U-006-401.1

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ARAR IDENTIFICATION FOR OU4 FMPC RI/FS

4-30-90

ASI/DOE
25
LETTER

U-006-401.3

576

April 30, 1990

Bobby Davis
Contracting Officer's Representative
U.S. Department of Energy
P.O. Box 398705
Cincinnati, OH 45239-8705

SUBJECT: ARAR Identification for OU4 FMPC RI/FS

As directed by DOE, ASI/IT has prepared a list of potential ARARs for Operable Unit 4. Attached to this letter is a memorandum by Dr. John Frazier (IT Knoxville) which describes the logic employed in selecting potential ARARs as well as a proposed list. This work is a product of the working group assembled from the project team to address the general subject of ARARs, TCBs, and remedial design objectives for all operable units. It is my recommendation that DOE review this submission for use as a basis for discussions with USEPA and OEPA on ARAR determination.

As you are aware, DOE has committed in the CERCLA Section 120 Consent Agreement to meet with USEPA and OEPA to discuss ARARs 30 days prior to delivery of any primary or secondary document which makes ARAR determination. In preparation for that meeting, Jack Craig has scheduled a meeting between DOE, WMCO, Lee Wan, and ASI/IT for Wednesday, May 9 at 10:00 a.m. in the ASI conference room to discuss the attached potential ARARs. I have ask John Frazier to prepare a brief summary presentation for that meeting.

Should you have specific questions regarding this effort, please contact me or John Frazier (615-690-3211) directly.

Sincerely,

John D. Wood
Project Director

JDW/JER:jf

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Attachment

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Project File Task 7.1

INTERNATIONAL TECHNOLOGY CORPORATION

Memorandum

To: John Wood, Project Director

Date: April 30, 1990

From: John Frazier

Subject:

IDENTIFICATION AND DETERMINATION OF POTENTIAL ARARS FOR OPERABLE UNIT 4

Identification of potential ARARs is an integral part of the evaluation of remedial alternatives for feasibility studies conducted under CERCLA. Guidance for development and screening of alternatives is given in Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, U.S. EPA (October 1988). The Work Plan for Conducting the Sitewide Remedial Investigation and Feasibility Study of the Feed Materials Production Center, Fernald, Ohio Revision 3 (March 1988) was prepared in accordance with draft guidance documents and is consistent with the October 1988 U.S. EPA Guidance document. The Work Plan includes the "Technical Approach of the Feasibility Study", and specifically, "Task 11: Development of Alternatives" and "Task 12: Initial Screening of Alternatives". The culmination of Tasks 11 and 12 are presented in the "Task 12 Report". Identification of potential location-specific ARARs and chemical-specific ARARs are made during Task 11 in accordance with the October 1988 U.S. EPA guidance document. Potential action-specific ARARs are identified during the early stages of Task 12.

The U.S. DOE agreed in the Consent Agreement Under CERCLA Section 120 and 106 (a) (Federal Facilities Agreement [FFA]) dated April 1990 to prepare draft ARAR determinations in accordance with Section 121 (d) (2) of CERCLA, the NCP and pertinent policy and guidance issued by U.S. EPA. In accordance with the requirements of the FFA, the U.S. DOE has agreed to meet with the U.S. EPA and State Project Managers to identify and propose all potential ARARs pertinent to a

primary report or secondary document that consists of or includes ARAR determinations. The dates for submission of draft primary documents by U.S. DOE to U.S. EPA are set forth in Section X of the FFA. The first draft primary report scheduled for submission to U.S. EPA is the Initial Screening of Alternatives (Task 12 Report) for Operable Unit 4, scheduled for June 4, 1990.

The U.S. DOE has also agreed to meet with the U.S. EPA and State Project Managers at least thirty (30) days prior to issuance of a draft report, to identify and propose, to the best of their ability all potential ARARs pertinent to the report being addressed. It is therefore appropriate that U.S. DOE schedule a meeting with U.S. EPA and the Project Manager from the State of Ohio on or before May 4, 1990, to identify and propose the ARARs pertinent to the Task 12 Report for Operable Unit 4. Since the Task 12 Report is the primary report through which U.S. DOE will notify U.S. EPA of the alternatives that will evaluated in detail, potential ARARs should be identified prior to submission of the Task 12 Report in order to comply with the requirements of the FFA and NCP [40 CFR 300.430.(e) (9)].

