

TEDX

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Potential Health Effects of Residues in 6 New Mexico Oil and Gas Drilling Reserve Pits Based on Compounds Detected in at Least One Sample Revised November 15, 2007

List of Substances Detected

The following substances were detected in six drilling reserve pits in the San Juan Basin of northwestern New Mexico and the Permian Basin of southeast New Mexico. An industry committee comprised of 19 oil and gas companies that operate in New Mexico sponsored a sampling and analysis program (SAP) of pit solids. The SAP was completed by a third party consultant and analytical laboratory. The SAP focused on drilling/reserve pits prior to closure.

This list was amended on November 15, 2007 after discovering that the laboratory doing the analysis admitted it purposefully added nine chemicals (listed below) to the samples prior to testing. This amended document is a reanalysis of the chemicals in the reserve pits excluding those added by industry.

| | | |
|-------------------------|--------------------|-------------------------------|
| 1,2,4-Trimethylbenzene | Iron | Uranium |
| 1,3,5-Trimethylbenzene | Isopropylbenzene | Zinc |
| 1-Methylnaphthalene | Lead | Oil and Grease |
| 2-Butanone | m+p-Xylene | Radium 226 |
| 2-Methylnaphthalene | Manganese | Radium 228 |
| 3+4 Methylphenol | Mercury | Chloride |
| Acetone | Methylene chloride | Sulfate |
| Arsenic | Naphthalene | |
| Barium | N-Butylbenzene | |
| Benzene | N-Propylbenzene | |
| Benzo(a)pyrene | O-xylene | Substances eliminated |
| Cadmium | Pentachlorophenol | <i>Dibromofluoromethane</i> |
| Carbon disulfide | Phenol | <i>2-Fluorophenol</i> |
| Chromium | P-Isopropyltoluene | <i>2,3,4-Trifluorotoluene</i> |
| Copper | Sec-butylbenzene | <i>2,4,6-Tribromophenol</i> |
| Cyanide, total | Selenium | <i>2-Fluorobiphenyl</i> |
| Diesel range organics | Silver | <i>4-Bromofluorobenzene</i> |
| Ethylbenzene | Tert-butylbenzene | <i>Decachlorobiphenyl</i> |
| Fluoride | Tetrachloroethene | <i>O-Terphenyl</i> |
| Gasoline range organics | Toluene | <i>Tetrachloro-m-xylene</i> |

Possible health effects associated with the 42 substances detected in 6 New Mexico drilling reserve pits

| Percentage | Number | Effect |
|------------|--------|--------------------------------------|
| 100% | 42 | gastrointestinal and liver toxicants |
| 95% | 40 | respiratory toxicants |
| 90% | 38 | neurotoxicants |
| 88% | 37 | skin and sensory organ toxicants |
| 79% | 33 | cardiovascular and blood toxicants |
| 79% | 33 | kidney toxicants |
| 69% | 29 | developmental toxicants |
| 69% | 29 | reproductive toxicants |
| 60% | 25 | result in other disorders |
| 57% | 24 | immunotoxicants |
| 57% | 24 | wildlife toxicants |
| 50% | 21 | endocrine disruptors |
| 48% | 20 | carcinogens |
| 31% | 13 | mutagens |

Possible health effects associated with 24 (57%) volatile substances in 6 drilling reserve pits in New Mexico:

| Percentage | Number | Effect |
|------------|--------|--------------------------------------|
| 100% | 24 | gastrointestinal and liver toxicants |
| 96% | 23 | respiratory toxicants |
| 96% | 23 | skin and sensory organ toxicants |
| 92% | 22 | neurotoxicants |
| 83% | 20 | kidney toxicants |
| 79% | 19 | cardiovascular and blood toxicants |
| 79% | 19 | developmental toxicants |
| 75% | 18 | wildlife toxicants |
| 75% | 18 | result in other disorders |
| 67% | 16 | reproductive toxicants |
| 63% | 15 | immunotoxicants |
| 54% | 13 | carcinogens |
| 54% | 13 | endocrine disruptors |
| 42% | 10 | mutagens |

Possible health effects associated with 4 (10%) soluble substances in 6 New Mexico drilling reserve pits

| Percentage | Number | Effect |
|------------|--------|--------------------------------------|
| 100% | 4 | cardiovascular and blood toxicants |
| 100% | 4 | gastrointestinal and liver toxicants |
| 100% | 4 | kidney toxicants |
| 100% | 4 | neurotoxicants |
| 100% | 4 | reproductive toxicants |
| 100% | 4 | respiratory toxicants |
| 100% | 4 | skin and sensory organ toxicants |
| 75% | 3 | developmental toxicants |
| 75% | 3 | endocrine disruptors |
| 75% | 3 | wildlife toxicants |
| 75% | 3 | result in other disorders |
| 50% | 2 | carcinogens |
| 50% | 2 | mutagens |
| 50% | 2 | immunotoxicants |

