

STONE CASTLE RECYCLING PAROWAN SITE EPA REMOVAL ACTION

The U.S. Environmental Protection Agency, Region 8, 1595 Wynkoop Street, Denver

November 2014

EPA Removal Action Starting December 2014 – What’s Happening

The U.S. Environmental Protection Agency (EPA) has determined that the Stone Castle Recycling-Parowan Site poses a danger to human health and the environment. Hazardous debris at the site includes discarded and abandoned electronic waste, primarily cathode ray tube (CRT) televisions. An EPA Response Action at the site, located just outside of the town of Parowan in southwest Utah, is set to begin. The response action will include:

- ◆ Mechanical processing to crush the hazardous debris with a horizontal grinder;
- ◆ On-site chemical treatment using water, Portland cement, and phosphate fertilizers to stabilize and immobilize the crushed debris;
- ◆ Off-site transportation and appropriate landfill disposal of all wastes present at the site.

The removal action is expected to take about two weeks. Perimeter air and dust monitoring will be conducted throughout to ensure the safety of the nearby Parowan community. After debris materials are transported off-site, site soils will be excavated and replaced with clean soil and reseeded.



Cathode Ray Tubes - Lead and Debris

The Stone Castle Recycling –Parowan Site is located in the arid and scenic corner of southwest Utah known for Zion National Park and Cedar Breaks National Monument. The site is located 1.5 miles west of the town of Parowan, along the Interstate 15 corridor. The electronics waste facility was one of three that, until recently, Stone Castle, LLC operated in the towns of Clearfield, Cedar City, and Parowan, Utah. The company dismantled electronics, sold the component parts, and recovered raw materials.

During the dismantling procedure, Stone Castle removed the cathode-ray from the leaded-glass vacuum tube inside Cathode Ray Tube (CRT)

televisions. Stone Castle segregated, crushed, and sent this glass to other leaded glass makers to melt down and create new leaded-glass CRTs.

Following the move from analog to digital broadcasting, and the corresponding shift from CRT televisions to plasma and liquid-crystal display (LCD) high-definition televisions, the market for leaded glass collapsed. Stone Castle had large volumes of nearly worthless CRTs and recovered raw materials without sufficient revenue. Electronic wastes, placed into corrugated cardboard "Gaylord boxes", were frequently stored outside of already full warehouse storage areas, where they rapidly deteriorated, spilling their contents onto the ground, subjecting the contents to further weathering.

The storage of these materials outside led to multiple fires at Stone Castle facilities. In March 2014, less than a year after Stone Castle, LLC began operations at the Parowan site, a fire occurred at and the electronic waste materials were abandoned. During the fire, the Parowan Fire Department used heavy equipment to push containerized CRTs and electronic wastes away from the waste materials engulfed in the fire to create a fire break. As a result, there are three piles of material at the site: 340 cubic yards of burned electronic waste debris; 830 cubic yards of mixed electronic waste debris; and 640 cubic yards of intact CRT televisions in deteriorating corrugated cardboard boxes. In August 2014, acting on information provided by both the EPA Region 8 Resource Conservation and Recovery Act (RCRA) Program and the Solid

and Hazardous Waste Division of the Utah Department of Environmental Quality (UDEQ), EPA began assessing and evaluating the site. The site evaluation included sampling of soils and debris piles and determining ways to recycle and/or treat the hazardous debris on site.

Key conclusions from the site evaluation included:

- ◆ **Lead in the CRT glass is the primary contaminant present at the site.** Lead is prone to leaching into the ground from broken CRT glass once the cathode ray tube is ruptured and exposed to weathering in the environment. It is estimated that there is more than 380 tons of leaded glass in the electronic wastes at the site.
- ◆ **The hazardous debris piles are not restricted and can be easily accessed.**
- ◆ **The hazardous debris piles are exposed to the elements.** Rain and snowfall can leach lead at high levels from the site into the environment.
- ◆ **The hazardous debris piles are combustible.** New fires could be ignited and expose people living nearby to hazardous particulates in the air.

For more information, please feel free to contact:

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