



KEY

| □ Locations | ○ Types of Samples |
|--------------------------------------|--------------------------|
| Bk Background Location | AP Airborne Particulates |
| DF Dairy Farm | AV Aquatic Vegetation |
| DWS Drinking Water Supply | DW Drinking Water |
| Est Estuary | E Effluents |
| FW Freshwater | Ex External Dose |
| IM Impoundment | F Fish |
| NF Nearest Farms | FC Food Crops |
| NG Nearest Garden | Fg Forage & Feed |
| NR Nearest Residences | GW Groundwater |
| OC Ocean | IW Irrigation Water |
| SB Site Boundary | M Meat |
| SWI SaltWater [Freshwater] Interface | Mi Milk |
| | Se Sediment |
| | SF Shellfish |
| | So Soil |

Figure 11.3.9 Locations and Types of Environmental Monitoring Samples

Table 11.3.5 Nuclear Power Reactor-1

| Sample Type | Sampling Sites | Collection Frequency | Analysis Frequency |
|---|---|---|--|
| External Radiation Thermoluminescent Dosimeters (TLDs) | 20+ Sites [SB] (each sector), [NR] +, [Bk], [Ntown] [NSchool] | Monthly | Monthly readout |
| Noble Gases Ionization Chamber | 1 Site: [E] | Continuously | Continuous readout |
| Airborne Particulates Low-velocity Air Sampler | 4+ Sites: [E, SB +, NR +, Bk] | Weekly | Continuous monitor on effluent; γ -spectrometry: weekly |
| Airborne Radio-iodines Charcoal canister | 6+ Sites: [E, Bk, SB +, NR +, NF, DF] | Weekly | Continuous monitor on effluent; γ -spectrometry: Weekly |
| Liquid Effluent | Effluent [E] | Continuous on effluent line; batch samples from waste tanks prior to release | Continuous monitoring, γ -spectrometry on each batch sample, ^{90}Sr , ^3H on monthly composites |
| Surface Water | Surface waters upstream [Bk] and freshwater [FW] and [IM], estuary [Est] and ocean [OC] | Monthly | γ -spectrometry on each batch sample, ^{90}Sr , ^3H on quarterly composites |
| Groundwater | Nearest wells in direction of groundwater flow. [GW] | Quarterly | γ -spectrometry on each batch sample, ^{90}Sr , ^3H , ^{226}Ra on annual composites |

Table 11.3.6 Nuclear Power Reactor-2

| Sample Type | Sampling Sites | Collection Frequency | Analysis Frequency |
|----------------|--|---|--|
| Drinking Water | Nearest downstream public water supply [DWS] | Semicontinuous composite (collected by water supply operator every 3-6 hours) | γ -spectrometry, ^{90}Sr , ^3H on monthly composites |
| Milk | Nearest dairy farms [DF] + Dairy | Weekly or biweekly at farms, monthly at dairy | γ -spectrometry weekly; ^{90}Sr , ^3H on monthly composites |
| Food Crops | Nearest garden [NG] and nearby farms [NF] | At harvest (either annually or semi-annually) | γ -spectrometry; ^{90}Sr if other nuclides are detected |
| Fish | Water source receiving effluent [FW], [IMP], [Oc] & [Bk] | During fishing season or semi-annually | γ -spectrometry; ^{90}Sr if other nuclides are detected |
| Shellfish | Water source receiving effluent [FW], [IMP], [Oc] & [Bk] | Semi-annually | γ -spectrometry; ^{90}Sr if other nuclides are detected |
| Sediments | Water source receiving effluent [FW], [IMP], [Oc] & [Bk] | Semi-annually | γ -spectrometry |

Table 11.3.7 Research Reactors [Power \geq 1 megawatt (thermal)]

| Sample Type | Sampling Sites | Collection Frequency | Analysis Frequency |
|--|---|--|--|
| External Radiation Thermoluminescent dosimeters (TLDs) | 3 Sites: [SB, NR, Bk]. More for significant releases | Quarterly | Quarterly readout |
| Airborne Particulates Low-velocity air sampler (e.g., moving tape sampler) | 1 Site: [E] | Continuously | As needed |
| Noble Gases Ionization chamber | 1 Site: Effluent [E] | Continuously | Continuous readout |
| Liquid Effluent | 1 Site: Effluent [E] | Batch or continuously | Each release or continuous; γ -spectrometry on monthly composite |
| Drinking Water | Pathway to nearest downstream public water supply [DWS] | Semi-continuous or periodic composite samples depending on the nature and level of the released nuclides | γ -spectrometry (^3H for D_2O reactors) on quarterly composites |