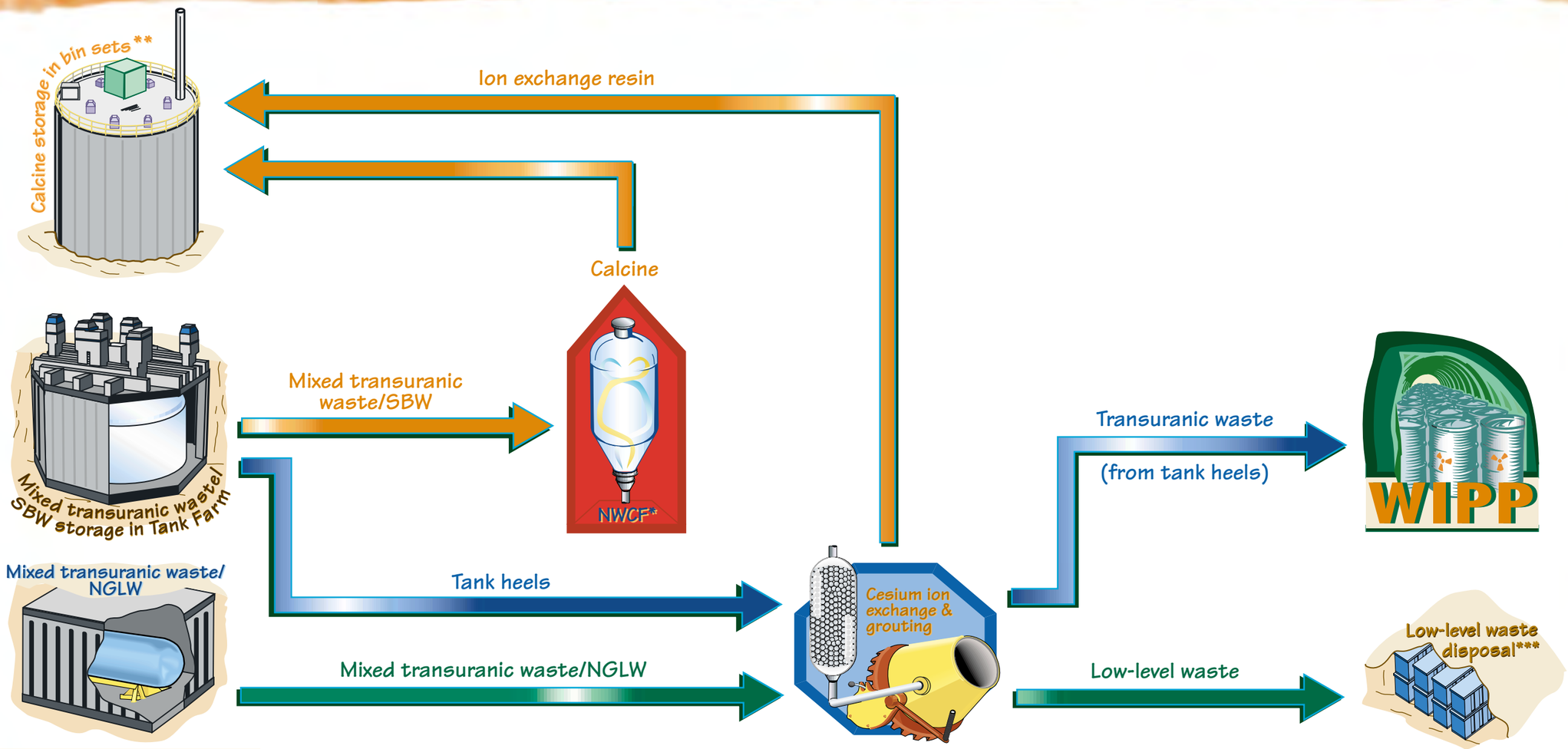


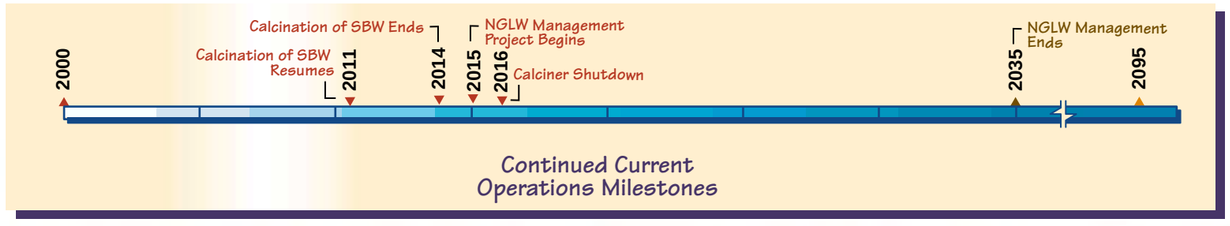
LEGEND

NGLW	Mixed transuranic waste/ newly generated liquid waste
NWCF	New Waste Calcining Facility
SBW	Mixed transuranic waste/ sodium-bearing waste
WIPP	Waste Isolation Pilot Plant

* Including high-temperature and maximum achievable control technology upgrades.

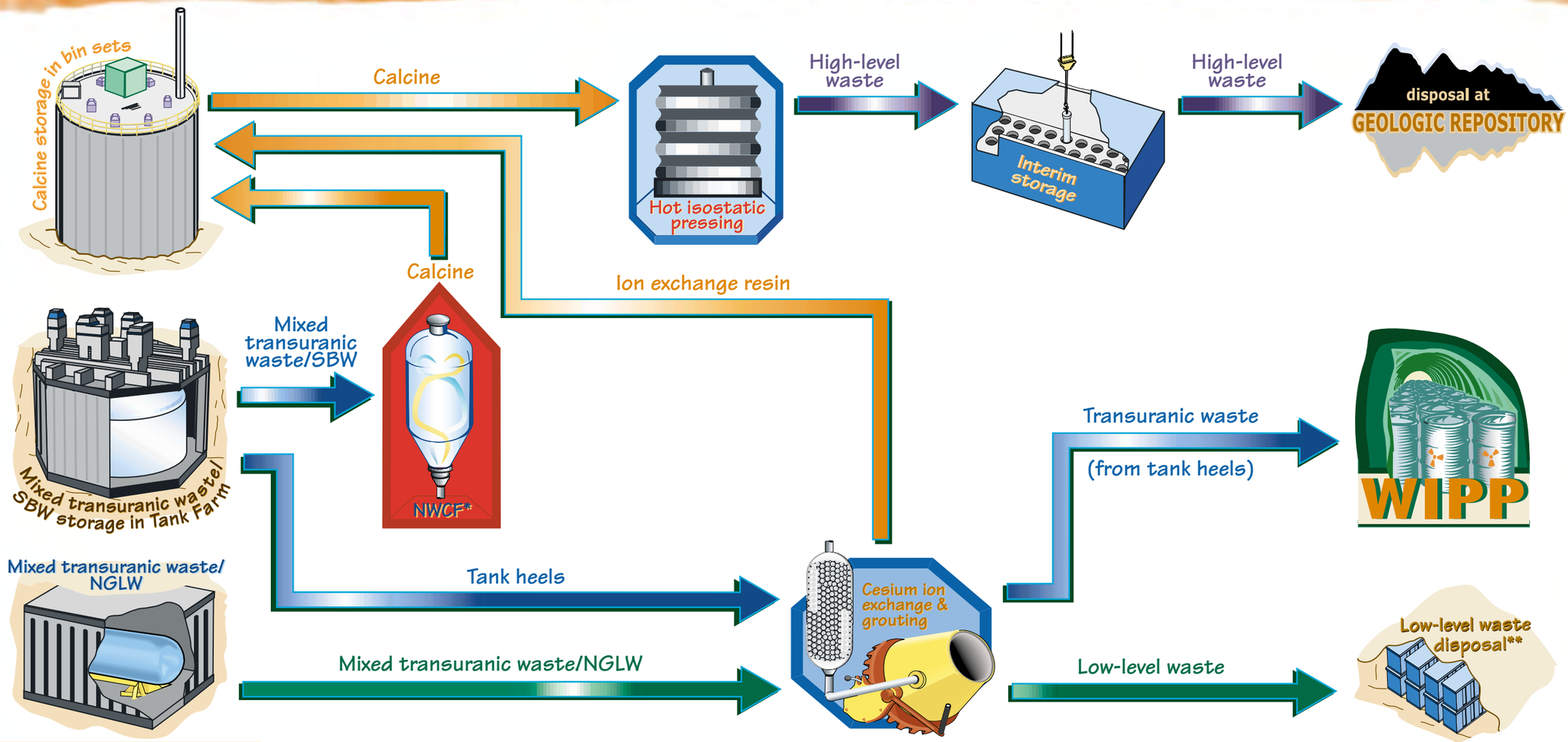
** Calcine would be transferred from bin set #1 to bin set #6 or #7.

*** Location may be determined by Waste Management Programmatic EIS decision and may be on or off the INEEL.



Continued Current Operations Milestones

FIGURE 3-2.
Continued Current Operations Alternative.



