(MCLG) nor a maximum concentration limit (MCL) for molybdenum because it occurs only infrequently in water. According to the most recent relevant report of the National Academy of Sciences (*Drinking Water and Health*, 1980, Vol. III), molybdenum from drinking water, except for highly contaminated sources, is not likely to constitute a significant portion of the total human intake of this element. However, as noted above, uranium tailings are often a highly concentrated source of molybdenum, and it is therefore appropriate to include a standard for molybdenum in this rule. In addition to the hazard to humans, our analysis of toxic substances in tailings in the Final Environmental Impact Statement for Remedial Action Standards for Inactive Uranium Processing Sites (EPA 520/4–82–013–1) found that, for ruminants, molybdenum in concentrations greater than 0.05 ppm in drinking water would lead to chronic toxicity. This concentration included a safety factor of 10; the standard provides for a safety factor of 5, which we consider adequately protective for ruminants.

The standard for combined uranium-234 and uranium-238 due to contamination from uranium tailings is 30 pCi per liter. The level of health risk associated with this standard is equivalent to the level proposed as the MCL for uranium in drinking water by EPA (56 FR 33050, July 18, 1991). The standard promulgated here applies to remedial actions for uranium tailings only. When the Agency has established a final MCL for isotopes of uranium in drinking water, we will consider whether this standard needs to be reviewed.

The limit for nitrate (as nitrogen) is 10 mg per liter. This is the value of the drinking water standard for nitrate.

B. The Cleanup Standard

With the exception of the point of compliance provision, the standard (subpart B) for cleanup of contaminated groundwater contains the same basic provisions as the standard for disposal in subpart A. In addition, it provides for the establishment of supplemental standards under certain conditions, and for use of institutional control to permit passive restoration through natural flushing when no public water system is involved.

Although the standards specify a single point of compliance for conformance to the groundwater standards for disposal, this does not suffice for the cleanup of groundwater that has been contaminated before final disposal. Instead, in this case compliance must be achieved anywhere contamination above the levels established by these standards is found or is projected to be found in groundwater outside the disposal area and its cover. The standards require DOE to establish a monitoring program adequate to determine the extent of contamination (§ 192.12(c)(1)) in groundwater around each processing site. The possible presence of any of the inorganic or organic hazardous constituents identified in tailings or used in the processing operation should be assessed. The plan for remedial action referenced under § 192.20(b)(4) should document the extent of contamination, the rate and direction of movement of contaminants, and consider future movement of the plume. The cleanup standards normally require restoration of all contaminated groundwater to the levels provided for under § 192.02(c)(3). These levels are either background concentrations, the levels specified in Table 1 in the rule, or ACLs. In cases where the groundwater is not classified as of limited use, any ACL should be determined under the assumption that the groundwater may be used for drinking purposes. In certain circumstances, however, supplemental standards set at levels that would be achieved by remedial actions that come as close to meeting the otherwise applicable standards as is reasonably achievable under the circumstances may be appropriate. Such supplemental standards and ACLs are distinct regulatory provisions and may be considered independently. The regulations provide that supplemental standards may be granted if:

- Groundwater at the site is of limited use (§ 192.11(e)) in the absence of contamination from residual radioactive materials; or
- Complete restoration would cause more environmental harm than it would prevent; or
- Complete restoration is technically impracticable from an engineering perspective.

The use of supplemental standards for limited use groundwater applies the groundwater classification system proposed in EPA's 1984 Groundwater Protection Strategy. As proposed for use in these standards (52 FR 36003, September 24, 1987), Class III encompasses groundwaters that are not a current or potential source of drinking water because of widespread, ambient contamination caused by natural or human-induced conditions, or cannot provide enough water to meet the needs of an average household. These standards adopt the proposed definition of limited use groundwater. However, for the purpose of qualifying for supplemental standards, human-induced conditions exclude contributions from residual radioactive materials.

Water which meets the definition of limited use groundwater may, nevertheless, reasonably be or be projected to be useful for domestic, agricultural, or industrial purposes. For example, in some locations higher quality water may be scarce or absent. Therefore, § 192.22(d) requires the implementing agencies to remove any additional contamination that has been contributed by residual radioactive materials to the extent that is necessary to preserve existing or reasonably projected beneficial uses in areas of limited water supplies. At a minimum, at sites with limited use groundwater, the supplemental standards require such management of contamination due to tailings as is required to assure protection of human health and the environment from that contamination. For example, if the additional contamination from the tailings would cause an adverse effect on drinkable groundwater that has a significant interconnection with limited use groundwater over which the tailings reside, then the additional contamination from the tailings will have to be abated.

Supplemental standards are also appropriate in certain other cases similar to those addressed in Section 121(d)(4) of the Superfund Amendments and Reauthorization Act of 1986 (SARA). SARA recognizes that cleanup of contamination could sometimes cause environmental harm disproportionate to the effects it would alleviate. For example, if fragile ecosystems would be impaired by any reasonable restoration process (or by carrying a restoration process to extreme lengths to remove small amounts of residual contamination), then it might be prudent not to completely restore groundwater quality. Such a situation might occur, for example, if the quantity of water that would be lost during remediation is a significant fraction of that available in an aquifer that recharges very slowly. Decisions regarding tradeoffs of environmental damage can only be based on characteristics peculiar to the specific location of the site. We do not yet know whether such situations exist in the UMTRCA program, but EPA believes that use of supplemental standards should be possible in such situations, after thorough investigation and consideration of all reasonable restoration alternatives.