According to the requirements of the NCP, the U.S. DOE must identify ARARs, other pertinent advisories, criteria or guidance related to specific actions in a timely manner and no later than the early stages of the Detailed Analysis of Alternatives (identified as Task 13 in the RI/FS Work Plan). The primary report by which identification of ARARs pertinent to Task 13 activities will be reported to the U.S. EPA is the FS Report. For Operable Unit 4, the FS Report is scheduled for submission by U.S. DOE to U.S. EPA on November 25, 1990. Although not specifically required by the FFA, ARARs pertinent to Task 13 activities for Operable Unit 4 should be reported and discussed with U.S. EPA and State Project Managers at the May 4, 1990 meeting to comply with the requirements of the NCP and, more importantly, to resolve ARARs

at an early stage in order to avoid major changes in the Detailed Analysis of Alternatives.

Enclosed is the list of currently identifiable potential ARARs for each of the eight remedial action alternatives for Operable Unit 4. The eight alternatives are:

Alternative No. 1 - Nonremoval, Cap, Slurry Wall
Alternative No. 2 - Nonremoval, Cap, Slurry Wall, In Situ Grout
Alternative No. 3 - Removal, Packaging, On-Site Disposal, Silo 3
Alternative No. 4 - Removal, Packaging, Off-Site Disposal, Silo 3
Alternative No. 6 - Removal, Stabilization, Packaging, On-Site Disposal, Silo 1 & 2
Alternative No. 7 - Removal, Stabilization, Packaging, Off-Site Disposal, Silo 1 & 2
Alternative No. 8 - Removal, Extraction, Stabilization, Packaging, On-Site Disposal, Silo 1 & 2
Alternative No. 9 - Removal, Extraction, Stabilization, Packaging, Off-Site Disposal, Silo 1 & 2

The tables list ARARs according to the categories: Substance-Specific, Area-Specific, and Action-Specific. (These category titles will be changed to be consistent with NCP terminology of Chemical-Specific, Location-Specific, and Action-Specific). Criteria which do not meet the definition of ARARs but which will assist in determining what is necessary to be protective of human health and the environment, or that are otherwise useful in developing remedies, are described as information to-be-considered (TBC). DOE Orders are TBCs and will be used, as appropriate, to complement use of, and not be in competition with, ARARs.

Submission of the enclosed tables to DOE and subsequent discussion of these potential ARARs with the U.S. EPA and State Project Managers will accomplish the near-term requirements of the FFA and the NCP for the FS activities to date for Operable Unit 4. Furthermore, because of the iterative nature of the RI/FS process, ARAR identification will continue throughout the RI/FS as a better understanding is gained of site conditions, contaminants within Operable Unit 4 and its environs, and remedial action alternatives. As noted in U.S. EPA guidance documents and in the NCP, ARARs identified during the early stages of the FS (eg. Tasks 12 and 13) will be refined throughout the preparation of the FS report (Tasks 15 and 16).

Attachment

FEED MATERIALS PRODUCTION CENTER
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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Radionuclides Emissions	25 mrem/year (whole body), 75 mrem/year (any critical organ)	DOE facilities, NRC licensees, and non-DOE Federal facilities, except from doses from radon-220, radon-222, and their decay products; facilities regulated under 40 CFR 190-192; and low-energy accelerators and users of sealed sources.	40 CFR Part 61 (CAA) DOE Order 5400.3 DOE Order 5400.xx
All	Radon-222 Emissions	Design and operation	Uranium mines	40 CFR Part 61 (CAA)
		Design and operation	Uranium mill tailings	40 CFR Part 61 (CAA)
All	Radon-222 Emissions	20 pCi/M^2-S (average for the entire source)	National emission standards for radon emissions from DOE facilities.	40 CFR Part 61 Subpart Q (CAA)
All	Protection of Drinking Water Supplies from Radioactive Pollutants	Maximum contaminant levels for radioactivity in community water systems are set as follows: • 5 pCi/l of combined radium-226 and radium-228; or • 15 pCi/l of gross alpha particle activity (including radium-226 but excluding radon and uranium).	Applicable to community water systems, which are defined as public water systems that serve at least 15 service connections used by year-round residents or regularly serve at least 25 year-round residents.	Safe Drinking Water Act (SDWA) 40 CFR section 141.15
		The average annual concentration of beta particle and photon (i.e., gamma) radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 mrem.	Applicable to community water systems, which are defined as public water systems that serve at least 15 service connections used by year-round residents or regularly serve at least 25 year-round residents.	40 CFR section 141.16 (SDWA)