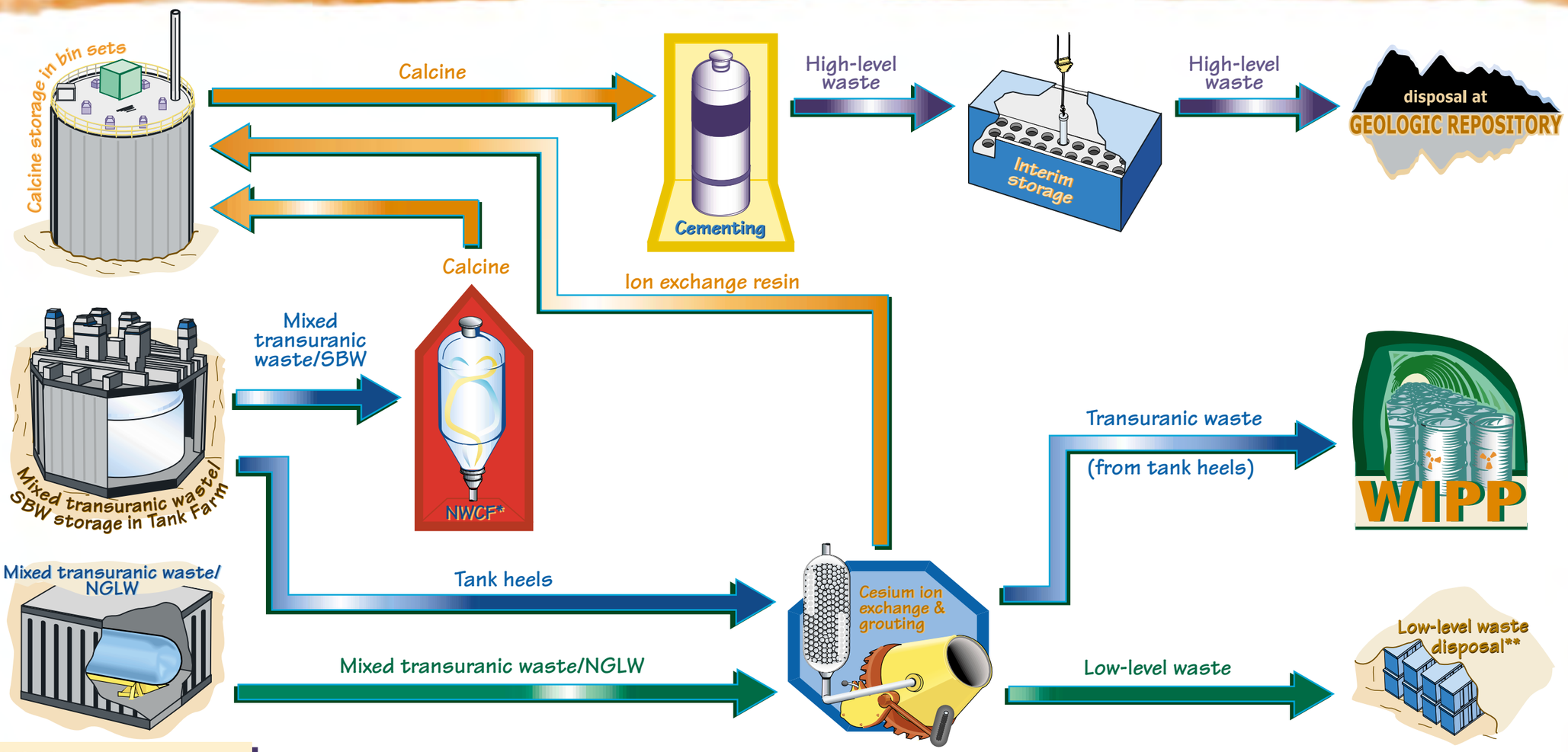
LEGEND

NGLW	Mixed transuranic waste/ newly generated liquid waste
NWCF	New Waste Calcining Facility
SBW	Mixed transuranic waste/ sodium-bearing waste
WIPP	Waste Isolation Pilot Plant

* Including high-temperature and maximum achievable control technology upgrades.

** Location may be determined by Waste Management Programmatic EIS decision and may be on or off the INEEL.

FIGURE 3-10.
Hot Isostatic Pressed Waste Option.



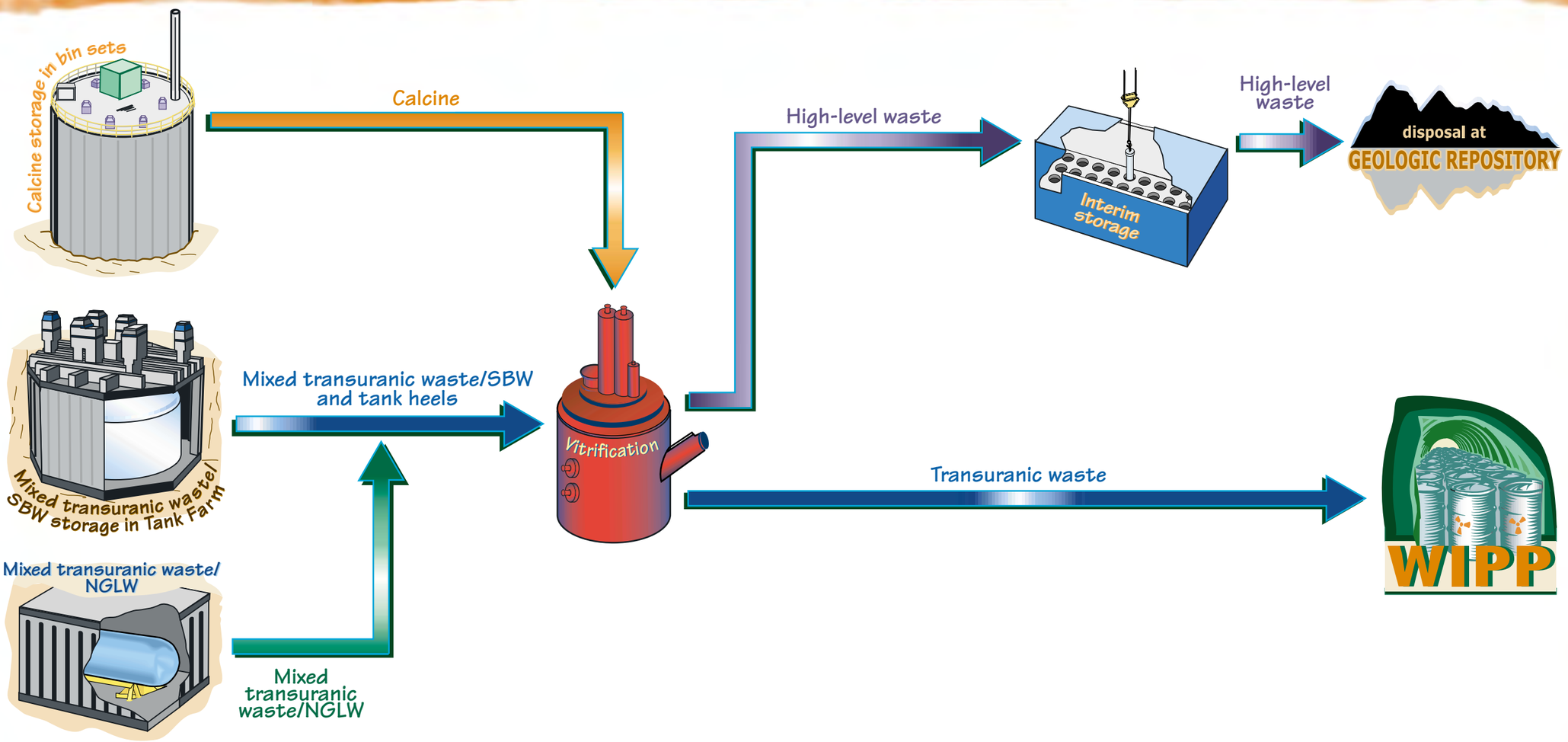
LEGEND

NGLW	Mixed transuranic waste/ newly generated liquid waste
NWCF	New Waste Calcining Facility
SBW	Mixed transuranic waste/ sodium-bearing waste
WIPP	Waste Isolation Pilot Plant

* Including high-temperature and maximum achievable control technology upgrades.

** Location may be determined by Waste Management Programmatic EIS decision and may be on or off the INEEL.

FIGURE 3-12.
Direct Cement Waste Option.



LEGEND

NGLW	Mixed transuranic waste/ newly generated liquid waste
SBW	Mixed transuranic waste/ sodium-bearing waste
WIPP	Waste Isolation Pilot Plant

Early Vitrification Milestones

FIGURE 3-13.
Early Vitrification Option.

