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### **Status and Growth of Underground Science at WIPP**

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The science community is increasingly taking advantage of research opportunities in the government-owned Waste Isolation Pilot Plant (WIPP), 655m underground near Carlsbad, NM. Discoveries so far include viable bacteria, cellulose, and DNA in 250 million-year old salt, preserved in an ultra-low background-radiation setting. Supplementing the overburden's shielding against cosmic radiation, terrestrial background from the host formation is less than five percent that of average crustal rock. In the past, WIPP accommodated development and testing of neutral current detectors for the Sudbury Neutrino Observatory and dark matter research, and it currently hosts two experiments pursuing neutrino-less double-beta decay. That scientists can listen to whispers from the universe in proximity to megacuries of radioactive waste lends, of course, credibility to the argument that WIPP itself is very safe. Almost a century of regional petroleum and potash extraction history and more than three decades of WIPP studies have generated a comprehensive body of knowledge on geology, mining technology, rock mechanics, geochemistry, and other disciplines relevant to underground science. Existing infrastructure is being used and can be expanded to fit experimental needs. WIPP's exemplary safety and regulatory compliance culture, low excavating and operating cost, and the high probability of the repository operating at least another 40 years make its available underground space attractive for future research and development. Recent proposals include low-photon energy counting to study internal dose received decades ago, investigations into ultra-low radiation dose response in cell cultures and laboratory animals (e.g., hormesis vs. linear no-threshold) and detectors for dark matter, solar and supernova neutrinos, and proton decay. Additional proposals compatible with WIPP's primary mission are welcome.