U-005-303.7

3296

OPERABLE UNIT 3 WORK PLAN ADDENDUM
VOLUME 2 OF 4 APPENDICES A, B & C
JUNE 1992

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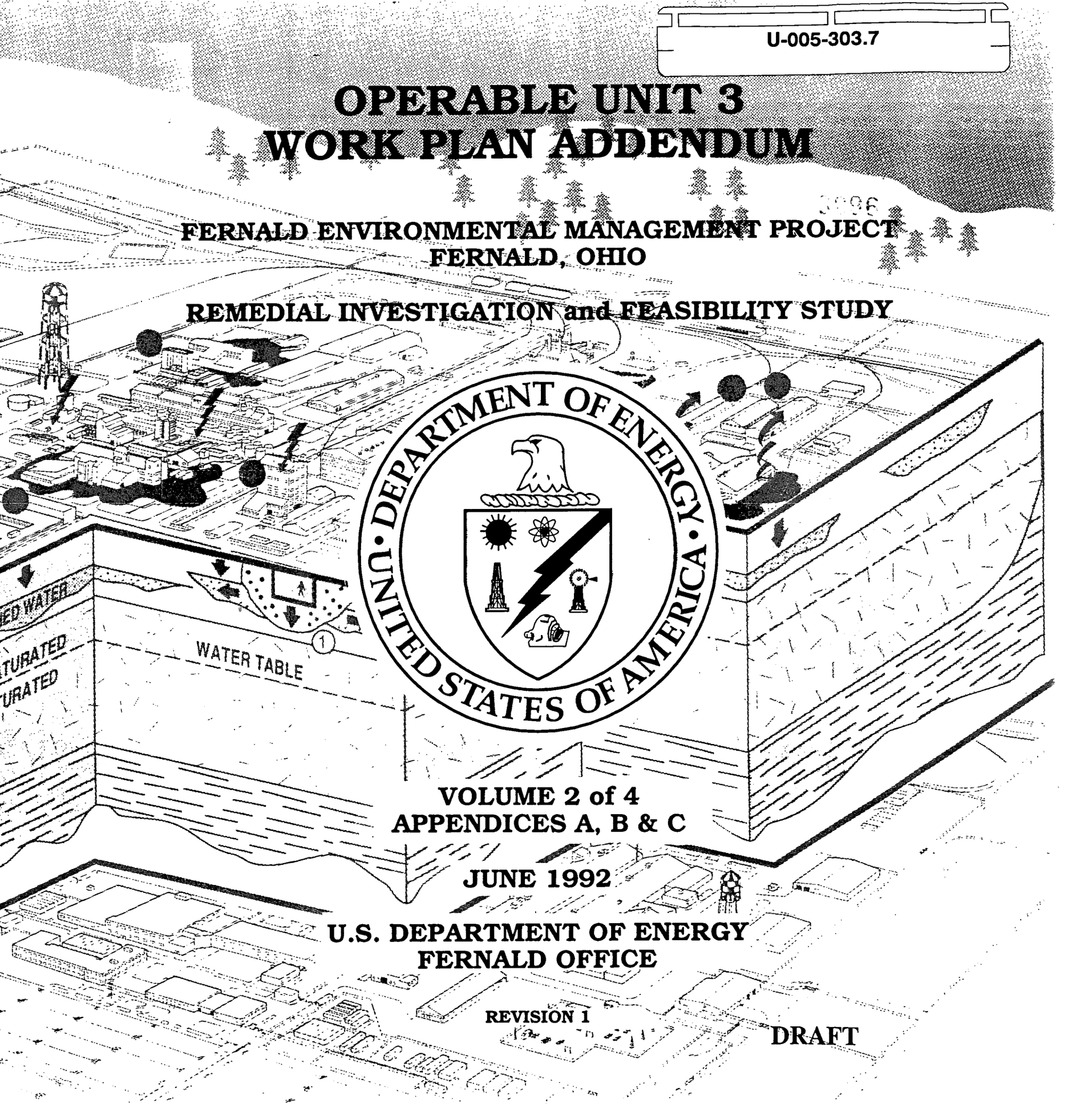
U-005-303.7

OPERABLE UNIT 3
WORK PLAN ADDENDUM

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

REMEDIAL INVESTIGATION and FEASIBILITY STUDY



VOLUME 2 of 4
APPENDICES A, B & C

JUNE 1992

U.S. DEPARTMENT OF ENERGY
FERNALD OFFICE

REVISION 1

DRAFT

OPERABLE UNIT 3
WORK PLAN ADDENDUM

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FERNALD, OHIO

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VOLUME 2 OF 4
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U.S DEPARTMENT OF ENERGY
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Revision 1

DRAFT

Appendix A

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APPENDIX A

SUMMARY TABLES

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TABLE A.1.0

OPERABLE UNIT 3 COMPONENT IDENTIFICATION LIST

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Table A.1.0 identifies the manmade structures and facilities on site that have been assigned a specific component identifier. The component identifier usually consists of a number followed by a letter. The number portion usually identifies a facility or group of related structures. In most cases, the letter "A" refers to the major structure of the facility with other letter designations referring to support structures for that facility. In other cases, a number has been assigned to a specific functional class of structure or facility (e.g., 16 for electrical support structures and 18 for water processing support).

Certain categories of components have identifiers that consist of a letter followed by a 3-digit number. The general category (G-000) refers to structures located throughout the site that are too numerous or too common to identify each separately (e.g., utility lines and storm sewers). The piles category (P-000) refers to specific piles of materials. These materials are construction soil, construction rubble, gravel, sand, rock salt, coal, copper, and miscellaneous scrap metal. The tension support structures (TS-000) are used to cover drum storage on the Plant 1 storage pad and will remain until remedial disposition of the drummed material.

The third column of the table refers to the component grid location. Each individual grid map is included in Appendix C.

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TABLE A.1.0
OPERABLE UNIT 3 COMPONENT IDENTIFICATION

Component	Component Designation	Grid
Preparation Plant	1 A	27
Plant 1 Storage Shelter	1 B	27
Plant 1 Ore Silos	1 C	27
Ore Refinery Plant	2 A	19
General/Refinery Sump Control Building	2 B	19
Bulk Lime Handling Building	2 C	19
Metal Dissolver Building	2 D	19
NFS Storage & Pump House	2 E	27
Cold Side Ore Conveyor	2 F	19
Hot Side Ore Conveyor	2 G	19
Conveyor Tunnel (From Plant 1)	2 H	19
Maintenance Building	3 A	19
Ozone Building	3 B	19
NAR Control House	3 C	19
NAR Towers	3 D	19
Hot Raffinate Building	3 E	19
Harshaw System	3 F	19
Refrigeration Building	3 G	19
Refinery Sump	3 H	19
Combined Raffinate Tanks	3 J	19
Old Cooling Water Tower	3 K	19
Electrical Power Center Building	3 L	19
Green Salt Plant	4 A	13
Plant 4 Warehouse	4 B	13
Plant 4 Maintenance Building	4 C	13
Metals Production Plant	5 A	12
Plant 5 Ingot Pickling	5 B	12
Plant 5 Electrical Substation	5 C	12
West Derby Breakout/ Slag Milling	5 D	12
Plant 5 Filter Building	5 E	12
Plant 5 Covered Storage Pad	5 F	12
Plant 5 Ingot Storage Shelter	5 G	12
Metals Fabrication Plant	6 A	6
Plant 6 Covered Storage Area	6 B	6
Plant 6 Electrostatic Precipitator (South)	6 C	6
Plant 6 Electrostatic Precipitator (Central)	6 D	6
Plant 6 Electrostatic Precipitator (North)	6 E	6
Plant 6 Salt Oil Heat Treat Building	6 F	6
Plant 6 Sump Building	6 G	6
Plant 7	7 A	13
Plant 7 Overhead Crane	7 B	13
Recovery Plant	8 A	20
Plant 8 Maintenance Building	8 B	20
Rotary Kiln/Drum Reconditioning	8 C	20
Plant 8 Railroad Filter Building	8 D	20
Drum Conveyor Shelter	8 E	20
Plant 8 Old Drum Washer	8 F	20
Special Products Plant	9 A	3
Plant 9 Sump Treatment Facility	9 B	3
Plant 9 Dust Collector	9 C	3
Plant 9 Substation	9 D	3
Plant 9 Cylinder Shed	9 E	3
Electrostatic Precipitator	9 F	3
Boiler Plant	10 A	10
Boiler Plant Maintenance Bldg.	10 B	10
Wet Salt Storage Bin	10 C	10
Cont. Oil/Graphite Burn Pad	10 D	10
Service Building	11	14
Main Maintenance Building	12 A	11
Cylinder Storage Building	12 B	11

TABLE A.1.0
OPERABLE UNIT 3 COMPONENT IDENTIFICATION

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Component	Component Designation	Grid
Lumber Storage Building	12 C	11
Pilot Plant Wet Side	13 A	26
Pilot Plant Maintenance Bldg.	13 B	26
Sump Pump House	13 C	26
Pilot Plant Thorium Tank Farm	13 D	26
Administration Building	14 A	14
Building 14 EOC Generator Set	14 B	14
Laboratory	15	21
Main Electrical Station	16 A	7
Electrical Substation	16 B	14
Electrical Panels & Transformer	16 C	7
Main Electrical Switch House	16 D	7
Main Electrical Transformers	16 E	7
Trailer Substation #1	16 F	7
Trailer Substation #2	16 G	7
BDN Surge Lagoon	18 A	31
General Sump	18 B	19
Coal Pile Runoff Basin	18 C	11
Biodenitrification Towers	18 D	19
Storm Water Retention Basin	18 E	30
Clearwell Pump House	18 G	31
BDN Effluent Treatment Facility	18 H	20
Methanol Tank	18 J	31
Low Nitrate Tank	18 K	31
High Nitrate Tank	18 L	31
High Nitrate Storage Tank	18 M	31
Main Tank Farm	19 A	11
Pilot Plant Ammonia Tank Farm	19 B	26
Tank Farm Control House	19 C	11
Old North Tank Farm	19 D	11
Pump Station & Power Center	20 A	11
Water Plant	20 B	10
Cooling Towers	20 C	11
Elevated Potable Storage Tank	20 D	4
Well House #1	20 E	25
Well House #2	20 F	25
Well House #3	20 G	26
Process Water Storage Tank	20 H	10
Gas Meter Building	22 A	6
Storm Sewer Lift Station	22 B	14
Truck Scale	22 C	4
Scale House & Weigh Scale	22 D	25
Utility Trench to Pit Area	22 E	25
Meteorological Tower	23	30
Railroad Scale House	24 A	16
Railroad Engine House	24 B	11
Chlorination Building	25 A	32
M.H.#175/Eff. Line/Sampling Bldg.	25 B	32
Sewage Lift Station Building	25 C	7
U.V. Disinfection Building	25 D	32
Digester & Control Building	25 E	32
Sludge Drying Beds	25 F	32
Primary Settling Basins	25 G	32
Trickling Filters	25 H	32
Pump House-HP Fire Protection	26 A	25
Elevated Water Storage Tank	26 B	25
Main Electrical Strainer House	26 C	7
Security Building	28 A	14
Human Resources Building	28 B	14
Guard Post on South End of 'D' St.	28 C	7

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TABLE A.1.0
OPERABLE UNIT 3 COMPONENT IDENTIFICATION

Component	Component Designation	Grid
Guard Post on West End of 2nd St.	28 D	24
Chemical Warehouse	30 A	18
Drum Storage Warehouse	30 B	27
Old Ten Ton Scale	30 C	18
Engine House/Garage	31 A	7
Old Truck Scale	31 B	7
Magnesium Storage Building	32 A	2
Building 32 Covered Loading Dock	32 B	2
Pilot Plant Annex	37	26
Propane Storage	38 A	10
Cylinder Filling Station	38 B	10
Incinerator Building	39 A	19
Waste Oil Decant Shelter	39 B	19
Incinerator Sprinkler Riser House	39 C	19
Sewage Treatment Plant Incinerator	39 D	32
Rust Engineering Building	45 A	25
Utility Shed East of Rust Trailers	45 B	25
Heavy Equipment Building	46	7
Six to Four Reduction Facility #2	51	26
Health & Safety Building	53 A	14
In-Vivo Building	53 B	14
Six to Four Reduction Facility #1	54 A	26
Pilot Plant Shelter	54 B	26
Pilot Plant Dissociator Shelter	54 C	26
Slag Recycling Building	55 A	12
Slag Recycling Pit/Elevator	55 B	12
CP Storage Warehouse	56 A	17
Storage Shed (West)	56 B	17
Storage Shed (East)	56 C	17
Quonset Hut #1	60	16
Quonset Hut #2	61	16
Quonset Hut #3	62	16
KC-2 Warehouse	63	9
Thorium Warehouse	64	2
(Old) Plant 5 Warehouse	65	2
Drum Reconditioning Building	66	27
Plant 1 Thorium Warehouse	67	24
Pilot Plant Warehouse	68	26
Decontamination Building	69	1
General In-Process Warehouse	71	27
Drum Storage Building	72	27
Fire Brigade Training Center Bldg.	73 A	FT
Fire Training Pond	73 B	FT
Fire Training Tank	73 C	FT
Fire Training Burn Trough	73 D	FT
Confined Space Burn Tank	73 E	FT
Plant 2 East Pad	74 A	19
Plant 2 West Pad	74 B	19
Plant 8 East Pad	74 C	20
Plant 8 West Pad	74 D	20
Plant 4 Pad	74 E	13
Plant 7 Pad	74 F	13
Plant 5 East Pad	74 G	12
Plant 5 South Pad	74 H	12
Plant 6 Pads	74 J	6
Plant 9 Pad	74 K	3
Building 65 West Pad	74 L	2
Building 64 East Pad & R.R. Dock	74 M	2
Building 12 North Pad	74 N	11
Decontamination Pad	74 P	1