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
6,7,8,9	Discharge of Radioactive Pollutants to Surface Waters	Best Available Technology: The concentration of pollutants discharged in drainage from mines that produce uranium ore shall not exceed: • 10 pCi/l of dissolved radium-226 in any one day or 3 pCi/l of dissolved radium-226 averaged over 30 consecutive days; • 30 pCi/l of total radium-226 in any one day or 10 pCi/l of total radium-226 averaged over 30 consecutive days; and • 4 mg/l of uranium in any one day or 2 mg/l of uranium averaged over 30 consecutive days.	Applicable to discharges of radium-226 and uranium from open-pit or underground mines from which uranium, radium, and vanadium ores are produced, including mines that use in-situ leach methods.	Clean Water Act (CWA) 40 CFR section 440.33
All	Protection of Individuals in Restricted Areas (i.e., Workers) from Radiation Exposure	A variety of different radiation exposure limits are set for individuals in restricted areas, including a dose limit of 1.25 rem/quarter (which is equivalent to 5 rem/year) to the whole body and radioactivity concentration limits for air and water in restricted areas (designed to limit worker exposures to 1.25 rem/quarter).	Applicable to all categories of NRC licensees; also applicable to Agreement State licensees. Applicable to exposures to source, byproduct, and special nuclear material, as well as to NARM released from facilities licensed to possess source, byproduct, and special nuclear material.	Atomic Energy Act (AEA) 10 CFR sections 20.101 through 20.104

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Protection of Individuals in Unrestricted Areas from Radiation Exposure	Radiation exposure to members of the public is limited to: • A whole body dose of 0.5 rem/year; • 0.002 rem/hour; • 0.1 rem in any 7 consecutive days; and • The dose limits in 40 CFR Part 190 for operations within the uranium fuel cycle.	Applicable to all categories of NRC licensees; also applicable to Agreement State licensees. Applicable to exposures to source, byproduct, and special nuclear material, as well as to NARM released from facilities licensed to possess source, byproduct, and special nuclear material.	10 CFR section 20.105 (AEA)
All	Discharge of Radionuclides to Unrestricted Areas (Air and Water)	Airborne and liquid discharges to unrestricted areas shall meet radionuclide-specific concentration limits in 10 CFR Part 20, Appendix B, Table II. These concentrations are designed to limit radiation exposure to members of the public to 0.5 rem/year to the whole body, blood-forming organs, and gonads; 3 rems/year to the bone and thyroid; and 1.5 rems/year to other organs.	Applicable to all categories of NRC licensees; also applicable to Agreement State licensees. Applicable to releases of source, byproduct, and special nuclear material, as well as to NARM released from facilities licensed to possess source, byproduct, and special nuclear material.	10 CFR section 20.106 (AEA)

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Radioactive Waste Treatment and Disposal	A variety of waste disposal requirements are set, including those specifying how licensees may dispose of licensed material as well as concentration limits for disposal of radioactive waste into sanitary sewerage systems, requirements for treatment and disposal by incineration, and specific requirements for the disposal of radioactively contaminated animal tissue and liquid scintillation media.	Applicable to all categories of NRC licensees; also applicable to Agreement State licensees. Applicable to releases of source, byproduct, and special nuclear material. Certain requirements also apply to other radioactive materials, i.e, NARM released from facilities licensed to possess source, byproduct, and special nuclear material.	10 CFR sections 20.301 through 20.311 (AEA) 10 CFR sections 20.302(a) and 20.302(b) (AEA)
All	Control of Uranium or Thorium Mill Tailings	Control measures shall be designed to ensure that releases of radon-222 from residual radioactive material to the atmosphere will not exceed an average (applied over the entire surface of the disposal site and over at least a one-year period) release rate of 20 $pCi/m^2/sec$ or increase the average annual concentration of radon-222 in the atmosphere at or above any location outside the disposal site by more than 0.5 pCi/l.	Applicable to certain inactive uranium processing sites designated for remedial action under Title I of UMTRCA.	Uranium Mill Tailings Radiation Control Act (UMTRCA) 40 CFR section 192.02(b)
All	Radionuclides	25 mrem/year (whole body)	Applicable to DOE facilities which release radioactive material into the surface water, groundwater, soil, plants, and animals.	DOE Order 5820.2A

