

Responses to George Anastas Questions 700-C Ventilation Fan Restart

1. What mass of salt is contained in the ductwork?

We used and estimated 60 tons of salt to perform the analysis, this is a conservative estimate. The majority of this salt deposit predates 2014.

2. What is the contamination at the base of the exhaust shaft?

The contamination at the base of the shaft is Americium, Plutonium and Neptunium (actual Ci value is unknown). Exhaust air currently passes through this area and up the exhaust shaft and is sampled both before and after filtration. The samples taken at the top of the shaft indicate that the exhaust air that has traversed this area has radiological doses many times lower than EPA and DOE limits for radioactive emissions, before it is filtered.

3. What is the average contamination along the exhaust shaft? What is the maximum contamination along the exhaust shaft?

As noted for question 2, air samples taken at the top of the exhaust shaft indicate that the air that has traversed the shaft has radiological doses many times lower than EPA and DOE limits for radioactive emissions, before it is filtered.

4. Are there color photographs of the interior and the exterior of the ductwork?? If not, why not? If yes, please provide these color photographs. Is there corrosion of the ductwork? If yes, what is the range of weakness in the surface of the ductwork?

Yes, there is some corrosion of the ductwork and analysis shows the corrosion does not impact the integrity of the ductwork. We do have photos that are in color, and they are posted as part of the WIPP Town Hall questions.

5. Has there been a recent structural analysis of the exhaust ductwork contaminated with salt and radioactive materials?

Yes, we have conducted a structural analysis of the exhaust ductwork and the analysis shows there are no integrity issues with the ductwork.

6. The radioassay report of LANL Drum 68600 dated 6/6/14 indicates 2.2 Ci of Am-241. DOE/WIPP now claim that LANL Drum contained 7.1 Ci of Am-241. Provide the basis of the claim of only 7.1 Ci of Am-241 was in LANL Drum 68660. What is the rationale and analysis that that 0.64 grams or 1.8 grams of Am-241 can contaminate many hundreds of thousands of square feet in the underground, travel up a 2000+ feet exhaust shaft, through ductwork, by-pass filters, some gets trapped on filters, get released to the facility site and environs.

LANL drum 68660 was one of the two drums generated from parent drum S855793. The TAT report (<https://www.epa.gov/radiation/2014-radiological-event-wipp>) used known information about parent drum S855793 from process knowledge records and real time radiography to estimate quantities. These estimated values were then coupled with various assumptions to estimate the Am-241 content in this drum to be 2.09 g or 7.1 Ci.

The official, certified assay data for Am-241 are 0.64 g or 2.2 Ci Am-241 for drum 68660 as shown in the WIPP Waste Data System (WDS). This data was obtained on the CBFO audited

and certified, and EPA inspected and approved, High Efficiency Neutron Counter Unit #1 operated at Los Alamos National Laboratory under the WIPP Central Characterization Program.

As an added measure of conservatism, the calculated 7.1 Curie value is used in some historical release and exposure analyses in lieu of the measured, certified value of 2.2 Ci.