Total Monthly Power Consumption**  
Shows the total monthly power consumption for all computers where NightWatchman is installed



# The Cable Debris Site – A Voluntary Corrective Action is Completed

The Cable Debris Site was located in Technical Area III at Sandia National Laboratories/New Mexico (SNL) within the boundaries of Kirtland Air Force Base. The 2009 Voluntary Corrective Action (VCA) included a cleanup of the site (pre-cleanup conditions shown below), confirmatory soil sampling, and submittal of regulatory reports to the New Mexico Environment Department (NMED).



Cable Debris Site prior to cleanup activities.

The debris at the site consisted of piles of discarded materials in a surge basin (a constructed depression that provides additional storage and retention of water during heavy rainfall). The size of the basin is approximately 1.3 acres. There were piles of metal cables, other metal debris (rebar, steel pipes, tubes, welded steel fixtures). Also included were spent rocket motors and powder actuated cable cutters, and reinforced concrete rubble. There were small piles of construction-type debris (wood, electric cable, trash), cobbles, fill dirt, and other solid waste that included paper, plastic and small metal debris (including lead fragments). Other items included poly-lined 55-gallon drum of soil, a container of activated carbon, a car battery, and numerous dry cell batteries.

The history of the site is not known; the discarded material was probably placed there sometime in the early 1990s. The site was not identified as a potential waste site with other sites at SNL in the late 1980s and early 1990s. Based on visual inspection, there was no indication that these piles contained anything other than solid waste; there was no soil staining or other signs of contamination.

The cleanup was conducted between August 2008 and January 2009. The metal debris was segregated and sized in order to be placed in roll-off containers. Concrete

rubble was broken up as needed, and rebar or other metals were segregated. A radiological survey was performed on the materials and there was no indication that there was any radiological contamination.

Once all the materials were removed from the surface of the site, separated, and containerized, the following quantities were tallied:

- 5 roll-off containers of metal
- 150 tons of concrete rubble
- Approximately 1,500 pounds of lead fragments
- 10 cubic yards of general solid waste
- 400 pounds of wood
- 400 pounds of electrical cable
- 9 spent rocket motors
- 5 spent cable cutters and 1 live cable cutter
- 20-gallon container of dry cell batteries and 1 car battery
- 55-gallon drum of soil (sampled and determined to be clean)
- 1 container of activated carbon

The metal, concrete rubble, wood, and electrical cable were all recycled. The spent rocket motors and cable cutters were recycled through Sandia's Reapplications High Risk Material Program. The lead fragments were transported into the lead storage facility at SNL. The solid waste, including the drum of clean soil was transported to the sanitary landfill. The batteries were disposed of as hazardous waste through SNL's Hazardous Waste Management Facility.



Cable recycling at the Cable Debris Site.



Concrete staging at the Cable Debris Site.

The NMED reviewed the final report and the analytical data and determined that the site is suitable for closure as Corrective Action Complete without institutional controls.

The site was graded and reseeded with native shrub and grass seeds in September 2009. A temporary irrigation system was set up for supplemental watering until the plants were established.

A summary of the investigation will be available at the April 17, 2012 DOE semi-annual public meeting. There will also be a public comment period in March for the Cable Debris Site. For more information, contact Mike Nagy at [mdnagy@sandia.gov](mailto:mdnagy@sandia.gov).



Powder actuated cable cutters at the Cable Debris Site.



Grading the site post-VCA at the Cable Debris Site.

Following removal of the materials, 25 confirmatory soil samples were collected from the surface of the site to ensure that no contamination was present. The samples were analyzed for metals, high explosives (HE) and radionuclides. Soil samples were also collected from the drum of soil found on the site.

The analytical results revealed elevated levels of 10 metals, no detections of HE, and the presence of cesium-137 above background levels. A laboratory reporting error was found in the results for cadmium and thallium. Following correction of the error, the results were within allowable background and soil screening values.

A risk assessment was performed for the elevated metals and cesium-137. In summary, the human health and ecological risks are acceptable per the NMED guidance for a residential land-use scenario.



Reseeding and supplemental watering at the Cable Debris Site.

## ELM Mission

The Environmental Life-Cycle Management (ELM) mission ensures long-term protection of human health and the environment and proactive management toward sustainable use and protection of natural and cultural resources affected by Sandia's operation and operational legacies. This mission will be accomplished by working with the line and support organizations in proactively identifying potential environmental impacts and applying environmental processes and guidance.

### Next Event:

What: DOE/DoD Semi-Annual Public Meeting

When: Tuesday, April 17, 2012

6:00 PM - 8:00 PM

Where: Cesar Chavez Community Center

7505 Kathryn SE, Albuquerque, NM 87108

For more information, go to:

<http://elm.sandia.gov>



If you do not wish to receive future ELM newsletters, please e-mail Katrina Wagner at [kmwagne@sandia.gov](mailto:kmwagne@sandia.gov) or call John Weckerle at 505-845-6026.

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