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TABLE A.1.0
OPERABLE UNIT 3 COMPONENT IDENTIFICATION

Component		Component Designation	Grid
Plant 8 Old Metal Dissolver Pad		74 Q	20
Plant 8 North Pad		74 R	20
Building 63 West Pad		74 S	9
Plant 1 Storage Pad		74 T	27
Pilot Plant Pad		74 U	26
Laboratory Pad		74 V	21
Finished Products Warehouse(4A)		77	3
D & D Building(Under Constr.)		78	2
Plant 6 Warehouse		79	4
Plant 8 Warehouse		80	20
Plant 9 Warehouse		81	3
Receiving/Incoming Mat'ls. Insp.		82	4
Clearwell Line		88	31
Parking Lot		89	15,8
Railroad Tracks		G-001	
Roads		G-002	
Storm Sewer System		G-003	
Sumps		G-004	
Dikes		G-005	
Utility Lines		G-006	
Underground Storage Tanks		G-007	
Aboveground Storage Tanks		G-008	
Process Trailers		G-009	
Non-process Trailers		G-010	
Pipe Bridges		G-011	
Drums (Non-RCRA)		G-012	
RCRA Drums		G-013	
Inventory		G-014	
Mobile Containers (Sea-Land)		G-015	
East of Plant 2	Dirt	P-001	19
South of Plant 8 (West)	Dirt	P-002	20
South of Plant 8 (Mid)	Dirt	P-003	20
South of Plant 8 (East)	Dirt	P-004	20
South of Bldg. 80	Dirt	P-005	20
West of Plant 5	Dirt	P-006	12
West of 7 Plex (North)	Dirt	P-007	14
Covered West of 7 Plex (South)	Dirt	P-008	14
North of Plant 9 (Near Basin)	Dirt	P-009	3
Covered Dirt Pile between R.R. track #6 and #9	Dirt	P-010	9
Construction rubble pile East of coal pile run off basin	Dirt	P-011	11
East of coal pile run off basin	Dirt	P-012	11
Rock salt pile South of Bldg. 61	Rock Salt	P-013	16
Sand piles South of Bldg. 61	Sand	P-014	16
Covered East of Bldg. 56	Dirt	P-015	17
Gravel North of Bldg. 56	Gravel	P-016	17
Copper metal scrap pile	Copper	P-017	17
Coal pile	Coal	P-018	10
Third Street dirt pile	Dirt	P-019	17
Partially covered along Track #11	Dirt	P-020	18
Southwest corner of lab	Dirt	P-021	21
North of Bldg. 67	Dirt	P-022	24
Scrap metal pile	Metal	P-023	1
NW rubble piles	Dirt	P-024	31
Outside Equipment Storage Area	Metal	P-025	9
Tension Support Structure #1		TS-001	17
Tension Support Structure #2		TS-002	17
Tension Support Structure #3		TS-003	17

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TABLE A.2.0

DESCRIPTION OF BUILDING TYPES BY GROUPING

Table A.2.0 provides prerequisite information to support Table A.2.1 (Description of Structures and Processes). The four descriptions contained in Table A.2.0 are of the predominant building types on the site. These descriptions are referenced, by type, in Table A.2.1 to provide concise descriptions.

TABLE A.2.0 Description of Building Types by Grouping

Building Type	Description of Building Type
Type A	Consists of structural steel frame on reinforced poured concrete base, reinforced poured concrete ground floor, transite (concrete panels reinforced with asbestos fiber) siding panels with insulation sandwiched between inner and outer panels, transite interior walls, transite roof panels, lead bolt covers and sill moldings, glass windows, some with basement sections, most with sloped roof. Approximation of a typical volumetric content of concrete, steel, and transite is not practical, since each facility varies greatly in volume-to-perimeter ratio.
Type B	Consists of cement block construction on reinforced poured concrete footers, with reinforced poured concrete floors, glass windows, and flat reinforced poured concrete roofs. Typically these structures are volumetrically composed of approximately 50% cinder block and 50% concrete. Larger structures also employ reinforced concrete columns and/or steel frames. Reinforced poured concrete second floors may be present in some structures.
Type C	A pre-engineered facility consisting of structural steel frame on reinforced poured concrete base, reinforced poured concrete ground floor, sloped steel roof panels, steel siding panels (some with insulation sandwiched between inner and outer panels), and glass windows. Typically these structures are volumetrically composed of approximately 40% steel and 60% concrete.
Type D	Consists of wood framed construction, wood siding and sloped roofing, and glass windows.

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TABLE A.2.1

DESCRIPTION OF STRUCTURES AND PROCESSES

Table A.2.1 discusses in some detail the size of the components (structures and facilities) and types of construction materials used, the processes and uses within the component, and the equipment contained in the component. The equipment and contents column does not detail all equipment contained in the components. Associated minor and support equipment and utilities generally are not included in this compilation. Only large or unusual equipment is highlighted in this table. An area or equipment that has been declared a Hazardous Waste Management Unit (HWMU) by the FEMP RCRA program has been highlighted, with italic type.

The following notes are associated with Table A.2.1:

[a] Associated minor and support equipment and utilities are not detailed in this compilation.

[b] Unit declared a RCRA Hazardous Waste Management Unit (HWMU).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Preparation plant (Plant 1) (1A)	Building type A, 82- x 202-ft multilevel building with 4 levels, 50 ft high, and 2 enclosed drum conveyors to the third floor. Irregular shape.	**Drum Sampling** - Obtain representative samples of incoming ore concentrates, in-process material, and residues for reclamation or discard.	-Original equipment replaced by new.
		Crushing/Milling - Crushing, milling, grinding, and classification of feed materials for FMPC processing at up to 9.1 metric tons per hour in a variety of milling/grinding machines. Drum conveyors brought ores and ore concentrates to the mill. A thaw tunnel heated ore concentrates prior to milling.	-Jaw crushers, ring roller mills (Williams Titan and Zenith), conveyors, thaw tunnel.
		Enriched Materials Reclamation - Safe storage (rabbit hutches), milling (pin cutter and small Fitzpatrick mill), and digestion of higher enriched materials (up to 16% U-235 in safe geometry and higher in the lab digestion system) for use as isotopic sweetener (replenishing U-235 lost in the reactor cycle). Unirradiated Loft fuel rods, Hallum fuel, various university receipts, and a large variety of materials were reclaimed using the processing options in the facility.	-Hammer mill (Fitzpatrick), pin cutter (Thorr Mill), safe geometry digestion system, lab digestion.
		Drum Washing - Used to clean ore concentrate drums for reuse.	-Drum washers.
		Solvent Reclamation - Used to distill used dry-cleaning solvents to purify for reuse.	-*Detrex solvent still.*[b]
		Waste Water Handling - Waste waters were collected and particulates were removed prior to transfer to the general sump.	-Filters, storage tanks.
		Repackaging - Leaking drums found on the storage pad were moved to building 1A, where they were dumped into new drums and/or overpacked for secondary containment. Paducah ash was also repackaged.	-Only a barrel-turning truck involved.
Plant 1 storage shelter (1B)	Steel structure with steel roof and no sides, 90 x 142 ft x 18 ft high, covering storage pad, north of building 1A.	**Covered Storage** - Drums were stored and staged for Plant 1 processes.	-Drum storage.
		Copper Shredding - Separated copper from insulation materials and shredded for dense storage.	-Shredder/classifier.
		Drum Straightening - Re-rolled 30- and 55- gal drums for reuse.	-30- & 55-gal drum expanders and re-rollers (removed).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 1 ore silos (1C)	A 54- x 115-ft multilevel open steel structure, 80 ft high with 4 floors and 6 concrete and 8 tile silos.	**Milled Ore Storage** - Intended to store milled ores for transfer to Plant 2 processes. Transfer would occur under 2nd Street via subgrade conveyor (2H). The silos stored dried raffinate from the spray calciner process in facility 3J for a short period.	-14 ore storage vessels and support structure. No ore was ever stored in the structures, only dried raffinate from concentrates.
Ore refinery plant (2A)	Building type A, 62- x 382- x 50-ft multilevel building, 50 ft high with 5 floors.	**Digestion** - Prepared ores and uranium-bearing residues were dissolved in nitric acid for purification processing in the extraction area.	-Digester & *storage tanks*,[b] dust collection equipment, and fume scrubbers.
		Drum Digestion - Drum digesters were used for dissolution of higher enriched residues for use as sweetener (isotopic adjustment).	-Portable stainless steel drums used for digestion, filter, and scrubber.
		Extraction - Purification of digested liquors by liquid-liquid countercurrent solvent extraction in perforated plate pulse columns. Raffinate (waste) was sent through a mixer-settler system to reduce uranium content prior to transfer to the hot raffinate building (3E). Solvent was recovered by treatment with nitric acid and soda ash, then centrifuged.	-Extraction columns, tanks (inside), pulse generators, deionized water generators, and centrifuges.
		Denitration - Concentration of uranyl nitrate (UNH) liquor from extraction columns by evaporation and boildown; denitration of the concentrated liquor in gas-fired pots and conveying, milling, and packaging the UO_3 product. Thorium nitrate was also denitrated in 1968.	-Denitration pots, evaporator, hammer mills, dust collection equipment, and related tanks.
		Enriched Calcining - Safe geometry rotary calciner in which up to 10% enriched UNH solution was calcined to produce black oxide (U_3O_8) for use as sweetener.	-Electrically heated rotary calciner, related tanks, and pumps.
General sump/refinery sump control building and annex (2B)	Building type A/C, 39- x 43-ft multilevel building, 20 ft high with a 20- x 20-ft annex.	**Sump Control** - MgO is slurried in water and transferred to the refinery sump operation to be used for precipitation of uranium compounds from the waste waters.	-MgO slurry tank, control panels.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Bulk lime handling building (2C)	Building type A, 17- x 28- x 10-ft single-level building, 10 ft high and an 18-ft diameter steel silo, 50 ft tall.	**Bulk Lime Handling** - Bulk quantities of lime (CaO) were unloaded from railroad cars into an overhead storage silo. Lime was then conveyed to a rectangular steel tank and slaked into water (dissolved to $Ca(OH)_2$) for treatment of refinery effluents requiring uranium removal.	-Storage hopper, conveyor, slurry tank, and unloading station.
Metal dissolver building (2D)	Building type A, 39- x 50-ft multilevel building, 20 ft high with 2 floors.	**Metal Dissolution** - Dissolution of uranium metal with nitric acid in a temperature-controlled stainless steel tank to provide recycle feed for the extraction process. Also digested baled drums as required.	-Digester tank, heat exchanger.
		West Metal Dissolution - Dissolution of higher grade uranium-bearing residues (oxides typically) in nitric acid for extraction feed.	-Digester tank, drum dumper.
		Charcoal Treatment - Reclamation of dirty extraction "solvent" by treatment with charcoal and subsequent filtration. The process removed particulates and miscellaneous organics collected in the process.	-Rotary vacuum filter, tanks, drum dumper, and filter precoat tank.
NFS storage tanks and pump house (2E)	Building type B, 14- x 16- x 9-ft single-level block pump house, 9 ft high and 51- x 61-ft concrete diked area with 4 tanks.	**NFS Storage** - UNH received from other DOE sites by tank truck were stored in 4 horizontal tanks. Used for isotopic adjustments in the digestion process. Receipts were from NFS, Inc. and from the Hanford reservation. The UNH went to the enriched calciner.	-4 temperature-controlled *uranyl nitrate storage tanks*[b]