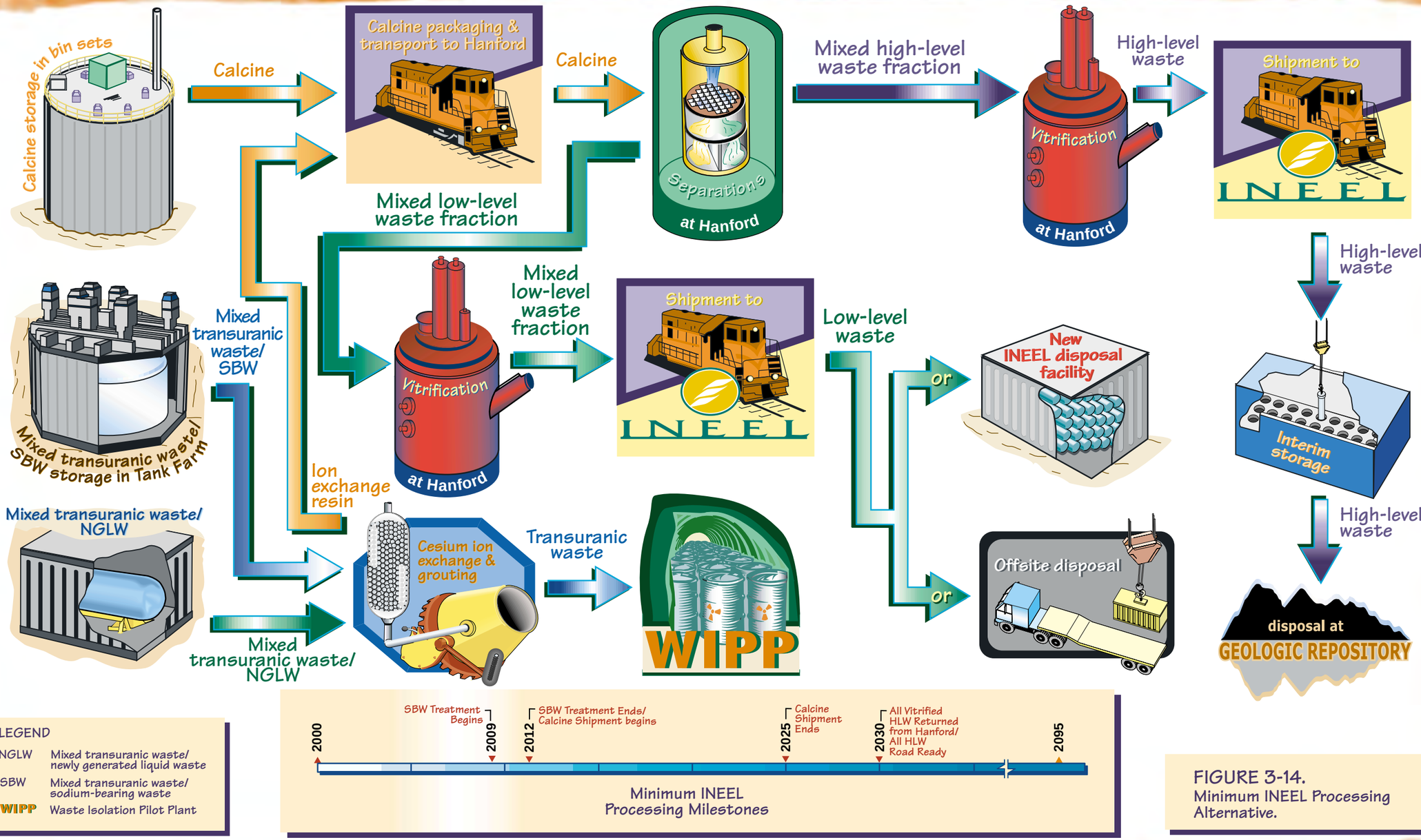
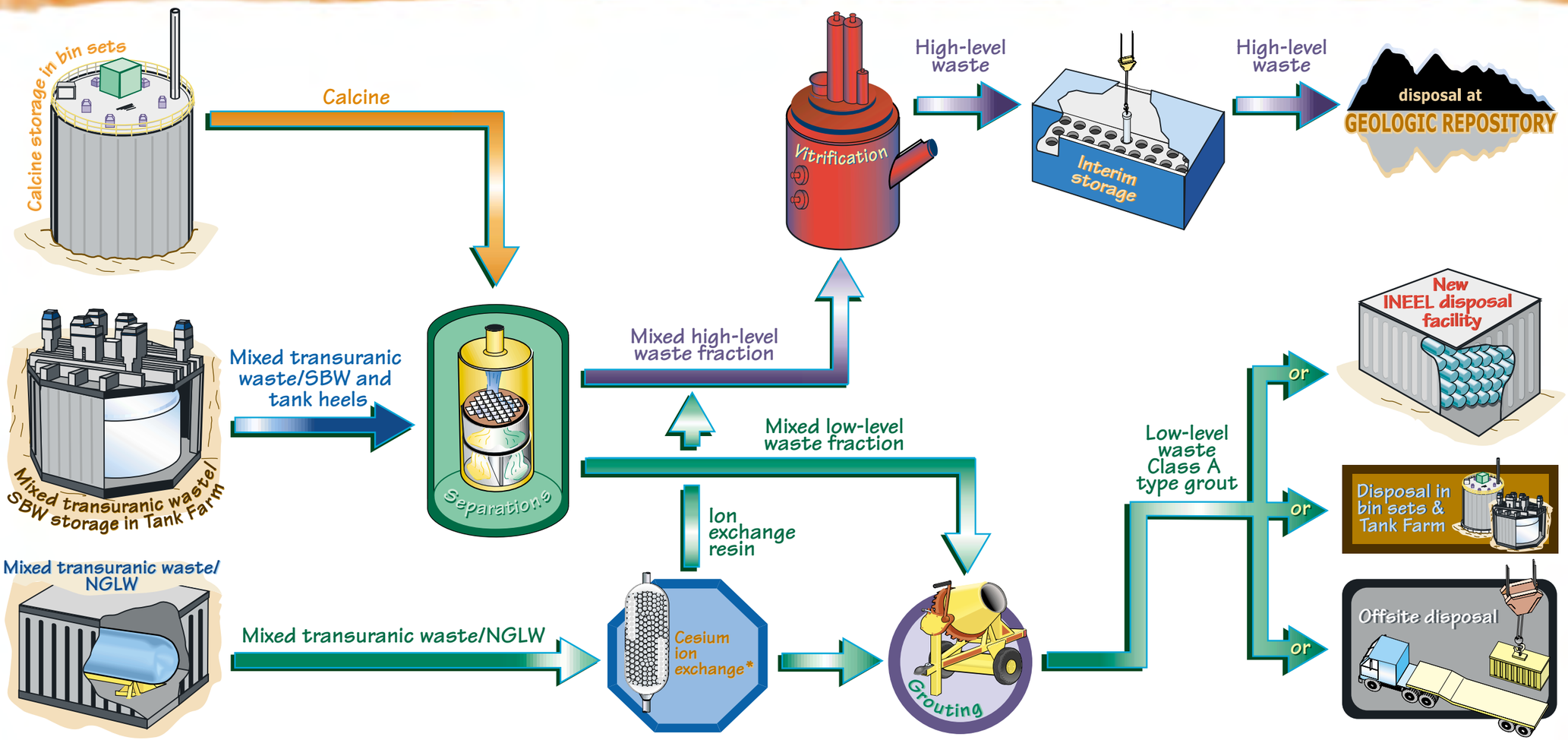


FIGURE 3-14.
Minimum INEEL Processing Alternative.



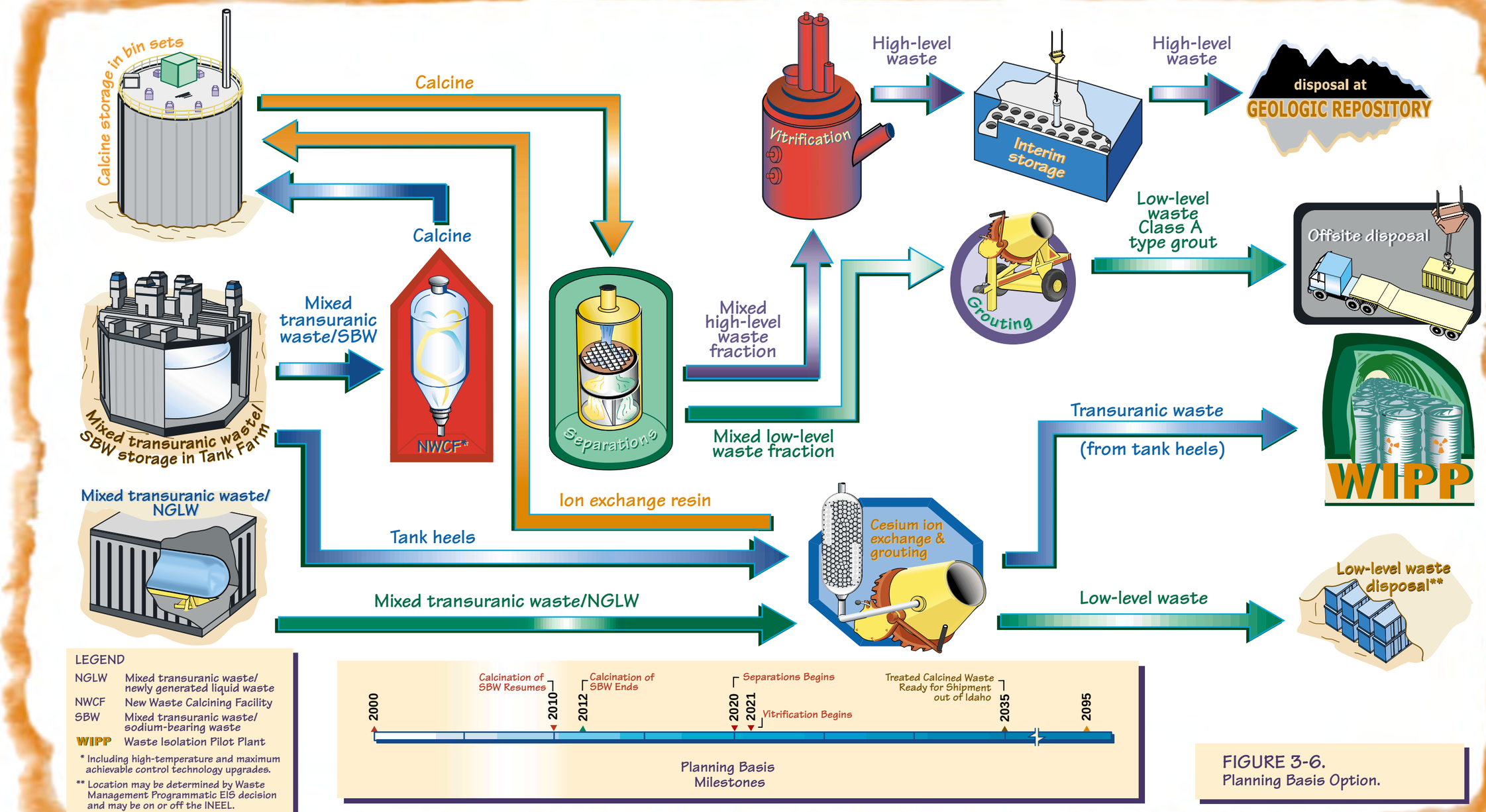
LEGEND

NGLW Mixed transuranic waste/ newly generated liquid waste

SBW Mixed transuranic waste/ sodium-bearing waste

* Some mixed transuranic waste (newly generated liquid waste) may not need to be treated with ion exchange and could be sent directly to the grouting facility.