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Radionuclides (continued)	100 mrem/year (continuous exposure) 500 mrem (acute exposure)	After loss of institutional control (100 years)	DOE Order 5820.2A
All	Radionuclides	Radiation protection guidance apply to public exposure during normal peacetime operations. Organ — RPG for Individuals Thyroid — 1.5 rem per year Bone Marrow — 0.5 rem per year Bone — 1.5 rem per year or 0.003 micrograms of Ra-226 or the biological equivalent (in the adult skeleton)	Applicable to all federal agencies having radiation protection responsibilities.	EO 10831 and Public Law 86-373
All	Radionuclides	Effective dose equivalent received by any member of the public resulting from the exposure during direct onsite access at a DOE facility shall not exceed a limiting value of 0.1 rem/year and/or 5 rem/year (tissue, including skin and the lens). Occupational Workers • Stochiastic effect (internal and external sources): 5 rem/year • Non-stochiastic effect (individual organs and tissue): 15 rem and 50 rem/year. To any other organ, tissue including the skin of the whole body or extremity of the body.	Applicable to DOE facilities and DOE contractor operations with respect to the protection of the worker from ionizing radiation.	DOE Order 5480.11

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OPERABLE UNIT 4 ALTERNATIVES

Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Radionuclides	• Effective dose equivalent to public = 100 mrem. • Liquid radioactive waste streams = ALARA with best available technology. • Shall not exceed 5 rem/year to the public for any tissue. Residual Concentrations for Ra-226, 228, and Th-230 and 232 are: (1) 5 pCi/g averaged over the first 15 cm of soil below the surface. (2) 15 pCi/g, averaged over 15 cm-thick layers of soil more than 15 cm below the surface. Requirements for Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites • Interim storage for U, Th, and their decay products: (1) control of stabilization features shall be designed for an effective life of 50 years with a minimum life of at least 25 years.	Applicable to DOE facilities and DOE contractor operations.	DOE Order 5400.xx

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Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Radionuclides (continued)	(2) Ra-222 concentration shall not exceed (above background) 100 pCi/l at any given point, and an annual average concentration of 30 pCi/l over the facility site and an average concentration of 3 pCi/l at or above any location outside the facility site. • Long term storage for U, Th, and their decay products. (1) Control and stabilization features shall be designed to ensure, to the extent reasonably achievable, an effective life of 1000 years with a minimum life of at least 200 years. (2) Emissions of Rn-222 to the atmosphere shall not exceed an annual average release of 20 pCi/M^2/S and shall not increase the average Rn-222 concentration at or above any location outside the boundary of the contaminated area by more than 0.5 pCi/l. (3) Access controls shall be effective for at least 200 years.		DOE Order 5400.xx

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OPERABLE UNIT 4 ALTERNATIVES

Substance Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Inorganic Chemicals • Arsenic • Barium • Cadmium • Chromium • Lead • Mercury • Selenium	Maximum contaminant level in groundwater at and beyond edge of the waste management area when waste is left in place. • 0.05 mg/l • 1.00 mg/l • 0.010 mg/l • 0.05 mg/l • 0.05 mg/l • 0.002 mg/l • 0.01 mg/l	Applicable to community water systems, which are defined as public water systems that serve at least 15 service connections used by year-round residents or regularly serve at least 25 year-round residents.	40 CFR 141.11 (SDWA) 40 CFR 300 Subpart E (NCP)

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Location Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
1 , 2	Area affecting stream or river	Action to protect fish or wildlife	Diversion, channeling or other activity that modifies a stream or river and affects fish or wildlife	Fish and Wildlife Coordination Act 40 CFR 6.302

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
1,2,3,6,8	Capping (See also Closure with Waste in Place for additional associated requirements)	Placement of a cap over waste (e.g., closing a landfill, or closing a surface impoundment or waste pile as a landfill, or similar action) requires a cover designed and constructed to: • Provide long-term minimization of migration of liquids through the capped area; • Function with minimum maintenance; • Promote drainage and minimize erosion or abrasion of the cover; • Accommodate settling and subsidence so that the cover's integrity is maintained; and • Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.	RCRA hazardous waste placed at site after the effective date of the requirements, or placement of hazardous waste into another unit will make requirements applicable when the waste is being covered with a cap for the purpose of leaving it behind after the remedy is completed. Capping without such placement will not make requirements applicable.	40 CFR 264.228(a) (Surface Impoundments) 40 CFR 264.258(b) (Waste Piles) 40 CFR 264.310(a) (Landfills)
		Eliminate free liquids, stabilize wastes before capping (surface impoundments).		40 CFR 264.228(a)
		Restrict post-closure use of property as necessary to prevent damage to the cover.		40 CFR 264.117(c)
		Prevent run-on and run-off from damaging cover.		40 CFR 264.228(b) 40 CFR 264.310(b)
		Protect and maintain surveyed benchmarks used to locate waste cells (landfills, waste piles).		40 CFR 264.310(b)