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Tanks outside plant 2A (no number)	Seven concrete diked storage areas with storage tanks, north and south of building 2A.	***Uranyl Nitrate Storage***[b] - 4 stainless steel tanks (25,000 gal each), in a diked area (NW) north of the digestion area stored uranyl nitrate. 2 stainless steel tanks in the same diked area (NW) stored tank leakage and water from the dike.	-6 stainless steel tanks.
		TBP/Kerosene Storage - 2 diked areas (NNW & NNE) north of the extraction area stored TBP/kerosene mix from extraction and slops to be cleaned. 5 stainless steel tanks are employed.	-5 stainless steel tanks.
		Clean Storage - 3 stainless steel tanks, TBP, kerosene, and cleaned TBP/kerosene mix are housed in the diked area (NE) north of the denitration area.	-3 stainless steel tanks.
		Bulk Unloading - Bulk quantities of TBP, kerosene, and nitric acid were unloaded at this station north of the denitration area.	-Sloped pad.
		Uranyl Nitrate Storage[b] - 4 stainless steel tanks in a diked area southeast of the denitration area stored uranyl nitrate ahead of evaporation and denitration.	-4 stainless steel tanks.
		Nitric Acid Storage - 3 stainless steel tanks in a diked area south of the digestion area stored nitric acid for use in digestion.	-3 stainless steel tanks.
		Sulfuric Acid Storage - A tank in a diked area south of the extraction area stored sulfuric acid for regeneration of refinery deionizers.	-1 Tank.
Plant 2 cold side ore conveyor (2F)	Conveyor shed, dumper building, bucket elevator, and subgrade concrete elevator pit.	**Cold Side Elevator Pit** - Ores or residues were dumped to the bucket elevator system in a 20-ft deep concrete elevator pit for south side digestors.	-Bucket elevator, drum conveyor, drum dumper, screw conveyor, conveyor shed, and drum dumper building.
Plant 2 hot side ore conveyor (2G)	Conveyor shed, dumper building, bucket elevators, and subgrade concrete elevator pit.	**Hot Side Elevator Pit** - Ores or residues were dumped to the bucket elevator system in a 20-ft deep concrete elevator pit for north side digestors. The system was initially designed to handle ores (and the associated radioactivity from radium content).	-2 bucket elevators, drum conveyor, 2 drum dumpers, 2 screw conveyors, conveyor shed, and drum dumper building.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Conveyor from Plant 1 ore silos (2H)	Subgrade conveyor system in a 15- x 190-ft concrete trench.	**Ore Conveying** - This unit was intended to transport ores to the hot side elevator of the refinery for processing as feed for digestion. Interviews have indicated that it was never used.	-Conveyor (unverified).
Maintenance building (3A)	Building type A, 60- x 60- x 14-ft single-level building, 14 ft high.	**Maintenance and Spare Parts Storage** - Store equipment and tools for maintenance of equipment in Plants 2 and 3. Store miscellaneous spare parts. Perform maintenance of some equipment in Plants 2 and 3.	-Spare parts, miscellaneous tools and equipment, and offices.
Ozone building (3B)	Building type A, 27- x 33- x 14-ft multilevel building, 14 ft high.	**Acid Bleaching** - Ozone was created for "bleaching" nitric acid from the nitric acid recovery process (NAR) in facility 3D.	-Office equipment, 2 refrigerators (original equipment removed).
NAR control house (3C)	Building type A, 26- x 110- x 14-ft single-level building, 14 ft high.	**NAR Control** - Electrical control panels for the nitric acid recovery system are housed in this building, in addition to a small conference room, offices, and a restroom.	-Electrical control panel, offices.
NAR towers and tanks (3D)[b]	Approximately 46- x 60-ft multi-level open area steel support structure, 60 ft high with 4 floors in a 70- x 108-ft diked area.	**Nitric Acid Recovery** - The system consists of 2 absorber towers in which nitrogen oxide (NO_x) fumes were drawn through a series of bubble caps. NO_x fumes were collected from the Plant 2 metal dissolver, digestion, and denitration (fumes passing through the pot scrubbers) processes. Nitric acid was produced for reuse in Plant 2 processes.	-2 Absorber towers, storage tanks, concentrator, surge storage tanks, and blowers.
		Concentrator - NO_x fumes from the combined raffinate evaporator were condensed and then heated with steam in the concentrator to produce up to 55% nitric acid for reuse. Overhead vapor from the concentrator went to the absorbers.	-Concentrator.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Hot raffinate building (3E)	Building type A, 52- x 91- x 60-ft multilevel building, 60 ft high with 3 floors and heavy concrete shielding.	**Hot Raffinate** - Received and filtered raffinate slurry and slag leach (nitric acid washed magnesium fluoride solids from building 2A) slurry through rotary vacuum filters. The filter cake was slurried with water and conveyed to the K-65 silos or waste pits, depending upon the nature of the material and whether it was within economic discard specifications. Filtrates were returned to refinery processes. The building was specially designed to handle higher radiation materials.	-2 Rotary drum filters, *3 receiver tanks*,[b] 2 reslurry tanks, 2 filtrate tanks, and support tanks.
Harshaw digestion fume recovery (3F)	A 19- x 40- x 35-ft multilevel open steel structure, 35 ft high.	**Harshaw Fume Recovery** - The Harshaw system was installed to relieve the fume load of the NAR in facility 3D. Nitrogen oxide fumes from the metal dissolver and digestion were collected to produce nitric acid. This process was not successful.	-Absorber towers, tanks.
Refrigeration building (3G)	Building type A, 16- x 44- x 11-ft single-level building, 11 ft high.	**Refrigeration** - Provided cooling for the Harshaw NO_x fume scrubber system in facility 3F.	-Original equipment removed. Currently used as file storage and for small instrument repairs. To be used for storage of returned chain-of-custody samples.
Refinery sump (3H)	Diked acid brick tank area, approximately 55- x 100-ft, adjoining the general sump.	**Refinery Sump** - Treated Plant 2/3 effluents with MgO (magnesium oxide) to precipitate uranium. MgO is slurried with water in building 2B for use in the process. Treated refinery sump effluents are transferred to the adjacent general sump.	-2 Sump receiving tanks, precipitator tanks, effluent tanks, thickener tank, and 3 filters.
Combined raffinate tanks (3J)	A 39- x 169-ft multilevel open area structure on a controlled concrete pad, 20 ft high.	**Combined Raffinate** - Received and concentrated (by evaporation) raffinates and slag leach filtrates for reprocessing in the refinery. Spent Zirnlo acid was transferred to the combined raffinate tanks from portable dumpsters from the Plant 9 Zirnlo process for use in this process.	-Evaporator with tube-type heat exchanger and 17 tanks.
		Spray Calcination - A spray calciner was used to dry raffinates for air conveyance to silo #3 in the K-65 area.	-Original equipment was removed after a short period.
		Contaminated Oil Storage - Contaminated oils were stored between the hot raffinate building and the combined raffinate pad for a period after 1980.	-Drums removed.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Old cooling water tower (3K)	Remaining grade and below-grade structure, approximately 30 x 50 ft.	**Process Water Cooling** - A wooden cooling tower provided process water cooling for refinery processes. Original equipment removed, but concrete basin and diked pad remain.	-Original equipment removed.
Electrical substation north of 3A (3L)	Building type A, 24- x 91- x 10-ft, single-level building, 10 ft high.	**Electrical Distribution** - Receives 13,200-volt feeds from the main electrical station. Feeds 480-volt lines to the plant.	-Transformers, disconnects.
Green salt plant (4A)	Building type A, 146- x 194- x 71-ft multilevel building with 5 floors, 71 ft high.	**Ammonia Dissociation** - Catalytically cracked anhydrous ammonia to H_2 and N_2 (dissociated ammonia - DA) for use in the hydrofluorination process.	-Catalytic ammonia dissociator reactors.
		Hydrofluorination - UO_3, produced primarily at the FMPC or the DOE Hanford works (UO_3 first converted to U_3O_8), was reduced with DA in heated fluid bed reactors and passed countercurrent to anhydrous hydrofluoric acid (AHF) in 3-stage heated horizontal continuous-flow reactor banks to produce UF_4 product.	-Fluid-bed reactors, horizontal ribbon-screw reactors, dust collection equipment, blending equipment, excess H_2 burner.
		AHF Vaporization - AHF provided from the main tank farm is vaporized for use in the hydrofluorination process.	-Vaporizers, superheaters.
		Hydrofluoric Acid Recovery - Excess AHF from the hydrofluorination process is filtered and scrubbed for recovery. Aqueous HF is transferred to the main tank farm.	-Filters, condensers, scrubbers.
		UF_4 Repackaging - UF_4 received from the DOE Paducah facility and FMPC operations are blended and repackaged for quality control.	-Material handling equipment, blending equipment, dust collector.
		Moving Bed Experimental Reactor - (1955-1958) Vertical packed-bed reactor for hydrofluorination.	-Reactor in place minus related equipment.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Green salt plant (4A) (Cont'd)		**Nitrogen Generation** - Produced and stored nitrogen gas for purging operations in Plant 4.	-Original nitrogen generator system replaced with new.
		HF Refrigeration - Used to reclaim HF fumes as anhydrous from Plant 4 and Plant 7 operations.	-Equipment removed.
		Thorium Tetrafluoride - (1954) Thorium oxide from Plant 9 was hydrofluorinated in bank 7 and returned to Plant 9.	-Existing reactor bank 7 equipment.
		Water Treatment - Originally, one of two steel tanks received floor sump liquids, was lime neutralized, and filtered to the second tank, which pumped to the general sump. Filter cake was drummed and sent for sampling. In more recent years, no processing was done. Collected liquids were transferred to the general sump or Plant 8 directly.	-Steel tank (one removed), plate & frame filter.
		Storage - Drummed materials and hoppers (UF_4, OU_3, *HF residues*,[b] etc.) have been stored at various times in many areas of the plant.	-Currently storing drums.
Plant 4 warehouse (4B)	Building type C, 60- x 202- x 13-ft single-level warehouse, 13 ft high.	**UF_4 Storage** - Covered storage for UF_4 resulting from Plant 4 and pilot plant UF_6 to UF_4 operations.	-UF_4 stored in drums.
Plant 4 maintenance building (4C)	Building type A, 60- x 60- x 14-ft single-level building, 14 ft high.	**Maintenance** - Maintain equipment from the chemical areas, primarily Plant 4.	-Tools, equipment, spare parts, offices.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Metals production plant (5A)	Building type A, 100- x 560- x 34-ft multilevel building, 34 ft high, with 2 floors in the primary areas of the building. Irregular shape.	**South Staging & Storage** - Stored raw materials (UF_4 magnesium and magnesium fluoride) and spare equipment for the Plant 5 reduction process.	-Storage for magnesium metal, MgF_2 (in 4 bins), UF_4, and spare equipment for the process.
		Reduction - Reduction pots were lined with a refractory-like product of magnesium fluoride in jolters fed from the MgF_2 mill (55A). UF_4 and magnesium metal were blended and charged into the pots (F machines). The charge was lidded and furnaced in resistance element furnaces to initiate the exothermic reduction to uranium metal and magnesium fluoride. The charge was subsequently cooled in air and then water and then "broken out" (breakout booth) to separate the uranium metal "derby" from the magnesium fluoride. The magnesium fluoride was screened and sized for transfer to the Plant 55 or Plant 5D milling circuit for recycle or to the Plant 1 mill.	-11 slag liner (Herman) jolters, 4 charge blenders in 4 F machines, 49 Rockwell (resistance) furnaces, 2 air cooling wells, 2 water cooling wells, 2 breakout systems, dust collection equipment. Currently storing drums.
		Casting (Remelt) - Uranium derbies, scrap, and recycle metal were charged in refractory-coated graphite crucibles, then conveyed to vacuum induction furnaces for melting, offgasing, and pouring to coated graphite molds. Cast shapes were removed from molds. Uranium ingots were sent to cropping. Molds were cleaned and recoated. Residual uranium was flame oxidized from crucibles. West remelt furnaces were used in 1981 for a copper ingot casting campaign.	-2 casting furnace lines, 2 breakout booths, mold painting area, vacuum oil recovery units,dust collection equipment. Currently storing drums.
		Ingot Cropping - Cast uranium ingots were top cropped and sawn to size.	-Two 3-ft diameter cold saws.
		Saw Sharpening - Saws were sharpened, retoothed, and maintained.	-Spare saws, saw repair equipment.
		Mold Preparation and Reconditioning - After molds and ingots were separated, molds entered the mold cleaning booth, where they were rotated, scraped clean, recoated with terrapaint (zirconia silicate), and dried for reuse. Molds for flat ingots were plasma sprayed at the pilot plant instead.	-Mold cleaning booths, dust collectors.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
5A (Cont'd)		***Hilco Oil Reclaimer***[b] - Dirty oil from the remelt furnace vacuum pumps was collected in a tank and processed for recovery (heated and filtered). Processed oil was sent to a cleaned oil tank for reuse.	-2 tanks, 2 vacuum pumps, 2 earth filters, 2 heat exchangers, 2 heaters
		North Staging & Storage - Stored graphite for machining and staged molds, crucibles and metal for casting process.	-Storage for graphite and staging for metal for casting.
		Graphite Machining - Graphite blanks for crucibles, molds, and pour plugs were machined to specifications.	-Lathes, drill presses, and variety of machines, dust collection equipment.
		Water Treatment - All floor sumps were pumped to a 6000-gal stainless steel tank which pumped through a plate and frame filter to the general sump. Beginning in 1983, the collected material was pumped to Plant 6 for treatment.	-Tank, filter press, pump
		Plasma Spraying - Similar to the unit utilized in the pilot plant annex (37) - not used.	-New unused equipment - Spray unit.
		Maintenance - Maintained Plant 5 equipment.	-Tools, equipment, spare parts.
Plant 5 west side separation and pickling (5B)	Building type C, 28- x 62-ft multilevel building, 15 ft high with 2 floors (partial basement), west of and adjoining building 5A.	**Ingot Separation and Pickling** - (New) Ingots cast in Plant 5 were to be transferred here for separation, mold cleaning, and ingot pickling. The facility was never used.	-New unused equipment - Ingot pickling tanks, nitric acid tank, wash water tank, ingot conveyor, scrubber, ingot robot, mold separation/cleaning booth.
Plant 5 electrical substation (5C)	Building type C, 16- x 30-ft single-level building, 30 ft high.	**Electrical Distribution** - Receives 13,200-volt feeds from the main electrical station. Feeds 480-volt lines to the plant.	-Transformers, disconnects.