FIGURE 3-3.
Full Separations Option.



LEGEND

NGLW	Mixed transuranic waste/ newly generated liquid waste
NWCF	New Waste Calcining Facility
SBW	Mixed transuranic waste/ sodium-bearing waste
WIPP	Waste Isolation Pilot Plant

* Including high-temperature and maximum achievable control technology upgrades.

** Location may be determined by Waste Management Programmatic EIS decision and may be on or off the INEEL.

FIGURE 3-6.
Planning Basis Option.

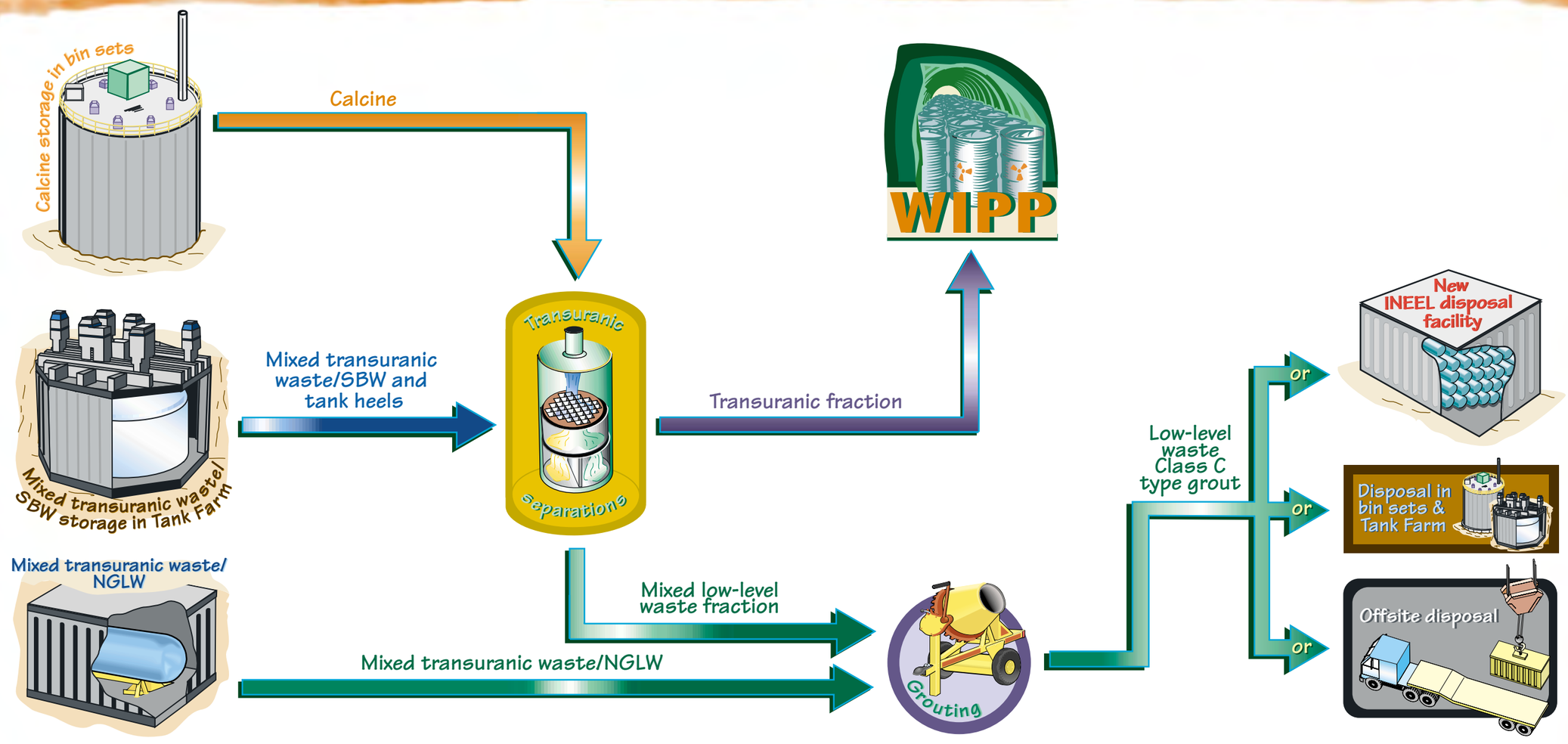


FIGURE 3-8.
Transuranic Separations Option.

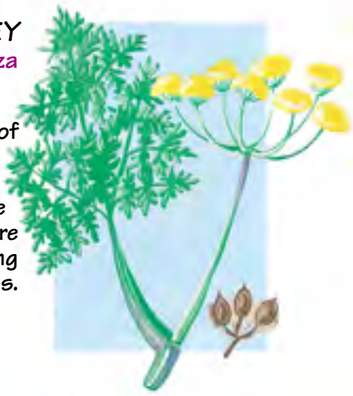
CACTUS
wogwai'bi

Opuntia polycantha is gathered for food. This common cactus grows abundantly throughout INEEL.

FIREWEED
bea sa nip
ba ba sh ea cah

Many members of the ***Epilobium*** genus are used for food, medicine, and tools. They are common throughout INEEL.

DESERT PARSLEY
do za



Some members of the genus ***Lomatium*** are used for food or medicine. They are uncommon but are scattered along INEEL roadsides.

BALSAM ROOT
doyatsayaha'n

A few members of the genus ***Balsamhorriza*** are used for food and medicine. They are common and scattered about the buttes around INEEL.

TANSY MUSTARD
ah za
a gah boe

Several members of the genus ***Descurainia*** are used for food and medicine. They are common in disturbed areas around INEEL.

CHOKECHERRY
dongiape

Prunus virginiana is gathered for food, medicine, tools, and fuel. It is a common tree found growing on buttes around INEEL.

WILD ONION
ge'nga

The ***Allium*** genus is collected for food, medicine, and dye. This onion is common throughout INEEL.

SERVICEBERRY
deambi, wi'yembi

Some members of the ***Amelanchier*** genus are used for food, medicine, and tools. They are common on buttes throughout INEEL.

BEGGAR'S TICKS
sohna

Bidens cernua is gathered for a source of food. This flower is common. It grows abundantly throughout INEEL's disturbed areas.

INDIAN RICEGRASS
wai

Oryzopsis hymenoides is harvested for food. This grass is common and abundant throughout INEEL.

GOOSEFOOT
kah zo ne bah
kah zo ne peh

Many members of the genus ***Chenopodium*** are used for food. They are common and abundant throughout INEEL.

MINT
bagwana

Some members of the ***Mentha*** genus are collected for medicine. These herbs are uncommon but are sometimes found growing along Big Lost River.

LEGEND
Blue = Bannock plant name
Red = Shoshone plant name
Violet = plant name shared by both cultures

FIGURE 4-4. (1 of 2)
Plants used by the Shoshone-Bannock located on or near INEEL.

WILD RYE
bohawehani'

Many members of the *Elymus* genus are used for food and tools. These grasses are common and abundant throughout INEEL.

GUM WEED
sanaka bada'

Grindelia squarrosa is used for medicine. This flower is common in disturbed areas throughout INEEL.

SAGEBRUSH
be ho ve
saw wah be

The genus *Artemisia* is used for tools and medicine. This genus is common and abundant throughout INEEL.

WOOD'S ROSE
tsiemb, tsiabe

Rosa woodsii is used for multiple purposes. It is used as food, for smoking, for medicine, and in rituals. This rose is common and abundant along the Big Lost River and at Big Southern Butte.

COYOTE TOBACCO
buhibahu

Nicotiana attenuata is used for smoking and medicine. It is uncommon but can be found along the Big Lost River.

WILLOW
seheebi

The *Salix* genus is used for medicine. These small trees are common in moist areas throughout INEEL.

GOOSEBERRY
washibo go'mbi

Many members of the *Ribes* genus are used for food. These shrubs are common and grow scattered throughout INEEL.

SUNFLOWER
'ake

Some members of the genus *Helianthus* are used for food and medicine. These flowers are common along INEEL roadsides.

THISTLE
doyaba'ke

Some members of the genus *Cirisium* are gathered for food. They are commonly found scattered throughout INEEL.

PLANTAIN
bia'sonip
ba ba sh ea cah

Some members of the genus *Plantago* are used for food and medicine. They are uncommon on INEEL.

LILY
sogo, sigobi

Several members of the *Calochortus* genus are gathered for food. They are commonly found on the buttes of INEEL.

JUNIPER
waapi

The genus *Juniperus* is used for food, tools, and medicine. It is common on parts of the INEEL.

LEGEND
Blue = Bannock plant name
Red = Shoshone plant name
Violet = plant name shared by both cultures

FIGURE 4-4. (2 of 2)
Plants used by the Shoshone-Bannock located on or near INEEL.