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
1,2,3,6,8	Closure with No Post-Closure Care (e.g., Clean Closure)	General performance standard requires elimination of need for further maintenance and control; elimination of post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products.	Applicable to land-based unit containing hazardous waste. Applicable to RCRA hazardous waste (listed or characteristic) placed at site after the effective date of the requirements, or placed into another unit. Not applicable to material treated, stored, or disposed only before the effective date of the requirements, or if treated in-situ, or consolidated within area of contamination. Designed for cleanup that will not require long-term management. Designed for cleanup to health-based standards.	40 CFR 264.111
		Disposal or decontamination of equipment, structures, and soils. Removal or decontamination of all waste residues, contaminated containment system components (e.g., liners, dikes), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and management of them as hazardous waste.	May apply to surface impoundments and container or tank liners and hazardous waste residues, and to contaminated soil, including soil from dredging or soil disturbed in the course of drilling or excavation, and returned to land.	40 CFR 264.111 40 CFR 264.178 40 CFR 264.197 40 CFR 264.228(a)(1) and 40 CFR 264.258
		Meet health-based levels at unit.		40 CFR 244.111

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OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
1,2,3,6,8	Closure with Waste In Place	Eliminate free liquids by removal or solidification. Stabilization of remaining waste and waste residues to support cover.	Applicable to land disposal of hazardous waste. Applicable to RCRA hazardous waste (listed or characteristic) placed at site after the effective date of the requirements, or placed into another unit. Not applicable to material treated, stored, or disposed only before the effective date of the requirements, or if treated in-situ, or consolidated within area of contamination.	40 CFR 264.228(a)(2) 40 CFR 264.228(a)(2) 40 CFR 264.258(b)
		Installation of final cover to provide long-term minimization of infiltration (see Capping).		40 CFR 264.310
		30-year post-closure care and ground-water monitoring.		40 CFR 264.310

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
1,2,3,6,8	Closure of Land Treatment Units	Maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone, minimize run-off of constituents, maintain run-on control system and run-off management system, control wind dispersal of hazardous waste, maintain unsaturated zone monitoring, establish vegetative cover, and establish background soil values to determine consistency with permit values.	Closure of land treatment units.	40 CFR 264.280
3,4,6,7,8,9	Container Storage	Containers of RCRA hazardous waste must be: • Maintained in good condition; • Compatible with hazardous waste to be stored; and • Closed during storage (except to add or remove waste).	Storage of RCRA hazardous waste (listed or characteristic) not meeting small quantity generator criteria held for a temporary period greater than 90 days before treatment, disposal, or storage elsewhere (40 CFR 264.10), in a container (i.e., any portable device in which a material is stored, transported, disposed of, or handled). A generator who accumulates or stores hazardous waste on-site for 90 days or less in compliance with 40 CFR 262.34(a)(1-4) is not subject to full RCRA storage requirements. Small quantity generators are not subject to the 90 day limit (40 CFR 262.34(c),(d),and(e)).	40 CFR 264.171 40 CFR 264.172 40 CFR 264.173
		Inspect container storage areas weekly for deterioration.		40 CFR 260.174

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POTENTIAL ARARs
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Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
3,4,6,7,8,9	Container Storage (continued)	Place containers on a sloped, crack-free base, and protect from contact with accumulated liquid. Provide containment system with a capacity of 10 percent of the volume of containers of free liquids. Remove spilled or leaked waste in a timely manner to prevent overflow of the containment system.		40 CFR 268.175
		Keep containers of ignitable or reactive waste at least 50 feet from the facility's property line.		40 CFR 264.176
		Keep incompatible materials separate. Separate incompatible materials stored near each other by a dike or other barrier.		40 CFR 264.177
		At closure, remove all hazardous waste and residues from the containment system, and decontaminate or remove all containers, liners.		40 CFR 264.178
		Storage of banned wastes must be in accordance with 40 CFR 268. When such storage occurs beyond one year, the owner/operator bears the burden of proving that such storage is solely for the purpose of accumulating sufficient quantities to allow for proper recovery, treatment, and disposal.		40 CFR 268.50