Plant 5 west side slag milling & derby breakout (5D)	Building type C, 41- x 160-ft multilevel building, 50 ft high, west of and adjoining 5A.	**Slag Milling** - (New) Similar to existing facility (55A) on the east side of building 5A, intended to provide milling, storage, and distribution of magnesium fluoride slag for pot liner, and drumming of wastes. New system, never started up.	-New unused equipment - bins, conveyors, screens, ball mill, bucket elevators, dust collector.
		Derby Breakout - (New) Replaced west side derby breakout originally housed within building 5A. Received cooled reduction pots, separated the metal (derby) from the liner and slag components. Magnesium fluoride was conveyed to the west side slag milling. New system, never started up.	-New unused equipment - pot conveyors, jolter, grizzly conveyor, screen, crusher, dust collector.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 5 filter building (5E)	Building type C, 54- x 70-ft single-level building, 22 ft high.	**Storage** - Originally constructed to house dust collection equipment expected in the renovation of Plant 5, however production was halted.	-Miscellaneous storage, excess equipment, new stores, etc.
Plant 5 covered storage (5F)	Steel structure with roof and no sides, 85 x 142 ft, covering a storage pad north of Plant 5.	**Storage** - Originally an uncovered storage area. Pad and cover recently constructed. Originally stored ingots from Plant 5. West half currently unused, east half storing drums of residues, metal, dicalite, empty drums, and excess equipment.	-Currently storing drums.
Plant 5 ingot storage shelter (5G)	Steel structure with roof and no sides, 30 x 62 ft, covering a storage pad east of Plant 5.	**Metal Storage** - Used for temporary storage of Plant 5 metal products (ingots and derbies), feed stock (scrap and briquettes), and excess materials.	-Currently storing derbies, briquettes, and other uranium metal.
Metals fabrication plant (6A)	Building type A, 200- x 520- x 31-ft single-level building, 31 ft high with a partial basement 20 ft below grade level. Irregular shape.	**Rolling Mill** - Uranium billets were conveyed to a preheat ingot furnace (75/25 blend of potassium carbonate and lithium carbonate), through the blooming mill (to reduce the ingot to size), the crop shears (to cut off the ends), the finishing mill (to roll to final size), placed in an equalizer furnace (to anneal the metal), and passed through the stamper-straightener, on to the rollout/cooling table, weighed, bundled, and sent for machining.	-Billet conveyor, ingot furnace, blooming mill, finishing mill, crop shears, equalizer furnace, stamper-straightener, rollout/cooling table, overhead crane, control booths.
		Core Machining - Uranium rods extruded at RMI were returned to the FMPC to be finished. The rods were cut to length in either the Griddly or B&O lathe. The cores produced were milled to exact tolerances in the Cross transfermatic machine and sent for inspection.	-2 Bardon & Oliver lathes, 3 Acme-Griddly machines, Warner-Swasey machine.
		Miscellaneous Machining - Flat ingots were surface-machined, and miscellaneous odd jobs were performed on the Plant 6 machines.	-Surface machine.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
6A (Cont'd)		**Coolant Clarifiers** - Coolant oil from the Griddly, B&O, and Cross machines went through clarifiers, where the insoluble oil layer was removed from the top via rake. Clear liquid was returned for reuse.	-3 clarifiers with rakes, 3 pumps.
		Chip Briquetting - Machining chips, turnings and sawdust from the operations in this plant and from Plants 5 & 9 were collected, washed, pickled (in nitric acid), and crushed to form dense metal briquettes for remelt casting feed.	-Chip conveyors, crusher/screen, process carousel, hydraulic press, briquette conveyor
		Scrap Metal Pickling - A nitric acid bath was used to remove surface oxidation from metal intended as feed for casting.	-Nitric acid dip tank, 2 rinse tanks.
		Slug Pickling - Uranium slugs (cores) were loaded into baskets, placed on a roller conveyor, dipped into a nitric acid tank, followed by several water rinses, and a heater/dryer.	-4 tanks, compartmented tank, conveyors, vent system.
		Tocco Furnaces/Oil Quench - (1969-1971) These refractory-lined induction furnaces for beta heat treating replaced the earlier Amsler-Morton furnace (salt-water heat treating). The oil tank was integral with the unit. A 50/50 blend of sodium chloride and potassium chloride was utilized.	-3 furnaces.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
6A (Cont'd)		**Salt-Water (Nu-Sal) Heat Treating** - Refractory-lined beta heat treating unit to break up large grain structures in uranium billets. Used a 50/50 blend of sodium chloride and potassium chloride salts. Parts were quenched in an adjacent water bath.	-Furnace, quench tank.
		Salt-Oil Heat Treating - See building 6F below.	-See building 6F below.
		NO_x Destructor - Sodium sulfide solution at high pH (NaOH) was used to scrub and neutralize NO_x fumes generated from the scrap metal pickling operation in two packed bed scrubber towers.	-2 Scrubber tanks, feed tanks.
		Inspection - The uranium metal products of the FMPC were inspected prior to packaging and shipping.	-2 ultrasonic testers, derby scale, ingot scale, bander, overpacks.
		Storage - Remaining machining equipment in the plant was moved to allow use of the bulk of the floor space for drum storage.	-Currently storing drums.
		Robot - A five-axis industrial robot was demonstrated for core handling at one of the B&O lathes.	-Robot, control panel.
		Perched Water - The clarifier pit in the scrap pickling area has been used to collect contaminated foundation waters, and along with perched water from wells, pumped from Plant 6 to Plant 8 for treatment to recover uranium and remove organics. (A removal action)	-Pit, wells, piping.
		Water Treatment - Process waters from the plant were acidified to allow separation of the machining oil phase from the water phase. Oils were routed to a clarifier for reuse. The aqueous phase was neutralized with NaOH to precipitate uranium. The resulting sludge was filtered and drummed. Filtrate was sent to the general sump.	-3 tanks, filter press.
		Tool Fabrication Room - Machine tool elements for Plant 6 and Plant 9 machining operations were fabricated on the vast variety of equipment employed in the tool room.	-Lathes, grinding equipment, miscellaneous milling equipment, and dust collection system.
		Bronze/Tin Heat Treating - An early heat treating/quench process used in conjunction with the rolling mill.	-Furnace, quench tank.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 6 covered storage area (6B)	Steel structure with roof and no sides, 42 x 60 ft, covering a concrete pad.	**Storage** - Stored uranium chips, turnings, briquettes, and residues for processing in Plant 6 or shipment to Plant 8.	-Currently storing excess equipment.
Plant 6 electrostatic precipitator south (6C)	Building type C, 16- x 30- x 14-ft single-level building, 14 ft high and HEPA filter.	**Precipitron** - Electrostatic precipitator for exhausts vented from machining equipment. Electrostatic elements were typically not powered, since exhausts contained moisture.	-Precipitator, air filters.
Plant 6 electrostatic precipitator central (6D)	Steel precipitator housing and two cyclonic separators in a concrete diked area approximately 12- x 20-ft and 15 ft high.	**Precipitron** - Electrostatic precipitator for exhausts vented from machining equipment. Electrostatic elements were typically not powered, since exhausts contained moisture.	-2 cyclones, precipitator and filters.
Plant 6 electrostatic precipitator north (6E)	Building type C, 16- x 30- x 14-ft single-level building, 14 ft high.	**Precipitron** - Electrostatic precipitator for exhausts vented from machining equipment. Electrostatic elements were typically not powered, since exhausts contained moisture.	-Precipitator, air filters.
Plant 6 salt-oil heat treat building (6F)	Building type A, approximately 25- x 45-ft single-level building, 20 ft high.	**Salt-Oil Heat Treating** - Refractory-lined beta heat treating unit to break up large grain structures in uranium core blanks. Used a 50/50 blend of sodium chloride and potassium chloride salts. Parts were quenched in an adjacent oil bath.	-Furnace, quench tank.
Plant 6 sump building (New) (6G)	Building type C, 42- x 90- x 39-ft multilevel building, 39 ft high north of building 6A.	**Water Treatment** - (New) Intended to replace the water treatment process identified in building 6A; however, never started up.	-New unused equipment.
Plant 7 (7A)	Building type A, 82- x 112- x 102-ft multilevel building, 102 ft high with 7 floors.	**UF_6 to UF_4 Reduction** - (1954-1956) Heated cylinders of UF_6 to vapor under the west shed, then contacted with hydrogen gas in a tubular reactor to reduce UF_6 to UF_4 and by-product HF. Drummed out product and collected HF for transfer to Plant 4's refrigeration system.	-UF_6 to UF_4 reactor and all support equipment removed in early 1950s.
		N_2 Generator - Similar to Plant 4 nitrogen generator. Provided nitrogen for plant uses.	-N_2 generator (removed).
		Storage - Store miscellaneous materials.	-Miscellaneous stored materials.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 7 overhead crane (7B)	20-ton overhead bridge crane structure, 75 x 350 ft, 20 ft high and concrete pad 75 x 350 ft.	**Loading and Unloading** - UF_6 cylinders and depleted UF_4 hoppers were shipped and received by truck or railroad car.	-20-ton crane.
Scrap recovery plant (8A)	Building type A, 239- x 280- x 37-ft, multilevel building, 37 ft high with 2 floors. Irregular shape.	**Drying (Rotary Kiln)** - Used to dry or oxidize a large variety of uranium and thorium process materials, including: sump cakes, magnesium fluoride, machining chips and turnings, thorium oxide, thorium oxalate, and thorium hydroxide. Dry material was fed by screw conveyor, wet feed was by manually raking from a tray. Kiln product could be drummed or conveyed to a silo on the Plant 8 east pad.	-Rotary kiln, fume scrubber, dust collector (removed).
		Multiple Hearth Vertical Furnacing *(Primary Calciner)*[b] - An 8-hearth, gas-fired furnace which dried or roasted magnesium fluoride, sump cakes, dust collector bags and dirty gloves. Also dried wet waste materials for shipments offsite. A crusher and magnetic separator above the calciner were used to reduce the particle size of MgF_2 feed from silos and to remove tramp iron;	-Calciner furnace, scrubber, dust collector, magnetic separator, gyracone crusher, wet cake feeder.
		***(Oxidation Furnace #1)*[b]** - A 6-hearth gas-fired furnace primarily used for oxidizing high-grade scrap (U chips, turnings, and sawdust);	-Furnace, scrubber, dust collector.
		(Oxidation Furnace #2) - A 6-hearth, gas-fired furnace used to reoxidize impure black oxide (U_3O_8) and to oxidize dust collector residues for refinery feed. Most recently used to covert UF_4 and lime to calcium uranate and calcium fluoride; and	-Furnace, scrubber, dust collector, feed hoppers.
		(UAP Furnace) - A 6-hearth, gas- or oil-fired (oil firing unsuccessful) furnace used to roast uranyl ammonium phosphate (UAP) and ammonium diuranate (ADU) cakes for refinery feed.	-Furnace, scrubber, dust collector (all removed).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
8A (Cont'd)		**Single Hearth Furnacing *(Box Furnace)*[b]** - A gas-fired furnace located just north of building 8A used to oxidize scrap uranium to U_3O_8 and to oxidize gloves, rags, filters, and other contaminated burnables for uranium recovery. Material was fed to the furnace in batches and manually rabbled. When oxidation was complete, ash was manually raked into product drums;	-Furnace, scrubber.
		(Muffle Furnace) - A gas-fired furnace used to dry wet sump cakes. MgF_2 with a high free metal content (prill) was fed to oxidize the metal. The furnace was mechanically rabbled.	-Furnace, scrubber, dust collector-
		Graphite Furnace - (1953 to mid-1960s) A moving hearth (chain grate) gas-fired furnace used to oxidize contaminated graphite, mostly furnace crucibles that were jaw-crushed in Plant 5. Operation was discontinued after ~ 3 months due to inefficiency. Uranium turnings were oxidized in the furnace for a short period.	-Furnace, dust collector (all removed).
		Metal Dissolver - (1955-1959) Used to dissolve uranium metal with hydrochloric acid (HCl) for reprocessing. Metallic uranium was placed in "baskets" which were then lowered into HCl in one of two wooden dissolver vessels west of building 8B. Following dissolution, the HCl was returned to the hydrometallurgical system. Cooling coils helped control the reaction.	-2 dissolvers, heat exchanger (all removed).
		Greensalt Reversion - (1956-1958) Scrap UF_4 was reverted to U_3O_8 for recovery in a horizontal electrically heated ribbon flight retort reactor. Superheated steam flowed countercurrent to the UF_4.	-Reactor, scrubber, dust collector (all removed).
		Milling - A roller mill was used to reduce the particle size of roasted MgF_2 from the primary calciner for more efficient digestion in the HCl digesters. Also used to mill salts, graphite, and ash. Material was fed from a feed bin. Milled fines passed through an air classifier to feed bins.	-Feed bin, roller mill, dust collector.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
8A (Cont'd)		**Crushing** - Lithium carbonate and calcium carbonate salts from Plant 6 heat treating operations were crushed in a large jaw crusher (later replaced with hammer mill) for further processing in the ball mill and digesters. The steel drums containing the cooled salt mass were cut off with acetylene torch. The salt was manually crushed to 4-in. pieces, redrummed, and sent to the crusher or hammer mill.	-Hammer mill, dust collector (all removed).
		Ball Mill - Used for milling scrap uranium residues to facilitate dissolution in HCl digesters. MgF_2 (MCW airport scrap) or crushed carbonate salt was raked into the mill feed chute. Water was circulated through the mill from a recycle tank. The resulting slurry was pumped to a digester for further processing. Equipment located on the east pad.	-Ball mill, recycle tank, feed hopper (all removed).
		Rotexing - Furnace product from oxidizing high grade residues (chips, turnings, etc.) was screened to separate the +8 mesh fraction containing the bulk of unoxidized metal for refurnacing. The -8 mesh became refinery feed.	-Vibrating screen, dust collector.
		Hydrometallurgical System - Two processes were used to recover uranium from low-grade residues: ADU was used 1955-1957 and 1967-1971, and UAP was used 1958-1967. In the UAP process, prepared feed (milled MgF_2) was fed into a digester and dissolved in HCl. Digest liquor was then filtered through the Eimco rotary drum filters. Tailings were discarded to the waste pits, filtrate was precipitated with ammonium hydroxide (NH_4OH) and phosphoric acid (H_3PO_4). The precipitate UAP slurry was filtered on the Oliver rotary drum filters and sent to the UAP furnace for drying and to the refinery as feed (UAP ash). The Oliver effluent was neutralized with NaOH or $Ca(OH)_2$, filtered, and pumped to the general sump for discard. The ADU process was similar with additional steps: ADU filter cake was slurried in NaOH solution, filtered again on the Oliver filter and the sodium diuranate cake was roasted in the UAP furnace. The effluent was returned to the caustic leach tanks for recycling.	-Digester tanks, HCl tank, feed tanks, filtrate tanks, precipitator tanks, rotary filters, fume scrubbers.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