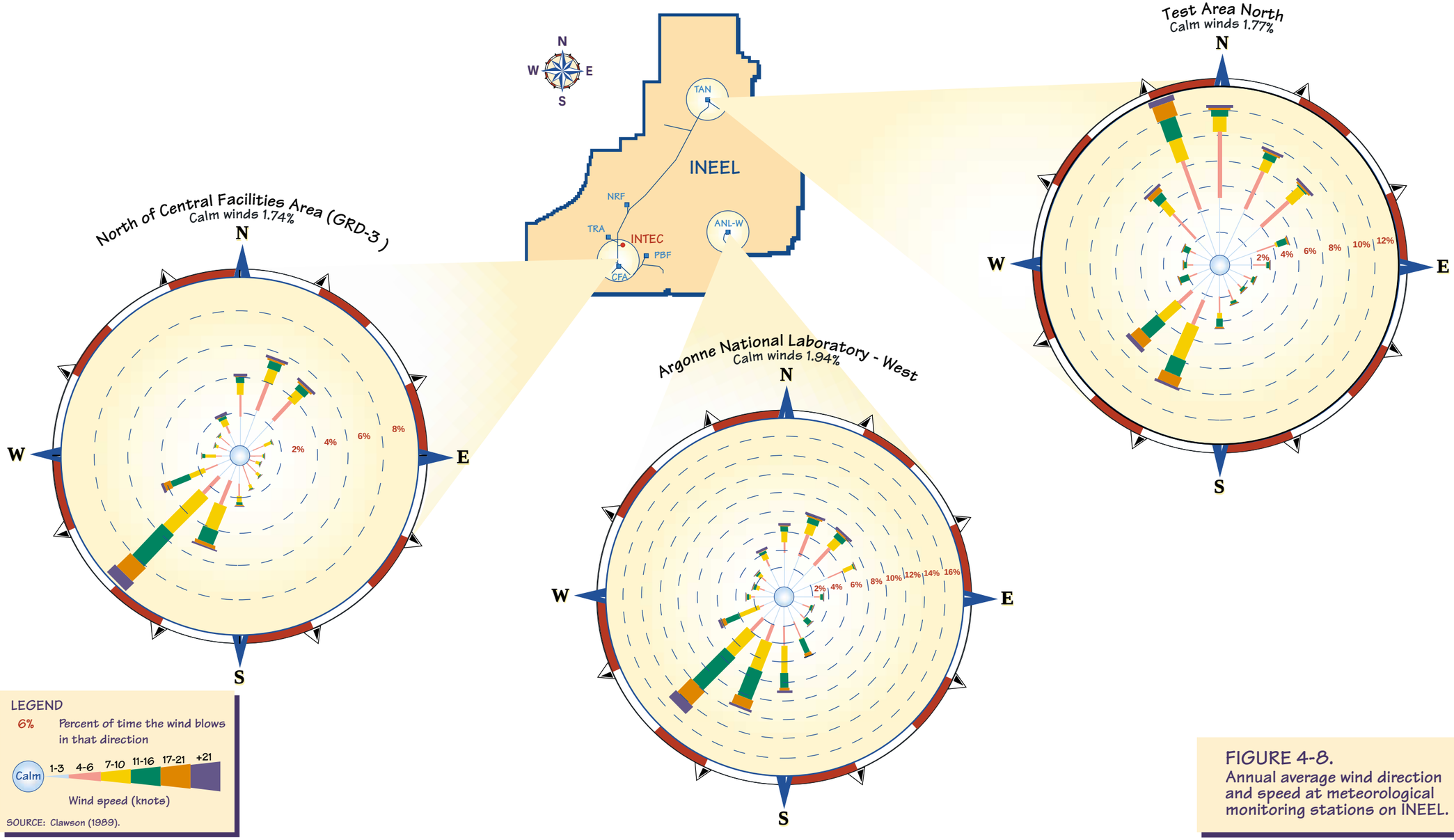


FIGURE 4-8.
Annual average wind direction and speed at meteorological monitoring stations on INEEL.

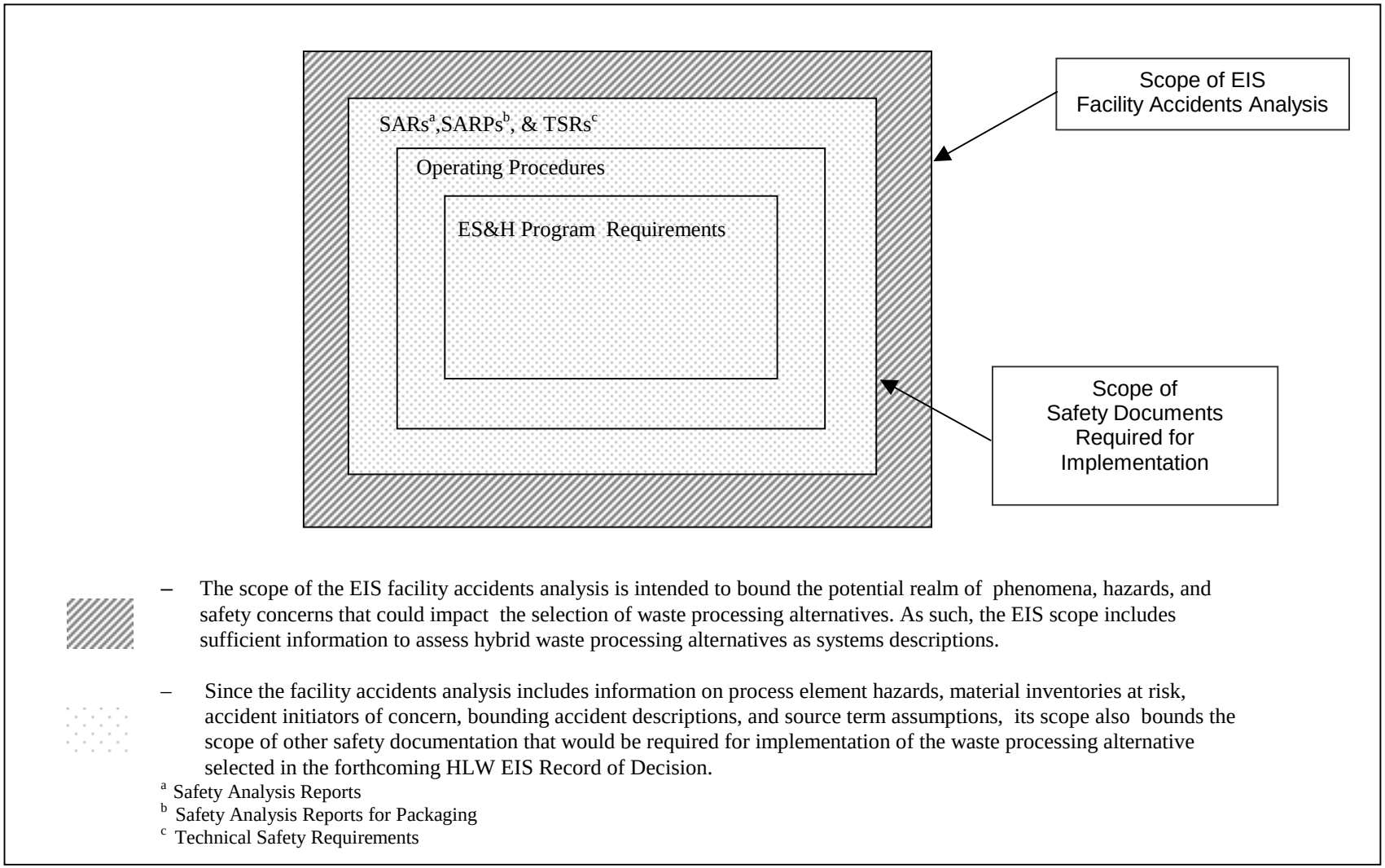


Figure C.4-3. Scope of EIS facility accidents analysis.