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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Discharge of Treatment System Effluent	**Best Available Technology:** Use of best available technology (BAT) economically achievable is required to control toxic and nonconventional pollutants. Use of best conventional pollutant control technology (BCT) is required to control conventional pollutants. Technology-based limitations may be determined on a case-by-case basis.	Point source discharge to waters of the United States.	40 CFR 122.44(a)
		Water Quality Standards: Applicable Federally approved State water quality standards must be complied with. These standards may be in addition to or more stringent than other Federal standards under the CWA.		40 CFR 122.44
		Discharge limitations must be established at more stringent levels than technology-based standards for toxic pollutants.		40 CFR 122.44(e)

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OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Discharge of Treatment System Effluent (continued)	**Best Management Practices:** Develop and implement a Best Management Practices program to prevent the release of toxic constituents to surface waters. The Best Management Practices program must: • Establish specific procedures for the control of toxic and hazardous pollutant spills. • Include a prediction of direction, rate of flow, and total quantity of toxic pollutants where experience indicates a reasonable potential for equipment failure. • Assure proper management of solid and hazardous waste in accordance with regulations promulgated under RCRA. **Monitoring Requirements:** Discharge must be monitored to assure compliance. Discharge will monitor: • The mass of each pollutant • The volume of effluent • Frequency of discharge and other measurements as appropriate.	Discharge to waters of the U.S.	40 CFR 125.100 40 CFR 125.104 40 CFR 122.41(i)

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Discharge of Treatment System Effluent (continued)	Approved test methods for waste constituent to be monitored must be followed. Detailed requirements for analytical procedures and quality controls are provided. Sample preservation procedures, container materials, and maximum allowable holding times are prescribed.		40 CFR 136.1 - 136.4
		Comply with additional substantive conditions such as: • Duty to mitigate any adverse effects of any discharge; and • Proper operation and maintenance of treatment systems.		40 CFR 122.41(i)
8,9	Placement of Liquid Waste in Landfill	<u>Liquids in Landfills Prohibition</u>: No bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids may be disposed of in landfills.	Placement of a bulk or non-containerized RCRA hazardous waste in a landfill.	40 CFR 264.314
		Containers holding free liquids may not be placed in a landfill unless the liquid is mixed with an absorbent or solidified.		40 CFR 264.314

SENT BY:IT 312 DIRECTORS KNOX ; 4-30-90 3:36PM ; 05582→ ;#22

FEED MATERIALS PRODUCTION CENTER
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POTENTIAL ARARs
OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
All	Placement of Waste in Land Disposal Unit	**Land Disposal Restrictions:** Attain land disposal "treatment" standards" before putting waste into landfill in order to comply with land ban restrictions. A treatment standard can be either: (1) a concentration level to be achieved (performance-based); or (2) a specified technology that must be used (technology-based). If the standard is performance-based, any technology can be used to achieve the standard.	Placement of RCRA hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave.	40 CFR 268 (Subpart D)
1,2	Slurry Wall	Excavation of soil for construction of slurry wall may trigger land disposal restrictions.	Materials containing RCRA hazardous waste subject to land disposal restrictions are placed in another unit.	40 CFR 268 (Subpart D)
1,2,3,6,8	Surface Water Control	Prevent run-on and control and collect run-off from a 24-hour 25-year storm (waste piles, land treatment facilities, landfills). Prevent over-topping of surface impoundment.	RCRA hazardous waste treated, stored, or disposed after the effective date of the requirements.	40 CFR 264.251(c) (d) 40 CFR 264.273(c) (d) 40 CFR 264.301(c) (d) 40 CFR 264.221(c)

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OPERABLE UNIT 4 ALTERNATIVES

Action Specific

Alternative No.	Substance, Location Action	Requirement	Prerequisite for Applicability	Citation
6,7,8,9	Treatment (in a unit)	Design and operating standards for unit in which hazardous waste is treated. (See citations at right for design and operating requirements for specific unit.)	Treatment of hazardous waste in a unit.	40 CFR 264.190 - 264.192 (Tanks) 40 CFR 264.221 (Surface Impoundments) 40 CFR 264.251 (Waste Piles) 40 CFR 264.273 (Land Treatment Unit) 40 CFR 264.343 - 345 (Incinerators) 40 CFR 264.601 (Miscellaneous Treatment Units) 40 CFR 265.373 (Thermal Treatment Units)