8A (Cont'd)		**WINLO** - (1962-1964) This process was used as a means of returning relatively pure, high assay enriched materials to the production stream without refining. U_3O_8, UAP, and metal dissolver liquor were dissolved in HCl and HNO_3 and filtered on the Eimco rotary drum filter. The filtrate was treated with 30% HF, copper sulfate, and sulfur dioxide to form a UF_4 precipitate, which was filtered on a horizontal pan filter, passed through a holoflite dryer, and sent to Plant 4 for further dehydration. Pan filter effluent was neutralized with lime slurry and pumped to the waste settling pit. Discontinued in 1964 due to high maintenance costs and high down-time.	-Pan filter, holoflite dryer, 2 scrubbers, SO_2 tank (N of 8A), related tanks (all removed).
		Water Treatment and Filtration - Waste water from floor washing, pump leakage, etc. that went into the floor sump was pumped to the neutralization tank, NaOH added and then filtered on a rotary drum filter. After the hydrometallurgical processes ceased in 1971, the digester tanks were used for sump neutralization with lime. Raffinate slurry and waste water was also received from other areas for treatment and filtration. Spent scrubber solutions from the various Plant 8 operations were also filtered. Effluent from waste water filtration was sampled and pumped to the general sump for discard.	-Neutralization tank, rotary drum filter, drum dumper.
		Oil Centrifuge - Used to remove solids from waste oil. The oil was to be used for heating the UAP furnace. Contaminated waste oil was dumped into a decant tank, where any water was decanted and the oil passed through a small centrifuge to two large storage tanks, located on a diked concrete pad south of building 8A.	-Centrifuge, 2 oil storage tanks, decant tank (all removed).
		Thorium Tetrafluoride Reversion - Thorium hydroxide was produced in Plant 8 for 6 months in 1966. ThF_4 was reverted to thorium hydroxide by heating in a reverter tube (the green salt reverter) with hydrofluoric acid as a byproduct. Approximately 59 metric tons of Th as thorium hydroxide was produced.	-See greensalt reversion (removed).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
8A (Cont'd)		**Thorium Residue Recovery** - (1969-1971) Scrap thorium oxide, oxalate, and hydroxide were processed to thorium hydroxide for return to the production stream. Residues were digested in HCl and filtered on a rotary drum filter. The filtrate was then precipitated with oxalic acid to form thorium oxalate. This was filtered and the resulting cake slurried with water, then treated with NaOH to form thorium hydroxide. The thorium hydroxide was filtered and the filtrate recycled back to the thorium oxalate precipitator. The cake was drummed and fed to the UAP furnace. Dried thorium hydroxide was sent to the pilot plant for processing.	-UAP furnace, pan filter, oxalic acid tank, rotary drum filter (Eimco) (all removed except Eimco).
		Thorium Storage - (1978-1988) Thorium compounds were stored in two elevated silos at the east end of Plant 8.	-2 steel silos (removed).
		Bulk Storage - Sodium hydroxide was stored in two horizontal tanks for use in Plant 8. One horizontal tank was used for phosphoric acid and one for sulfur dioxide. The phosphoric acid tanks has most recently been used to store sodium carbonate. All were north of the plant.	-3 steel tanks (1 removed).
Plant 8 maintenance building (8B)	Building type B, 30- x 42- x 13-ft single-level building, 13 ft high.	**Maintenance** - Maintain equipment from Plant 8. Plant 8 equipment was occasionally moved to maintenance for repair.	-Tools, equipment, spare parts.
Rotary kiln/drum reconditioner (8C)	Building type C, 50- x 100- x 33-ft multilevel building, 33 ft high.	**New Rotary Kiln** - New, unused; will receive and dry waste residues for off-site disposal or on-site storage.	-New unused equipment - Rotary kiln, dust collection equipment.
		New Drum Reconditioning - New, unused; will clean and recondition drums.	-New unused equipment - Drum reconditioning equipment.
Plant 8 railroad filter building (8D)	Building type C, 8- x 10-ft single-level building 10 ft high.	**Filtration** - See facility 74C for description of the airport scrap operation, the primary use of this facility. The structure served as a gauge and pump house.	-Subgrade settling basins, sand filter, pump, agitator, car wash pit.
Plant 8 old drum washer (8F)	Steel-enclosed equipment for drum washing.	**Drum Washing** - Used to wash out drums for refurbishing. Drums from all over the site were washed with a sodium hydroxide solution in this unit located on the west pad (74D).	-Drum washer.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Special products plant (9A)	Building type A, 201- x 261-ft single-level building, 20 ft high.	**Enriched Uranium Casting** - Enriched uranium derbies and scrap metal were remelted to cast 11-in. and 13-in. ingots for further processing. Graphite crucibles and zirconia-coated graphite molds were utilized in the induction-heated vacuum NPR furnaces. After pouring the ingot, a crucible was inverted and subjected to flame oxidation to "burn out" residual uranium. Ingots were cooled and separated from the molds and sent for machining. Molds were cleaned and precoated either at Plant 9 or the pilot plant for reuse.	-2 Induction furnaces, dust collection equipment, vacuum system and oil reclaimer.
		Zirnlo Decladding - (1963-1988) Used for decladding non-irradiated fuel cores of copper and zirconium or nickel and aluminum cladding. Cores were sawn to size and placed sequentially in oxidizing and then reducing baths to remove the clad layers.	-Reciprocating saw, open tanks, holding tanks.
		Uranium Machining - A variety of machining capabilities existed for uranium ingots: top cropping, OD turning, hole boring, and chamfering.	-Saws, lathes, drills.
		Derby Cleaning - A molten salt treatment for uranium derbies (50/50 blend of lithium carbonate and potassium carbonate) was used to remove MgF_2 adhering to them. The operation was conducted in resistance element furnaces originally used for reduction.	-8 resistance element furnaces (Rockwell).
		Triple Beta Heat Treating - The ingots produced in Plant 9 were, at one time, beta heat treated 3 times in NuSal salt in a furnace in Plant 9. Later heat treating was one-step.	-Ingot heat treating furnace (removed).
		Thorium Metal - (1954-1955) Thorium nitrate was dissolved in nitric acid, precipitated as ThF_4 with HF, dried, pulverized, blended with calcium and zinc chloride, and thermally reduced to a zinc-thorium derby. The derby was subsequently de-zinced and remelted in a vacuum furnace. Turnings from machining the thorium to a final form were acid washed and briquetted for return to the remelt cycle.	-All equipment removed.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
9A (Cont'd)		**Uranium Reduction** - Milled dolomite was used as a pot liner for the reduction pot. Liners were formed in jolters, filled with blended UF_4/magnesium mix, lidded, and furnaced. The uranium produced from the reduction reaction was cooled and separated from the magnesium fluoride and dolomite. Magnesium fluoride was later used to line the furnace pots.	-3 Jolters, 6 liner hoppers, pot filling/blending machine, capping and lidding station, 13 reduction furnaces, cooling tanks, and a breakout booth.
		I & E Remelt Furnaces - Four vacuum induction furnaces functioned as remelt furnaces (see description above) and with similar support equipment to above prior to replacement. Some current Plant 5 induction furnaces are identical.	-2 vacuum pumps, 4 furnaces, crucible burnout, charging and mold cleaning stations, separation booth, oil reclaimer (all removed).
		Briquetting - Uranium chips from Plant 9 machining were dumped into a crusher, put into baskets, through a centrifuge, nitric acid bath, two water rinses, centrifuged, and briquetted in a press.	-Nitric tank, 2 rinse tanks, 2 centrifuges, crusher, press, and fume scrubber (all removed).
		Scrap Metal Pickling - A nitric acid bath was used to remove surface oxidation from metal to be used for remelt feed.	-Nitric acid tank, rinse tank, fume scrubber.
Plant 9 sump treatment (9B)	Building type A, approximately 20- x 30-ft single-level building, 20 ft high.	**Water Treatment** - Plant 9 waste waters were treated with NH_4OH, originally (and later, lime), to remove the bulk of the contaminants prior to transfer to the general sump.	-Decant tank, acid tank, mix tank, 2 plate & frame filters, 3 filtrate tanks.
Plant 9 dust collector (9C)	Steel dust collector housing approximately 20 x 35 ft and 25 ft high.	**Dust Collection** - Dust collector G42-615 was used to collect and filter exhausts from the Plant 9 reduction processes.	-Dust collector, hoffman vacuum pump, 2 cyclones.
Plant 9 electrical substation (9D)	Building type A, approximately 25- x 40-ft single-level building, 20 ft high.	**Electrical Distribution** - Receives 13,200-volt feeds from main electrical station. Supplies 480-volt feeds to the plant.	-Transformers, disconnects.
Plant 9 cylinder shed (9E)	A 3-sided transite/steel single-level shed, 5 x 10 ft, 8 ft high.	**Cylinder Storage** - Stored full and empty cylinders for Plant 9 use.	-Empty cylinder racks.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 9 electrostatic precipitator house (9F)	Building type C, 16- x 30- x 14-ft single-level building, 14 ft high.	**Precipitron** - Electrostatic precipitator handled exhausts from vented machining equipment in Plant 9. Electrostatic elements were typically not powered, since exhausts contained moisture.	-Electrostatic precipitator, air filters.
Boiler plant (10A)	Building type A, 72- x 163- x 57-ft multilevel open area structure, 57 ft high with 2 floors and a basement 72 x 97 x 15 ft. Irregular shape.	**Steam Production** - Four coal-fired steam boilers provide steam to the entire FEMP facility for heating.	-4 coal-fired boilers, electrostatic precipitator, feed conveyors.
Boiler plant maintenance building (10B)	Building type C, 40- x 60- x 16-ft single-level building, 16 ft high.	**Boiler Plant Maintenance** - Proved maintenance for the boiler plant equipment.	-Equipment, tools, vented basin for solvent cleaning of equipment.
Wet salt storage bin (10C)	A 17- x 42-ft rectangular concrete tank for salt.	**Wet Salt Storage** - The bin is used to store salt solution for regenerating the zeolite water softeners. Sodium chloride is received by truck, dumped into the bin, and dissolved.	-Salt storage bin, salt solution.
Oil burner/graphite burner pad (10D)	A concrete pad approximately 55 x 85 ft.	**Graphite Burner** - Small, open, gas-fired furnace used for oxidizing scrap graphite crucibles/molds for uranium recovery.	-Graphite burner.
		Oil Burner - A small refractory brick enclosure housed removable steel pots. Contaminated oil/solvent was continuously fed into the burning pot. Combustion was aided by an air jet into the top of the pot. The oil was pumped from drums into an oil-water separator tank, then into the steam-heated tank (where the oil was preheated) before going to the burner pot. Combustion was self-sustained. Ash was drummed for uranium recovery.	-Oil burner enclosure, tank (other equipment removed).
		Sump - Decanted surface water was pumped from the sub-grade pit into portable tanks and sent to Plant 8.	-Steam eductor (removed).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Service building (11)	Building type B, 230- x 322- x 30-ft multilevel building, 30 ft high with 2 floors.	**Laundry** - Provides cleaning services for process clothing. In the past, also cleaned clothes from off-site operations. **Locker Rooms** - Change-out facilities and showers for employees and sub-contractors. **Cafeteria** - Provides lunchroom service for employees and sub-contractor.	-Washers, dryers, dry cleaners (refurbished and enlarged in 1987). -Locker and shower facilities (refurbished and enlarged in 1987). -Cafeteria equipment.
Main maintenance building (12A)	Building type A/B, 150- x 361- x 20-ft multilevel building, 20 ft high with 2 floors.	**Main Maintenance, Stores, and Offices** - The maintenance stores, the main maintenance shops, tool rooms, and associated offices are housed in this building.	-Heavy-duty maintenance equipment, spare parts, *parts cleaner.*[b]
Cylinder storage building (12B)	Building type B/C, 31- x 47- x 10-ft single-level building, 10 ft high.	**Cylinder Storage** - Used for storage of argon, chlorine, and other gas cylinders used on site.	-Full and empty cylinders.
Lumber storage shed (12C)	A steel shelter, 40 x 50 x 14 ft, 14 ft high.	**Lumber Storage** - Used for storage of lumber and plywood for building projects on site.	-Plywood, lumber, electric motors.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Pilot plant wet side (13A)	Building type B, 63- x 155-ft multilevel facility, 35 ft high (extraction area 53 ft high).	**Solvent Extraction** - (1964-1980) Purification of thorium or uranium digested liquors by liquid-liquid counter-current extraction in perforated plate pulse columns. Diamyl-amyl phosphonate (DAAP) in kerosene and di-sec-butyl phenyl phosphonate (DSBPP) in kerosene made up the extractants for thorium. TBP was also used to remove uranium. Raffinate was neutralized and filtered. Filter cake was drummed, effluent went to the general sump. Solvent was recovered by nitric acid and soda ash treatment and centrifuging. Extraction product (UNH or TNT) was concentrated by heating in tank W-10 (outside west). Two-inch columns were used for processing higher enriched UNH.	-Three 6-in. columns, one 10-in. column, centrifuge, 2 pulse generators, 2-in. pyrex extraction columns.
		Sump Process - All floor sumps were collected in 2 outside tanks (F101, F102) treated batchwise in 2 neutralizing tanks with MgO and MnO_2 and filtered.	-2 neutralizer tanks (D-15, D-16), two 24-in. plate and frame filters - has been removed.
		Thorium Digestion - (1964-1980) Thorium ores, thorium oxalate, and other thorium materials were dissolved in HNO_3 in a single digester for extraction feed. Vented to outside scrubber.	-Digester tank (D-1 removed).
		Thorium Oxalate - (1971-1976) Thorium nitrate tetrahydrate (TNT) was precipitated with oxalic acid to form a wet thorium oxalate, which was filtered. The oxalate was calcined at another location.	-Tanks, plate & frame filter (removed).
		Thoria Gel (hydrated oxide) - (1964-1970, 1977-1979) TNT solution was precipitated with CO_2 and ammonia to form thorium hydroxide. This was slurried with water and ammonia, filtered, dried, and sent to another location for calcining to thorium oxide.	-Tanks, plate & frame filter, shelf dryer (removed).
		Thorium Tetrafluoride Precipitation - (1969-1971) Thorium tetrafluoride (ThF_4) was precipitated by adding hydrofluoric acid to thorium nitrate tetrahydrate (TNT) solution. The ThF_4 was filtered and dried twice.	-Tanks, pan filter, shelf dryer (removed).