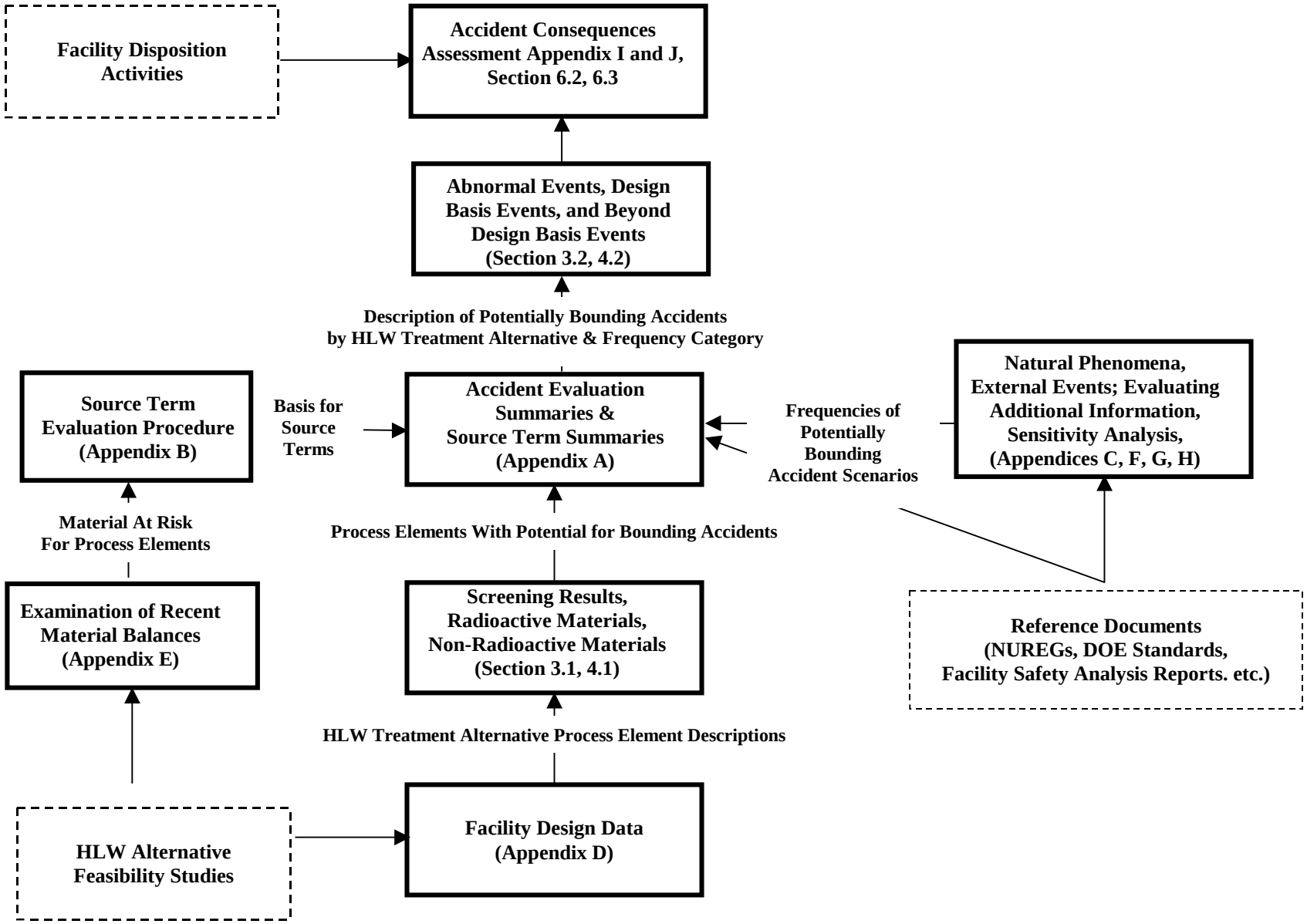


Figure C.4-5. Technical Resource Document elements.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	No land disturbed outside of INTEC boundary. No change in existing land use.	No land disturbed outside of INTEC boundary. No effects on local or regional land use or land use plans.	Minimal impact due to conversion of 22 acres of undeveloped land adjacent to INTEC to industrial use (new Low-Activity Waste Disposal Facility). No effects on local or regional land use or land use plans.	No land disturbed outside of INTEC boundary. No effects on local or regional land use or land use plans.	At INEEL - Minimal impact due to conversion of 22 acres of undeveloped land adjacent to INTEC to industrial use (new Low-Activity Waste Disposal Facility). No effects on local or regional land use or land use plans. At Hanford - Small impact due to conversion of 52 acres of undeveloped land within 200-East Area to industrial use (Canister Storage Buildings and Calcine Dissolution Facility).
	A total of 40 construction phase (20 direct and 20 indirect) jobs would be retained in the peak year (2005). No impacts on community services or public finances in the region of influence.	A total of 180 construction phase (90 direct and 90 indirect) jobs would be retained in the peak year (2008).	FS 1,700 construction phase jobs (850 direct and 850 indirect) retained in the peak year (2013). PB 1,800 construction phase jobs (870 direct and 900 indirect) retained in the peak year (2013). TS 1,400 construction phase jobs (680 direct and 700 indirect) retained in the peak year (2012). Implementation of this alternative could result in a small increase in construction employment in the region of influence.	HIP 730 construction phase jobs (360 direct and 370 indirect) retained in the peak year (2008). DC 820 construction phase jobs (400 direct and 420 indirect) retained in the peak year (2008). EV 670 construction phase jobs (330 direct and 340 indirect) retained in the peak year (2008). Implementation of this alternative could result in a small increase in construction employment in the region of influence.	At INEEL - 410 construction phase jobs (200 direct and 210 indirect) retained in the peak year (2008). Implementation of this alternative could result in a small increase in construction employment in the region of influence. At Hanford - 590 construction phase jobs (290 direct and 300 indirect) retained in the peak year (2024).

TABLE 3-6. (1 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	A total of 240 operations phase jobs (70 direct and 170 indirect) would be retained in peak year (2007). No impacts on community services or public finances in the region of influence.	A total of 780 operations phase jobs (280 direct and 500 indirect) would be retained in peak year (2015). No significant new job growth expected in INEEL workforce because jobs would be filled by reassigned and retrained workers. No impacts on community services or public finances in the region of influence.	FS Total of 1,230 operations phase jobs (440 direct and 790 indirect) retained in peak year (2018). PB Total of 1,340 operations phase jobs (480 direct and 860 indirect) retained in peak year (2020). TS Total of 890 operations phase jobs (320 direct and 570 indirect) retained in peak year (2015). No significant new job growth expected in INEEL workforce under any option because jobs would be filled by reassigned and retrained workers. No impacts on community services or public finances in the region of influence.	HIP Total of 1,280 operations phase jobs (460 direct and 820 indirect) retained in peak year (2015). DC Total of 1,460 operations phase jobs (530 direct and 930 indirect) retained in peak year (2015). EV Total of 920 operations phase jobs (330 direct and 590 indirect) retained in peak year (2015). No significant new job growth expected in INEEL workforce under any option because jobs would be filled by reassigned and retrained workers. No impacts on community services or public finances in the region of influence.	At INEEL - Total of 920 operations phase jobs (330 direct and 590 indirect) retained in peak year. No significant new job growth expected in INEEL workforce because jobs would be filled by reassigned and retrained workers. No impacts on community services or public finances in the region of influence. At Hanford - Total of 2,100 operations phase jobs (740 direct and 1,300 indirect) would be created, resulting in a 10 percent increase in Hanford Site employment and less than 1 percent increase in employment in the region of influence.

TABLE 3-6. (2 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	No impacts to cultural resources would be expected.	No impacts to cultural resources would be expected.	Some minor visual degradation of the cultural setting of the INEEL and adjacent lands would occur from process air emissions through 2035. If cultural resources or human remains are uncovered during construction phase of projects, a stop-work order would be issued and the INEEL Cultural Resources Management Office, State Historic Preservation Officer, and Native American tribes would immediately be notified. Specific mitigation measures would be determined in consultation with these groups.	Some minor visual degradation of the cultural setting of the INEEL and adjacent lands would occur from process air emissions through 2035. If cultural resources or human remains are uncovered during construction phase of projects, a stop-work order would be issued and the INEEL Cultural Resources Management Office, State Historic Preservation Officer, and Native American tribes would immediately be notified. Specific mitigation measures would be determined in consultation with these groups.	At INEEL - Some minor visual degradation of the cultural setting of the INEEL and adjacent lands would occur from process air emissions through 2035. If cultural resources or human remains are uncovered during construction phase of projects, a stop-work order would be issued and the INEEL Cultural Resources Management Office, State Historic Preservation Officer and Native American tribes would immediately be notified. Specific mitigation measures would be determined in consultation with these groups. At Hanford - Several new facilities would be built within the 200-East Area of the Hanford Site. In accordance with the Hanford Cultural Resources Management Plan, DOE would identify and evaluate cultural resources associated with the project locations and mitigate possible damage to those cultural resources.

TABLE 3-6. (3 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	The existing INEEL visual setting would not change, nor would scenic resources be affected.	There would be negligible change in the INEEL visual setting. Scenic resources would be minimally affected.	Options under this alternative would have the highest potential for visibility degradation due to emissions of fine particulate matter and nitrogen dioxide. Engineered air pollution control systems would likely be employed to limit impacts.	Options under this alternative would have the second highest potential for visibility degradation due to emissions of fine particulate matter and nitrogen dioxide. Engineered air pollution control systems would likely be employed to limit impacts.	At INEEL - There would be negligible change in the visual setting. Scenic resources would be minimally affected. At Hanford - Under certain conditions, plumes would be visible at site boundaries. Visual impacts would be minor.
	Minimal impacts to geologic resources and soils from limited construction.	Minimal impacts to geologic resources and soils from limited construction.	Small potential impacts on geologic resources and soils from construction activities. DOE would employ standard soil conservation measures to limit soil loss and stabilize disturbed areas.	Small potential impacts on geologic resources and soils from construction activities. DOE would employ standard soil conservation measures to limit soil loss and stabilize disturbed areas.	At INEEL - Small potential impacts from soil erosion as a result of construction activities. DOE would employ standard soil conservation measures to limit soil loss and stabilize disturbed areas. At Hanford - Small potential for erosion as a result of construction activities.

TABLE 3-6. (4 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Radiation doses from emissions would be low ($6.0x10^{-4}$ millirem per year to offsite MEI); no criteria pollutant would exceed significance threshold. Maximum impact of offsite carcinogenic toxic pollutant emissions would be approximately 1.8 percent of the applicable standard.	Radiation dose from emissions would be $1.7x10^{-3}$ millirem per year to offsite MEI under this alternative, well below regulatory limit; one criteria pollutant (SO_2) exceeds significance threshold. Maximum impact of offsite carcinogenic toxic pollutant emissions would be approximately 2.9 percent of the applicable standard.	FS Radiation dose from emissions would be $1.2x10^{-4}$ millirem per year to offsite MEI, well below regulatory limit; two criteria pollutants (SO_2 and NO_x) would exceed significance thresholds. PB Radiation dose from emissions would be $1.8x10^{-3}$ millirem per year to offsite MEI, well below regulatory limit; two criteria pollutants (SO_2 and NO_x) would exceed significance thresholds. TS Radiation dose from emissions would be $6.0x10^{-5}$ millirem per year to offsite MEI, well below regulatory limit; one criteria pollutant (SO_2) exceeds significance threshold. Maximum impact of offsite carcinogenic toxic pollutant emissions would be 5.8 to 14 percent of the applicable standard under the Separations Alternative.	HIP Radiation dose from emissions would be $1.8x10^{-3}$ millirem per year to offsite MEI, two criteria pollutants (SO_2 and NO_x) would exceed significance thresholds. DC Radiation dose from emissions would be $1.7x10^{-3}$ millirem per year to offsite MEI, one criteria pollutant (SO_2) would exceed significance threshold. EV Radiation dose from emissions would be $8.9x10^{-4}$ millirem per year to offsite MEI; one criteria pollutant (SO_2) would exceed significance thresholds. Maximum impact of offsite carcinogenic toxic pollutant emissions would be 2.4 to 5.1 percent of the applicable standard under the Non-Separations Alternative.	At INEEL -Radiation dose from emissions would be $9.5x10^{-4}$ millirem per year to offsite MEI, no criteria pollutant would exceed significance threshold. Maximum impact of offsite carcinogenic toxic pollutant emissions would be 1.2 percent of applicable standard. At Hanford - Radiation dose from emissions would be low ($1.7x10^{-5}$ millirem per year to offsite MEI); one criteria pollutant (CO) would exceed significance threshold.
	A temporary increase in sediment loads in stormwater runoff would be expected as a result of limited construction activity. Impact to nearby surface waters would be negligible. There would be no routine discharge of hazardous or radioactive liquid effluents that would result in offsite radiation doses.	A temporary increase in sediment loads in stormwater runoff would be expected as a result of limited construction activity. Impact to nearby surface waters would be negligible. There would be no routine discharge of hazardous or radioactive liquid effluents that would result in offsite radiation doses.	A temporary increase in sediment loads in stormwater runoff would be expected as a result of limited construction activity. Impact to nearby surface waters would be negligible. There would be no routine discharge of hazardous or radioactive liquid effluents that would result in offsite radiation doses.	A temporary increase in sediment loads in stormwater runoff would be expected as a result of limited construction activity. Impact to nearby surface waters would be negligible. There would be no routine discharge of hazardous or radioactive liquid effluents that would result in offsite radiation doses.	At INEEL - A temporary increase in sediment loads in stormwater runoff would be expected as a result of construction activity. Impact to nearby surface waters would be negligible. There would be no routine discharge of hazardous or radioactive liquid effluents that would result in offsite radiation doses. At Hanford- Liquid effluent sent to Effluent Treatment Facility. No discharge to surface waters.

TABLE 3-6. (5 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	No impacts to state or Federally-listed species or designated critical habitats are expected. Jurisdictional wetlands would not be affected. Potential exposure of plants and animals to hazardous and radiological contaminants from emissions would be small. Biotic populations and communities would not be affected.	No impacts to state or Federally-listed species or designated critical habitats are expected. Jurisdictional wetlands would not be affected. Potential exposure of plants and animals to hazardous and radiological contaminants from emissions would be small. Biotic populations and communities would not be affected.	No impacts to state or Federally-listed species or designated critical habitats are expected. Jurisdictional wetlands would not be affected. Construction of a Low-Activity Waste Disposal Facility would disturb 22 acres of undeveloped land adjacent to INTEC, but the site provides only marginal wildlife habitat. Therefore, impacts would be minimal. Potential exposure of plants and animals to hazardous and radiological contaminants from emissions would be small. Biotic populations and communities would not be affected.	No impacts to state or Federally-listed species or designated critical habitats are expected. Jurisdictional wetlands would not be affected. Potential exposure of plants and animals to hazardous and radiological contaminants from emissions would be small. Biotic populations and communities would not be affected.	At INEEL - No impacts to state or Federally-listed species or designated critical habitats are expected. Jurisdictional wetlands would not be affected. Construction of a Low-Activity Waste Disposal Facility would disturb 22 acres of undeveloped land adjacent to INTEC, but the site provides only marginal wildlife habitat. Therefore, impacts would be minimal. Potential exposure of plants and animals to hazardous and radiological contaminants from emissions would be small. Biotic populations and communities would not be significantly affected. At Hanford - New facilities could require the conversion of 52 acres of shrub-steppe habitat to industrial use. Impacts to biodiversity would be small and local in scope. There would be no impacts to wetlands or special status species.

TABLE 3-6. (6 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	No offsite transportation would occur.	Incident-free impacts for truck transport[a]: 0.01 LCF. Accident LCF risk for truck transport: 5.0×10^{-5}.	Incident-free impacts for truck transport: 0.23 LCF (Transuranic Separations Option is highest impact option). Accident LCF risk for truck transport: 0.09 (Transuranic Separations Option is highest impact option).	Incident-free impacts for truck transport: 1.5 LCFs (Direct Cement Waste is highest impact option). Accident LCF risk for truck transport: 0.02 (Direct Cement Waste is highest impact option).	Incident-free impacts for truck transport: 0.55 LCF. Accident LCF risk for truck transport: 0.02.
	The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this alternative would be 6.0×10^{-4}.	The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this alternative would be 5.5×10^{-4}.	FS The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 6.0×10^{-5}. PB The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 1.7×10^{-4}. TS The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 3.2×10^{-5}.	HIP The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 5.5×10^{-4}. DC The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 5.5×10^{-4}. EV The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 8.5×10^{-4}.	At INEEL - The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this option would be 6.0×10^{-4}. At Hanford - The estimated number of latent cancer fatalities in the population within 50 miles of INTEC related to waste processing under this alternative would be 1.1×10^{-6}.

TABLE 3-6. (7 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	The estimated number of latent cancer fatalities in involved workers related to waste processing under this alternative would be 0.19.	The estimated number of latent cancer fatalities in involved workers related to waste processing under this alternative would be 0.30.	FS The estimated number of latent cancer fatalities in involved workers related to waste processing under this option would be 0.44. PB The estimated number of latent cancer fatalities in involved workers related to waste processing under this option would be 0.61. TS The estimated number of latent cancer fatalities in involved workers related to waste processing under this option would be 0.39.	HIP The estimated number of latent cancer fatalities in involved workers related to waste processing under this option would be 0.51. DC The estimated number of latent cancer fatalities in involved workers related to waste processing under this option would be 0.64. EV The estimated number of latent cancer fatalities in involved workers related to waste processing under this option would be 0.35.	At INEEL - The estimated number of latent cancer fatalities in involved workers related to waste processing under this alternative would be 0.42. At Hanford - The estimated number of latent cancer fatalities in involved workers related to waste processing under this alternative would be 0.14.
	Total lost workdays during construction (34). Total recordable cases during construction (4).	Total lost workdays during construction (120). Total recordable cases during construction (14).	FS Total lost workdays during construction (1,700). Total recordable cases during construction (200). PB Total lost workdays during construction (2,000). Total recordable cases during construction (240). TS Total lost workdays during construction (1,400). Total recordable cases during construction (170).	HIP Total lost workdays during construction (720). Total recordable cases during construction (86). DC Total lost workdays during construction (680). Total recordable cases during construction (81). EV Total lost workdays during construction (740). Total recordable cases during construction (88).	At INEEL - Total lost workdays during construction (840). Total recordable cases during construction (100). At Hanford - Total lost workdays during construction not reported. Total recordable cases during construction (227).

TABLE 3-6. (8 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Total lost workdays during operations (310). Total recordable cases during operations (44).	Total lost workdays during operations (860). Total recordable cases during operations (120).	FS Total lost workdays during operations (2,500). Total recordable cases during operations (350). PB Total lost workdays during operations (3,100). Total recordable cases during operations (430). TS Total lost workdays during operations (1,900). Total recordable cases during operations (270).	HIP Total lost workdays during operations (2,000). Total recordable cases during operations (290). DC Total lost workdays during operations (2,300). Total recordable cases during operations (330). EV Total lost workdays during operations (1,800). Total recordable cases during operations (260).	At INEEL - Total lost workdays during operations (1,700). Total recordable cases during operations (240). At Hanford - Total lost workdays during operations (NR). Total recordable cases during operations (27).
	No significant impacts to human health were identified, thus no disproportionately high and adverse impacts to minority populations or low-income populations would be expected.	No significant impacts to human health were identified, thus no disproportionately high and adverse impacts to minority populations or low-income populations would be expected.	No significant impacts to human health were identified, thus no disproportionately high and adverse impacts to minority populations or low-income populations would be expected.	No significant impacts to human health were identified, thus no disproportionately high and adverse impacts to minority populations or low-income populations would be expected.	No significant impacts to human health were identified, thus no disproportionately high and adverse impacts to minority populations or low-income populations would be expected.

TABLE 3-6. (9 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Operational electrical usage would increase by 13 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 640,000 gallons. Process water use would increase by about 3.5 percent. Sewage treatment demand would increase by approximately 2.5 percent.	Operational electrical usage would increase by 20 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 1.9 million gallons. Process water use would increase by about 16 percent. Sewage treatment demand would increase by approximately 5 percent.	FS Operational electrical usage would increase by 45 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 4.5 million gallons. Process water use would increase by about 1 percent. Sewage treatment demand would increase by approximately 7 percent.	HIP Operational electrical usage would increase by 38 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 2.8 million gallons. Process water use would increase by about 22 percent. Sewage treatment demand would increase by approximately 7 percent.	At INEEL - Operational electrical usage would increase by 28 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 490,000 gallons. Process water use would increase by about 2 percent. Sewage treatment demand would increase by approximately 5 percent.