		ZnF_2 Precipitation - (1969-1971) Zinc fluoride was precipitated by dumping bags of zinc oxide into dilute HF. The ZnF_2 produced was filtered and dried twice for use in thorium metal production. This process used the same equipment used for ThF_4 precipitation.	-Same as above.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
13A (Cont'd)		**Pot Liner Preparation** - Calcium fluoride from thorium derby breakout was prepared for pot liner material by crushing and ball milling.	-Jaw crusher, ball mill, dust collector (removed).
		Decladding Fuel Elements - Aluminum-clad, nickel-plated uranium fuel elements were declad by placing in a stainless steel ventilated trough and circulating sodium hydroxide and nitric acid. Declad elements were returned to the production stream in Plant 5 and the spent solution went to Plant 8.	-Tank, trough (removed).
		Enriched Oxidation Furnace - (1956-1985) A small single hearth, gas-fired furnace used to process enriched scrap U_3O_8, U metal, and other residues.	-Furnace, dust collector (removed).
		Barium Chloride Conversion[b] - Barium chloride heat treating salts from the uranium extrusion operation at RMI were converted to barium sulfate.	-Tanks (removed).
Pilot plant maintenance building (13B)	Building type, 30- x 60-ft single-level building, 11 ft high.	**Maintenance** - Maintain equipment in the pilot plant. Required moving equipment into the building for repairs.	-Tools, equipment, spare parts.
Sump pump house (13C)	Building type B, 12- x 16-ft single-level building, 8 ft high.	**Sump Pump House** - Area includes 2 large sump hold tanks (2 subgrade concrete pits) which received filtered sump effluent, which was sampled and pumped to the general sump. 2 smaller tanks were hold tanks for extraction solvent. An *abandoned sump*[b] hole may also have been used.	-Tanks (sub-grade pits have been filled).
Pilot plant thorium tank farm (13D)	A 50- x 75-ft open concrete diked area west of building 13A.	**Thorium Tank Farm** - Used for storage of thorium nitrate tetrahydrate (TNT), HNO_3, NaOH, *spent solvents (T-5 and T-6 tanks)*,[b] and water. Also contained a dust collector, packed tower fume scrubber, and an extraction product (TNT) receiving tank.	-Tanks, dust collector, fume scrubber (~6,000 gal of TNT remain in T-2).
Administration building (14A)	Building type B, approximately 143- x 240-ft (equiv.) multilevel building, 24 ft high with 2 floors. This building has a partial basement under part of the west wing.	**Offices** - Main offices for site management, mailroom, central reproduction, central computing, and files storage.	-Office equipment, stored documents, computer hardware.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
EOC emergency electrical generator (14B)	Electrical generator on pad, approximately 10 x 10 ft.	**Emergency Operations** - This unit consists of a diesel engine, fuel tank and electrical generator for use in emergency situations to power the emergency operations center (EOC).	-Engine, diesel tank, generator.
Laboratory building (15)	Building type B, 253- x 292-ft multilevel building, 20 ft high with 2 floors in some sections, a basement (148 x 293 x 11 ft) under the west corridor, and access tunnels under the south and central corridors. Irregular shape.	**Laboratories** - Housed the analytical, metallurgical, and chemical process labs. Also housed the photography lab, the library, and a significant number of offices. The building has been added to and remodeled.	-Laboratory equipment, office equipment.
Main electrical station (16A) and support equipment (16B-16E)	A 200- x 200-ft area with steel structures and small buildings.	**Electrical Distribution** - The structure provides the main electrical feed to the FEMP. Receives 132,000-volt feeds from the mains and transforms to 13,200-volt feeds to local substations around the facility.	-Steel frames, 3 transformers, 9 circuit breakers, disconnects.
Trailer electrical substation 1 (16F)	A small fiberglass enclosure for electrical transformer.	**Electrical Distribution** - Receives 480-volt feeds and transforms to 220-volt feeds for the local office trailers.	-Transformer, disconnect.
Trailer electrical substation 2 (16G)	A small fiberglass enclosure for electrical transformer.	**Electrical Distribution** - Receives 480-volt feeds and transforms to 220-volt feeds for the local office trailers.	-Transformer, disconnect.
Biodenitrification surge lagoon (18A)[b]	A 400- x 400-ft lagoon, 15 ft above grade, plus 50,000-gal steel tank with integral floating roof.	**Lagoon** - The biodenitrification (Bio-D) surge lagoon (8.6 million gallons) holds general sump effluents waiting processing for nitrate removal in the Bio-D towers (18D).	-Lagoon.
General sump (18B)	A 113- x 116-ft multilevel open area facility, 25 ft high with 2 floors, resting on a concrete pad.	**General Sump** - Provides treatment of site effluents other than sewage. Responsible for disposition of effluents to the biodenitrification facility or the Great Miami River (via manhole 175).	-Five 56,000-gal tanks, two 15,000-gal tanks, three 20,000-gal tanks, one 12,000-gal tank, and one 5,000-gal tank.
Coal pile runoff basin (18C)[b]	A 150- x 300-ft basin, 6 ft above grade and 12 ft deep.	**Runoff Retention** - The 25,000-gal basin collects stormwater runoff from coal pile P-018 for treatment.	-Runoff water from the coal pile and continuous blowdown from boiler operations.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Biodenitrification towers building (18D)	Building type C, 72- x 79-ft multilevel building, 67 ft high with 6 floors.	**Biodenitrification** - The process supports bio-mass on fluidized coal particles to obtain denitrification (removal of nitrates) of liquid effluents.	-Four 30-ft towers, screens.
Storm water retention basin (18E)	2 adjacent lined collection basins 300 x 300 ft and 200 x 550 ft.	**Storm Water Retention** - Two basins supply ~10 million gallons of capacity to retain rainwater flow from the site. The retention allows uranium-bearing solids to settle. Decanted liquids are pumped to manhole 175.	-Rainwater, 4 underdrain pumps, 2 decant pumps, sampling station building.
Clearwell pump house (18G)	Building type A, approximately 10- x 22-ft single-level building, 15 ft high.	**Clearwell Pumping** - Pump clear sampled surface runoff water to the biodenitrification surge lagoon (18A) through the piping in utility trench 22E.	-2 pumps.
Biodenitrification effluent treatment facility (18H)	Building type C, 30- x 50-ft single-level building, 15 ft high in a 100- x 100-ft area including process equipment.	**Effluent Treatment** - Biodenitrification system effluents are treated to reduce biological oxygen demand (BOD) and total suspended solids (TSS) prior to transfer to sewage treatment.	-Pumps, tanks, chlorinators, filter press, compressors, aerators.
Methanol tank (18J)	A 5-ft diameter stainless steel tank, situated on a 31- x 41-ft concrete pad.	**Methanol Storage** - The methanol tank stores methanol, the primary food source for the biomass colony in the biodenitrification process.	-1 tank, methanol.
Low nitrate tank (18K)	A 180- x 180-ft polymer-lined temporary steel-sided reservoir of 1,000,000-gal capacity.	**Low Nitrate Tank** - A temporary tank used during the reconstruction of the biodenitrification surge lagoon to hold low nitrate waste waters. Control of nitrate levels to the biodenitrification process was accomplished by blending of the high and the low nitrate tank flows.	-1 lined steel-sided basin.
High nitrate tank (18L)	A 180- x 180-ft polymer-lined temporary steel-sided reservoir of 1,000,000-gal capacity.	**High Nitrate Tank** - A temporary tank used during the reconstruction of the biodenitirification surge lagoon th hold high nitrate waste waters.	-1 lined steel-sided basin.
High nitrate storage tank (18M)	A 60-ft diameter vertical steel tank of 500,000-gal capacity in a 112- x 112-ft padded diked area.	**High Nitrate Storage** - The tank was intended to store high nitrate wastes from the operation of the refinery. The tank has not been used, but is planned to provide interim storage of filtrate from the uranyl nitrate neutralization project.	-1 steel tank (never used).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Main tank farm (19A)	A 140- x 190-ft open area concrete diked structure, with 5 horizontal tanks and structures up to 20 ft high.	**Bulk Storage** - The tank farm supplied and received bulk liquid chemicals. Railcar and truck loading and unloading facilities exist. The original tanks in the tank farm were: Nitric acid, AHF, DHF, TBP, kerosene, anhydrous ammonia, HCl, ammonium hydroxide, and KF. The original tank farm was not padded or diked, but sloped to a sump. In 1986 the south end of the tank farm was renovated. New storage tanks were installed in a diked, concrete-padded area with a control room. These tanks were not used. Old tanks remain in the north half. A *railcar of dilute HF*[b] and an empty *railcar for nitric acid*[b] are stored nearby. *HF residues*[b] from tank cleanout were temporarily stored south of the cooling towers (20C).	-5 tanks with load cells, piping, control equipment, loading/ unloading stations.
Pilot plant ammonia tank farm (19B)	A 40- x 51-ft open area concrete diked structure, partially sub-grade SW of building 13A.	**Ammonia Storage** - Constructed in 1989 and used briefly for anhydrous ammonia storage to supply the pilot plant UF_6 to UF_4 process and the refinery.	-2 tanks.
Main tank farm control room (19C)	Building type C, 25- x 43-ft single-level building, 10 ft high.	**Offices** - The control room was designed as a control center for tank farm operations, but has not been used in that capacity. Currently used as office space.	-Electrical control panels, office equipment.
Old north tank farm (19D)	Remaining north half of the old tank farm, approximately 130- x 130-ft area, containing 7 horizontal steel tanks.	**Bulk Storage** - Seven 25,000-gal horizontal steel tanks stored KF, AHF, and anhydrous ammonia. As part of the renovation of the tank farm, the south end was phased first. The second phase (north end) was not completed, however, catwalks and piping were removed from the north end. Tanks were also made non-functional. *HF residues*[b] from tank cleanout were temporarily stored south of the cooling towers (20C).	-7 horizontal and 1 vertical steel tanks (out-of-service), piping (removed), catwalks (removed).
		Sump[b] - Runoffs and spills were collected in a concrete basin and treated with lime to neutralize acid content. Treated liquids were stored in the old HCl tanks (1 vertical remaining) and/or transferred to the general sump.	-Runoff water, rubber-lined tank (one removed).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Pump station & power center building (20A)	Building type A, 17- x 83- x 12-ft single-level building, 12 ft high.	**Pumps** - Houses the pumps for the sanitary system and chlorinator, and unit sub-station.	-Steam turbine, pump, chlorinator.
Water plant building (20B)	Building type A/C, 50- x 78- x 19-ft multilevel building, 19 ft high with 2 floors.	**Water Treatment** - Provides treatment of all water using alum and lime.	-9 sand filters (pressurized), 2 lime feeders, 2 pumps, 2 alum feeders, 2 pumps.
Cooling towers (20C)	A 31- x 96-ft wooden structure, 42 ft high.	**Water Cooling** - Provides air cooling of site process water in mechanical draft-type towers. Four units exist today. Early site photos show only three as original installed equipment.	-4 forced-draft cooling tower assemblies, 4 electric pumps, steam turbine.
Elevated potable storage tank (20D)	A 30- x 40-ft steel tank structure, 100 ft high.	**Water Storage** - Potable water storage capacity of 210,000 gal for on-site fire protection and potable uses. Water comes from on-site wells, from well houses 1, 2, or 3 (20E, 20F, or 20G, respectively).	-1 water tower.
Well house 1 (20E)	Building type B, 11- x 20- x 9-ft single-level building, 9 ft high.	**Water Pumping** - One of three well pumping stations to supply water for fire protection and potable uses on site.	-Pump.
Well house 2 (20F)	Building type B, 11- x 20- x 9-ft single-level building, 9 ft high.	**Water Pumping** - One of three well pumping stations to supply water for fire protection and potable uses on site.	-Pump.
Well house 3 (20G)	Building type B, 11- x 20- x 9-ft single level building, 9 ft high.	**Water Pumping** - One of three well pumping stations to supply water for fire protection and potable uses on site.	-Diesel engine powered pump, diesel tank.
Process water storage tank (20H)	A 80-ft diameter reinforced concrete tank, 20 ft high.	**Water Storage** - Used to store water, with a 750,000-gal capacity.	-Concrete tank with flexible membrane liner.
Gas meter building (22A)	Building type B, 16- x 20- x 11-ft single-level building, 11 ft high and 4 ft below grade.	**Gas Metering and Distribution** - Houses the main gas meter for the site and houses distribution piping.	-2 gas meters, incoming distribution piping.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Storm sewer lift station (22B)	Building type B, 10- x 16- x 8-ft building, 8 ft high and 20 ft deep.	**Lift Station** - Pumps stormwater runoff to river.	-2 electric pumps, sampling equipment.
Truck scale (22C)	A 12- x 52-ft structure, 2 ft below grade.	**Truck Scale** - Weigh incoming and outgoing trucks as required. Originally installed near the garage (31A), later moved to the new receiving building (82).	-Truck scale.
Scale house and weigh scale (22D)	Building type A, 12- x 52- x 10-ft single-level building 10 ft high and scale with subgrade scale pit.	**Scale Operation** - Incoming and outgoing trucks were weighed as needed to verify shipments. Generally replaced by the truck scale (22C) in use near the new receiving building (82). Used to weigh sea/land containers prior to loading on trucks.	-Scale.
Utility trench to K-65 area (22E)	A subgrade steel piping system approximately 1,500 ft long in a 3-ft wide concrete trench.	**Transfer Lines** - Air transfer and slurry transfer lines originally used to fill the storage silos in the K-65 area. Additional lines now support transfers between the biodenitrification process, the clearwell, the waste pits, manhole 175 (not used), etc. The trench is covered with removable concrete slabs.	-3 transfer lines: general sump or hot raffinate - pits or silo #3, BDN surge lagoon - BDN towers, clearwell - manhole 175.
Meteorological tower (23)	Steel tower.	**Meteorological Tower** - Constructed to provide site-specific weather information during emergencies and for dispersion modeling.	-Tower, meteorological instruments.
Railroad scale house (24A)	Building type B, 13- x 14- x 9-ft single-level building, 9 ft high	**Scale House** - Provided weighing of incoming and outgoing railcars.	-Scale.
Railroad engine house (24B)	Building type B, 27- x 45- x 16-ft single-level building, 16 ft high.	**Engine Storage** - Provides covered storage and under-carriage maintenance access for the site's locomotive.	-Ethylene glycol, lubricating oil.