TABLE 3-6. (10 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Existing INTEC capacity would be adequate to support increased resource demand.	Existing INTEC capacity would be adequate to support increased resource demand.	PB Operational electrical usage would increase by 57 percent relative to baseline usage. Estimated annual increase in fossil fuel use would be about 6.3 million gallons. Process water use would increase by about 17 percent. Sewage treatment demand would increase by approximately 11 percent. Existing INTEC capacity would be adequate to support increased resource demand. TS Operational electrical usage would increase by 33 percent relative to baseline usage. Estimated annual increase in fossil fuel use would be about 2.2 million gallons. Process water use would increase by about 13 percent. Sewage treatment demand would increase by approximately 5 percent. Process water use would increase by 13 percent. Sewage treatment demand would increase by approximately 5 percent. Existing INTEC capacity would be adequate to support increased resource demand.	DC Operational electrical usage would increase by 32 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 2.5 million gallons. Process water use would increase by about 16 percent. Sewage treatment demand would increase by approximately 9 percent. Existing INTEC capacity would be adequate to support increased resource demand. EV Operational electrical increase by 44 percent relative to baseline usage. Estimated increase in annual fossil fuel use would be about 1.1 million gallons. Process water use would increase by about 2 percent. Sewage treatment demand would increase by approximately 5 percent. Existing INTEC capacity would be adequate to support increased resource demand.	Existing INTEC capacity would be adequate to support increased resource demand. At Hanford - Operational electrical usage would increase substantially but would fall short of electrical usage experienced in the 1980's. Approximately 1.3 million gallons per year of fuel oil would be required during operations, which would not affect supplies locally or regionally.

TABLE 3-6. (11 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Approximately 15,000 cubic meters of industrial waste, 1,500 cubic meters of mixed LLW, and 190 cubic meters of LLW generated through year 2035.	Approximately 26,000 cubic meters of industrial waste, 3,400 cubic meters of mixed LLW, and 9,500 cubic meters of LLW generated through year 2035. (includes construction and operations phases)	FS Approximately 110,000 cubic meters (maximum) of industrial waste, 7,000 cubic meters of mixed LLW, and 1,500 cubic meters of LLW generated through year 2035. PB Approximately 110,000 cubic meters (maximum) of industrial waste, 9,000 cubic meters of mixed LLW, and 10,000 cubic meters of LLW generated through year 2035. TS Approximately 82,000 cubic meters (maximum) of industrial waste, 6,400 cubic meters of mixed LLW, and 1,200 cubic meters of LLW generated through year 2035. (includes construction and operations phases)	HIP Approximately 69,000 cubic meters (maximum) of industrial waste, 7,500 cubic meters of mixed LLW, and 10,000 cubic meters of LLW generated through year 2035. DC Approximately 80,000 cubic meters (maximum) of industrial waste, 9,700 cubic meters of mixed LLW, and 10,000 cubic meters of LLW generated through year 2035. EV Approximately 65,000 cubic meters of industrial waste, 7,100 cubic meters of mixed LLW, and 1,100 cubic meters of LLW generated through year 2035. (includes construction and operations phases)	At INEEL - Approximately 61,000 cubic meters of industrial waste, 6,800 cubic meters of mixed LLW, and 810 cubic meters of LLW generated through the year 2035. At Hanford - Approximately 26,000 cubic meters of industrial waste, 0 cubic meters of mixed LLW, and 1,500 cubic meters of LLW generated through year 2030. (includes construction and operations phases)

TABLE 3-6. (12 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Bounding[b] Abnormal Event (long-term onsite storage of calcine): MEI Dose = 170 millirem, Noninvolved Worker Dose = 1.2×10^4 millirem, Offsite Population Impacts = 0.65 LCF. Bounding Design Basis Event (long-term onsite storage of calcine): MEI Dose = 9.7×10^3 millirem, Noninvolved Worker Dose = 6.6×10^5 millirem, Offsite Population Impacts = 33 LCFs.	Bounding Abnormal Event (long-term onsite storage of calcine) MEI Dose = 170 millirem Noninvolved Worker Dose = 1.2×10^4 millirem Offsite Population Impacts = 0.65 LCF Bounding Design Basis Event (long-term onsite storage of calcine) MEI Dose = 9.7×10^3 millirem Noninvolved Worker Dose = 6.6×10^5 millirem Offsite Population Impacts = 33 LCFs	FS, PB Bounding Abnormal Event (SBW retrieval and onsite transport): MEI Dose = 5.3×10^{-3} millirem, Noninvolved Worker Dose = 0.36 millirem, Offsite Population Impacts = 2.8×10^{-5} LCF. TS Bounding Abnormal Event (Low-level waste Class C type grout disposal): MEI Dose = 5.8 millirem, Noninvolved Worker Dose = 390 millirem, Offsite Population Impacts = 0.04 LCF. FS Bounding Design Basis Event (Full Separations): MEI Dose = 460 millirem, Noninvolved Worker Dose = 3.2×10^4 millirem, Offsite Population Impacts = 1.8 LCFs. PB Bounding Design Basis Event (New Waste Calcining Facility Continued Operations): MEI Dose = 350 millirem, Noninvolved Worker Dose = 2.4×10^4 millirem, Offsite Population Impacts = 2.9 LCFs. TS Bounding Design Basis Event (Transuranic Operations): MEI Dose = 1,300 millirem, Noninvolved Worker Dose = 8.6×10^4 millirem, Offsite Population Impacts = 4.0 LCFs.	HIP, DC, EV Bounding Abnormal Event (SBW retrieval and onsite transport): MEI Dose = 5.3×10^{-3} millirem, Noninvolved Worker Dose = 0.36 millirem, Offsite Population Impacts = 2.8×10^{-5} LCF. HIP, DC Bounding Design Basis Event (New Waste Calcine Facility Continued Operations): MEI Dose = 350 millirem, Noninvolved Worker Dose = 2.4×10^4 millirem, Offsite Population Impacts = 2.9 LCFs. EV Bounding Design Basis Event (Calcine Retrieval and Onsite Transport): MEI Dose = 1.6 millirem, Noninvolved Worker Dose = 110 millirem, Offsite Population Impacts = 7.0×10^{-3} LCF.	Bounding Abnormal Event (Calcine Retrieval and Onsite Transport): MEI Dose = 0.25 millirem, Noninvolved Worker Dose = 17 millirem, Offsite Population Impacts = 1.3×10^{-3} LCF. Bounding Design Basis Event (Calcine Retrieval and Onsite Transport): MEI Dose = 3.0 millirem, Noninvolved Worker Dose = 210 millirem, Offsite Population Impacts = 0.06 LCF.

TABLE 3-6. (13 of 14)
Summary comparison of impacts from waste processing alternatives.

Resource	No Action Alternative	Continued Current Operations Alternative	Separations Alternative	Non-Separations Alternative	Minimum INEEL Processing Alternative
	Bounding Beyond Design Basis Event (long-term onsite storage of calcine): MEI Dose = 420 millirem, Noninvolved Worker Dose = 2.9×10^4 millirem, Offsite Population Impacts = 1.8 LCFs.	Bounding Beyond Design Basis Event (New Waste Calcining Facility Continued Operations/Liquid Waste Stream Evaporation): MEI Dose = 420 millirem, Noninvolved Worker Dose = 2.9×10^4 millirem, Offsite Population Impacts = 1.8 LCFs.	FS. PB Bounding Beyond Design Basis Event (Borosilicate Vitrification): MEI Dose = 6.8×10^4 millirem, Noninvolved Worker Dose = 4.6×10^6 millirem, Offsite Population Impacts = 300 LCFs. TS Bounding Beyond Design Basis Event (Transuranic Separations): MEI Dose = 1.3×10^3 millirem, Noninvolved Worker Dose = 8.6×10^4 millirem, Offsite Population Impacts = 4.0 LCFs.	HIP Bounding Beyond Design Basis Event (New Waste Calcining Facility Continued Operations/Liquid Waste Stream Evaporation): MEI Dose = 460 millirem, Noninvolved Worker Dose = 3.2×10^4 millirem, Offsite Population Impacts = 1.8 LCFs. DC Bounding Beyond Design Basis Event (Direct Grout HLW): MEI Dose = 1.0×10^3 millirem, Noninvolved Worker Dose = 7.1×10^4 millirem, Offsite Population Impacts = 5.6 LCFs. EV Bounding Beyond Design Basis Event (Borosilicate Vitrification): MEI Dose = 730 millirem, Noninvolved Worker Dose = 5.0×10^4 millirem, Offsite Population Impacts = 3.3 LCFs.	Bounding Beyond Design Basis Event (High-Level Waste Interim Storage for Transport/High-Level Waste Stabilization and Preparation for Transport): MEI Dose = 4.9×10^3 millirem, Noninvolved Worker Dose = 3.4×10^5 millirem, Offsite Population Impacts = 26 LCFs.

LEGEND

FS Full Separations Option
PB Planning Basis Option
TS Transuranic Separations Option
HIP Hot Isostatic Pressed Waste Option
DC Direct Cement Waste Option
EV Early Vitrification Option
MEI Maximally exposed individual
LLW Low-level Waste
LCF Latent cancer fatality
[a] Latent cancer fatalities for transportation by truck selected as the representative parameter for comparison of alternatives
[b] The term "bounding" means the accident with highest consequence for each frequency range (Abnormal Event, Design Basis Event, and Beyond Design Basis Event).

TABLE 3-6. (14 of 14)
Summary comparison of impacts from waste processing alternatives.