Chlorination building (25A)	Building type B, 6- x 8- x 8-ft, single-level building, 8 ft high.	**Chlorination** - Used to treat sewage trickling filter effluent when UV disinfection equipment (25D) is out-of-service.	-Chlorine feeder.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Manhole #175, sampling building, and effluent line (25B)	Building type C, approximately 12- x 12- x 10-ft single-level building, 10 ft high with manhole access to 4,200-ft effluent line to river.	**Manhole 175** - Manhole 175 handles all normal site effluent flows. The manhole serves as the last checkpoint for effluents to the river. The building houses sampling and flow monitoring equipment. Historically some site runoff has also gone directly to Paddys Run creek. **Effluent** - The effluent line to the Great Miami River is intended to handle all site liquid effluents. A series of manholes between the sewage treatment plant and the river provide access to the line.	-Control panel and samplers. -16-in. diameter pipeline.
Sewage lift station building (25C)	Building type B, 15- x 20- x 9-ft single-level building, 9 ft high.	**Lift Station** - Pumps sanitary wastes from the site to sewage plant for treatment.	-2 electric pumps.
U.V. disinfection building (25D)	Poured concrete building, 13- x 15- x 9-ft single-level building, 9 ft high.	**Ultraviolet Disinfection** - Sewage effluent is treated with ultraviolet light to destroy residual bacteria from the trickling filter process.	-2 UV disinfection units, sampler, flow meter.
Digester and control building (25E)	Building type B, 61- x 40- x 16-ft multilevel building, 16 ft high and 40-ft diameter double-walled concrete tank.	**Anaerobic Sewage Digestion** - Houses the anaerobic bacterial digester for site sewage treatment and the control room for the operation.	-Tank, pumps, sewage heater, control panel.
Sludge Drying Beds (25F)[b]	Two 30- x 80-ft concrete tanks.	**Sludge Settling** - Sludges from site sewage are settled in one of two concrete basins. Sludge is pumped to the anaerobic digester. Liquids are pumped to the trickling filters.	-2 settling basins.
Clarifier basins (25G)	Two 12- x 30-ft basins.	**Clarifiers** - 2 concrete tanks utilized as sludge filters from anaerobic digester. Also known as the primary settling basins.	-2 sand filters.
Trickling filters (25H)	Two 40-ft diameter concrete tanks.	**Trickling Filters** - 2 tanks provide aerobic bacterial digestion of sewage from the site.	2 concrete tanks.
Pump house-HP fire protection (26A)	Building type B, 26- x 50- x 11-ft single-level building, 11 ft high. Also includes a 35-ft diameter steel tank, 22 ft high.	**Fire Protection Water Pumping** - Three pumps supply water from the holding tank (~300,000 gal) for on-site fire fighting.	-3 pumps, steel tank.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Elevated water storage tank (26B)	A 60-ft diameter elevated steel tank, 265 ft above grade.	**Water Storage** - Potable water storage capacity of 350,000 gal for on-site fire protection and potable uses. Water is from on-site wells from well houses 1, 2, or 3 (20E, 20F, or 20G, respectively).	-1 water tower.
Main electrical strainer house (26C)	Building type B, 10- x 12- x 10-ft single-level building, 10 ft high.	**Main Electrical Deluge System** - Heat sensors in the main electrical transformers control activation of this fire suppression (deluge) system.	-Automatic sprinkler control valve.
Security building (28A)	Building type B, 109- x 82- x 10-ft single-level building, 10 ft high, including a turnstile area 50 x 55 ft.	**Security Services** - Provides on-site security headquarters, access services, and employee turnstiles.	-Communication center, office equipment, and classified document vault.
Human resources building (28B)	Building type B, 80- x 100- x 10-ft single-level building, 10 ft high.	**Offices** - Offices for human resources employees and DOE Inspector General assignees.	-Office equipment.
Security checkpoint (28C)	Building type C, 10- x 10-ft single-level building, 10 ft high.	**Checkpoint** - Used to store protective clothing (smocks, shoe covers, etc.) for off-site drivers entering the process area.	-Protective clothing.
Guard post west end of 2nd Street (28D)	Building type D, 15- x 15-ft single-level building, 10 ft high.	**Checkpoint** - Originally used a guardpost to control access to the K-65 silo and waste pit area. Currently used for radiological contamination control upon exit from the area.	-Frisker units, radio.
Chemical warehouse (30A)	Building type A, 82- x 321- x 16-ft single-level building, 16 ft high.	**Chemical Storage** - For storage of operating supplies for use on site. NE area now used for visual inspection of drums for RCRA determination and overpacking of low-level waste.	-Aerosol Paint cans, lime, dicalite, graphite crucibles, etc.
Drum storage warehouse (30B)	Building type A, 20- x 33- x 12-ft single-level building, 12 ft high.	**Drum Storage** - Former truck dock office and scale house. Now used for RCRA sampling. Will be radiological clothing change area.	-Currently storing drums.
Old ten ton scale (30C)	A drive-on pallet-size scale.	**Scale Operations** - Received materials were weighed on the scale on the pallets shipped.	-Scale.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Garage - engine house (31A)	Building type B, 62- x 123- x 17-ft single-level building, 17 ft high.	**Garage** - The structure houses offices, and areas for on-site vehicle repairs. Also houses the ambulance and one fire truck for the site.	-Vehicle repair equipment, offices, *waste oil*[b] fire and ambulance vehicles.
Old truck scale platform (31B)	Concrete platform approximately 15 x 140 ft.	**Scale Operation** - Original location of scale used near the new receiving building (82). Scale was moved. Concrete ramp platform remains.	-Concrete ramps.
Magnesium storage building (32A)	Building type B, 52- x 103- x 17-ft single-level building, 17 ft high.	**Magnesium Storage** - Stored drummed or bagged magnesium metal turnings for use in the Plant 5 reduction process.	-Not currently in use. To be used for storage of excess equipment from building 56A.
Magnesium storage covered loading dock (32B)	Covered concrete railroad dock, approximately 20 x 60 ft.	**Dock** - The dock is covered and has a ramp for vehicle access.	-Miscellaneous.
Pilot plant annex (37)	Building type B, 52- x 122- x 25-ft single-level building, 25 ft high.	**Grit-Blasting Furnace Crucibles** - Remelt furnace graphite crucibles from Plant 5 were placed in the grit-blaster enclosure and the inside of the crucible was cleaned prior to plasma spray coating.	-Grit-blaster unit, dust collector.
		Plasma Spraying of Crucibles - Grit-blasted crucibles were coated on the inside with calcia-stabilized zirconia by the plasma spray unit. Plasma sprayed crucibles were returned to Plant 5.	-Plasma spray unit, dust collector.
		Oil Reclaimer - A Hilco oil reclaimer was used to filter contaminants from oil used in the de-zincing furnace vacuum pumps.	-Oil reclaimer.
		De-Zincing Furnace - Same operation as de-zincing in building 54A, except this was P-2 furnace. The pilot plant sump processed a small amount of water collected from a subsurface pit under this furnace.	-P-2 Furnace.
		Briquetting - UF_4 and magnesium were blended and crushed into pillows to make a higher density reduction charge.	-Briquetting unit.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
(37) (Cont'd)		**Uranium Derby Cleaning (Rotoblaster)** - Uranium derbies were placed on an enclosed revolving table and sprayed with fine uranium pellets to remove traces of MgF_2 from the derby. The pellets were continuously recycled during the operation.	-Rotoblaster, dust collector.
		Milling Thorium Tetrafluoride - Dehydrated ThF_4 was milled (Sturtivant) and packaged for reduction.	-Mill (removed).
		Calcium Metal Storage - Drums of fine calcium metal were stored and weighed for the reduction process.	-Portable scale (removed).
		Box Furnace - Electrically heated multi-purpose furnace. Used for enriched uranium turnings and sawdust oxidation.	-Box furnace (removed).
		Flats Outgassing - 2-inch and 4-inch uranium flat castings were processed in the P-2 vacuum furnace to remove excess hydrogen gas.	-P-2 furnace.
		NuSal Heat Treating - A 50/50 blend of molten sodium chloride and potassium chloride salts was used as a medium for heat treating of uranium core blanks on a pilot scale.	-NuSal salt furnace, quench tank.
		Enriched Derby Production - Test runs were made by technical personnel to produce uranium derbies up to 5% U-235. A small-scale reduction furnace was used to produce a derby approximately 5 inches in diameter.	-Furnace removed.
Propane storage (38A)	Building type B, 23- x 33-ft building, 10 ft high plus 2 steel tanks.	**Propane Storage** - Two steel tanks with a propane capacity of 33,000 gal each which store propane for use in site vehicles. Original site photos showed 5 tanks in use rather than the two remaining.	-2 propane tanks.
		Propane Distribution - The main building houses monitoring and vaporization equipment and equipment which originally allowed distribution of propane gas to several other locations on site.	-Vaporizer.
Cylinder filling shed (38B)	Building type C, 6- x 10- x 8-ft single-level building, 8 ft high.	**Propane Cylinder Filling** - A cylinder filling building is located east of the main building (38A).	-Cylinder filling station.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Incinerator building (39A)	Building type A, approximately 52- x 54-ft multilevel building, 37 ft high with 2 floors.	**Trash Baler Operation** - Trash, primarily paper and cardboard, are baled to provide the greatest density for shipment to offsite disposal.	-Trash baler.
		Solid Waste Incinerator - (1980-1987) A cylindrical fire brick-lined, gas-fired furnace used to incinerate burnable trash from the site. Ash was drummed for uranium recovery processing.	-Incinerator, feed conveyor.
		Liquid Waste Incinerator[b] - (1983-1987) A waste solvent and oil incinerator used for burnable liquids from the site. Residues were treated for uranium recovery.	-Incinerator.
		Drum Dryer - Used to dry refinery raffinate cake for discard. Raffinate slurry was filtered on a rotary drum filter, dropped to a gas-fired rotary furnace, dried, and packaged. The furnace was later used to dry sump cakes from Plant 8 for refinery feed.	-Rotary filter, drum dryer, dust collection equipment (all removed).
Waste oil decant shelter (39B)	A steel shelter over a concrete pad, 18 x 28 x 12 ft, and 12 ft high.	**Oil-Water Separation** - Oils and solvents were decanted to remove the water content prior to incineration in the liquid waste incinerator (39A).	-2 tanks.
Incinerator building sprinkler riser house (39C)	Building type B, 6- x 8- x 8-ft single-level building, 8 ft high.	**Incinerator Sprinkler Riser** - Originally supplied fire protection for the nearby wooden cooling tower. Now supplies water for fire protection to the incinerator building (39A).	-Pump.
Sewage treatment plant incinerator (39D)	Outdoor waste incinerator equipment situated on a 16- x 20-ft concrete pad.	**Waste Incineration** - (1954-1979) An outdoor incinerator structure used for a variety of site wastes. Replaced by the building 39A incinerator.	-Incinerator and stack.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Rust Engineering building (45A)	Building type C, 121- x 150- x 14-ft single-level building, 14 ft high.	**Offices** - Currently used by Rust Engineering Company as offices and warehouse. **Machine Shop** - The facility was formerly used as a machine shop for the laboratory building (15). **Miscellaneous Processes** - The facility also housed a small experimental rolling mill in the south bay. After machining equipment was removed from the center and north bays, the north bay was used to cut clad uranium carbide rods, from which the UC and sodium metal plugs were removed. Sodium plugs were placed in kerosene for discard in the scrap pit. The UC was reacted in water to form U_3O_8 in the center bay. The U_3O_8 was packaged and furnaced at Plant 8 for refinery feed.	-Office equipment. -Machining equipment (removed). -Rolling mill (removed).
Utility shed (45B)	Building type D, approximately 15- x 15-ft single-level building, 10 ft high.	**Storage** - Used for storage of small tools and desk space.	-Tools, desk.
Heavy equipment building (46)	Building type C, 60- x 221- x 17-ft single-level building, 17 ft high.	**Heavy Equipment Storage** - Provides covered storage for site heavy equipment (cranes, back-hoes, etc.). Also houses offices.	-Fire equipment, street and yard maintenance vehicles, fork trucks, etc.
UF_6 to UF_4 reduction facility 2 (51)	Building type C, 165- x 244- x 30-ft single-level building, 30 ft high.	**UF_6 to UF_4** - A second process facility for uranium tetrafluoride production from uranium hexafluoride was partially constructed during the 1986-1987 timeframe. The process would have been essentially identical to the process in building 54A. The construction of the building was completed, but the process was not installed. **Advanced Waste Water Treatment** - The structure will house the advanced waste water treatment (AWWT) process intended to further treat site effluents for uranium removal. The process as planned includes superoxidizer technologies and ion exchange technologies.	-New, unused UF_6 to UF_4 process equipment owned by US Army. -None yet installed.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Safety and health building (53A)	Building type B, 89- x 221- x 22-ft multilevel building, 22 ft high with 2 floors and a partial basement under the west section.	**Offices** - Office and conference areas exist on both main floors.	-Office equipment.
		Medical Services - Houses equipment for emergency medical attention, routine examination and testing, x-ray testing, and medical laboratory.	-Medical equipment, x-ray machine.
		Security - Site security utilizes much of the basement floor as a communications headquarters.	-Communications console.
In-vivo monitoring building (53B)	Building type B, 36- x 72- x 15-ft single-level building, 15 ft high.	**In-Vivo Monitoring** - Radiation-shielded facility provides measurement of internal radiation for employees. Measurements are typically for uranium content in the lungs.	-Monitoring equipment.
Pilot plant UF_6 to UF_4 facility (54A)	Building type A, 62- x 80- x 44-ft structure 44 ft high.	**UF_6 to UF_4** - (1984-1988) Uranium hexafluoride (UF_6) was reduced to uranium tetrafluoride (UF_4) with dissociated ammonia (H_2 and N_2) in one of two reactors. The product UF_4 was sent to Plant 5 for further reduction. Offgases were condensed by a refrigeration unit to produce anhydrous hydrofluoric acid (AHF) which was sent to the main tank farm. Aqueous HF from the wet scrubber recirculated as scrubber liquor until transferred to portable tanks for transport to the main tank farm tanks. If too low a concentration was achieved, the liquor was sent to Plant 8 for disposition.	-2 bridge cranes, 3 autoclaves, 2 tubular reactors, 3 catalytic ammonia dissociators, 3 scrubber tanks, refrigeration unit (replaced in 1988), dust collection equipment, AHF storage tank (S of building 37), DHF storage tank (E of building 37).
		Jolter - Liner material (milled CaF_2) for the thorium metal process was jolted into shape.	-Jolter (all removed).
		Furnace Pot Loading - Thorium tetrafluoride (ThF_4) was blended with calcium and zinc fluoride, emptied into CaF_2-lined furnace pots, capped with CaF_2, and lidded. Argon gas purge was used on blender to prevent H_2 gas buildup.	-Blender and enclosure (all removed).

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
54A (Cont'd)		**Reduction Furnaces** - Loaded pots were heated in one of two resistance furnaces to produce a zinc-thorium metal derby and calcium fluoride slag. After cooling, the pots were sent to Plant 5 where the metal and CaF_2 were removed and returned to the pilot plant.	-2 furnaces (all removed).
		Thorium Derby Sampling - The clean derbies were weighed and a thin slice was sawn from each for analysis. Sawdust from sampling was drummed and sent to Plant 8 for oxidation.	-Power hacksaw, weight scale (all removed).
		De-Zincing Zn-Th Derbies - (1969-1971) The Zn-Th derbies from the reduction furnaces were placed in a vacuum furnace (P-1) and heated to boil off the zinc. The purified thorium derbies were then saw-sampled. A total of 809 thorium derbies were produced, containing approximately 51 metric tons of thorium metal. Perchloroethylene was circulated through the furnace cooling jackets prior to using cooling water.	-1 furnace, perchloroethylene. tank.
		ThF_4 Dehydration - Pre-dried ThF_4 from the thorium precipitation step was stacked in pans and placed in a Rockwell resistance furnace for further dehydration. The dried ThF_4 was then milled on a small Sturtivant mill (building 37), packaged and used for thorium derby production.	-Furnace removed, 2 tray driers.
		Original UF_6 to UF_4 Reduction Process - (1952-1957, 1962-1967) This process was similar to the process that replaced it, in roughly the same location, except for the following: only one reactor, UF_6 cylinders heated in a cradle outside (north of building 54A), only one ammonia dissociator (inside, north wall). All equipment including the structural steel decks were removed to make way for the new process.	-Reactor, scrubber, catalytic ammonia dissociator (all removed).
		PLT Furnace - This was an experimental pressurized low temperature (PLT) furnace used to produce metal by continuous feeding of UF_4 and magnesium and separating the molten MgF_2 from the uranium. No practical application was developed from this experiment.	-Furnace removed.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
54A (Cont'd)		**Casting** - Enriched uranium ingots were produced in furnaces P-1 and P-2 by remelting. Perchloroethylene was used in the cooling coils.	-See above.
Pilot plant shelter (54B)	Building type C, 50- x 74- x 10-ft single-level building, 10 ft high.	**Storage** - Provide temporary storage for UF_4 and other pilot plant materials. **UF_4 from Paraffin** - Paraffin containing UF_4 was treated in kerosene and centrifuged to collect the UF_4.	-Currently storing drums (UF_4, Freon 11). -Centrifuge (all removed).
Pilot plant dissociator shelter (54C)	Building type C, 20- x 48- x 19-ft structure, 19 ft high with 1 floor.	**Ammonia Dissociation** - Catalytically cracked anhydrous ammonia to H_2 and N_2 gases for use in the pilot plant UF_6 to UF_4 process.	-3 catalytic ammonia dissociators.
Slag recycling building (55A)	Building type A, 32- x 62- x 42-ft multilevel building, 42 ft high with 3 floors.	**Slag Milling** - Received magnesium fluoride (slag) from the Plant 5 breakout system via the old slag plant (55B). Two streams, coarse and fine were stored for processing. The coarse stream (representing material produced by the reduction reaction in Plant 5) was ball milled and passed through an air classifier to select the product particle distribution. Fines (representing pot liner material from the reduction reaction) were passed through the system; only a small fraction was saved. Both products were stored in bins in Plant 55 and subsequently air-veyed to conveyor feed bins in Plant 5. Excess fines, classifier waste, and larger metal particles from screening were drummed for dispositioning.	-Conveyors (vibrating, flight, and pneumatic), bucket elevators, storage bins, ball mill and Rotex (vibrating) screen.
Slag recycling pit/elevator (55B)	Building type A, 12- x 12- x 38-ft multilevel building, 38 ft high with 3 floors.	**Slag Processing** - Received magnesium fluoride from the Plant 5 breakout system. Provided initial screening of the material in fines and coarse material streams. In addition, provided a variety of material handling options including pack out of unsplit stream to mobile hoppers (for transport to waste pits), storage of quantities of slag, and conveyance of stored slag to screening process.	-Conveyors, bucket elevator, storage bin.
CP warehouse (Butler building) (56A)[b]	Building type C, 50- x 180- x 14-ft single-level building, 14 ft high.	**Storage** - Recently functioned as excess furniture and supply storage for the site. Now used for low-level waste drum storage. Formerly used for electrical transformer storage.	-Currently storing RCRA drums.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Storage shed west (56B)	Building type C, approximately 24- x 36-ft single-level building, 14 ft high, west of building 56A.	**Construction Tool Storage** - Provides tool storage for the site's primary construction management subcontractor.	-Construction laborer tools.
Storage shed east (56C)	Building type C, approximately 30- x 50-ft single-level building, 14 ft high, west of building 56A.	**Construction Tool Storage** - Provides tool storage for the site's primary construction management subcontractor.	-Construction laborer tools.
Quonset hut 1 (60)	Building type C, 41- x 121- x 20-ft single-level building, 20 ft high.	**Storage** - Functioned as a storage area for stores equipment, materials, and miscellaneous items.	-Currently storing drums (thorium compounds from Plant 8 silos).
Quonset hut 2 (61)	Building type C, 41- x 60- x 20-ft single-level building, 20 ft high.	**Storage** - Functioned as a storage area for thorium-contaminated equipment from the Bettis operation.	-Thorium-contaminated equipment.
Quonset hut 3 (62)	Building type C, 41- x 60- x 20-ft single-level building, 20 ft high.	**Storage** - Functioned as a maintenance storage area for spare parts and miscellaneous items of bulk size. Currently storing archived samples (drums) from K-65 silos 1 & 2.	-Currently storing drums.
KC-2 warehouse (63)[b]	Building type B, 79- x 346- x 16-ft single-level building, 16 ft high.	**Storage** - Eight storage bays utilized in the following manner: Bay 1 - maintenance storage for "work order request" materials; Bays 2, 3, 4 - stores and inventory control storage for bulk items; Bays 5, 6, 7 - RCRA waste storage; and Bay 8 - maintenance storage for landscaping and snow removal equipment. *A railcar with nitric acid*[b] is east of this area.	-Currently storing drums, equipment, bulk inventory items, and work order materials.
Thorium warehouse (64)	Building type C, 50- x 320- x 22-ft single-level building, 22 ft high.	**Storage** - Stores drummed thorium compounds, metal, and drummed wastes. Also stores uranium derbies and ingots. Center area used for 90-day storage of material awaiting analysis.	-Currently storing drums, uranium ingots, uranium derbies.
		Overpacking - Equipment used for overpacking deteriorated drums of thorium metal. Also to be used to overpack drums of thorium compounds.	-Overpacking control station, inert gas blanketing equipment, robust fork truck.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Old plant 5 warehouse (65)	Building type C, 50- x 210- x 22-ft single-level building, 22 ft high.	**Storage** - Stores drummed thorium compounds.	-Currently storing drums.
Drum reconditioning building (66)	Building type C, 38- x 101- x 13-ft single-level building, 13 ft high.	**Drum Reconditioning** - Cleaned and straightened 30- and 55-gal steel drums entered the facility for steel shot blasting to remove old paint, repainting in the paint spray booth (inside and out), and drying in an electrically heated oven. Drums not reusable were crushed and baled. Currently baling scrap drums for off-site shipment.	-*Shot blaster (Wheelabrator), dust collector*[b], paint spray booth, continuous drum drying oven, and scrap drum crusher/baler.
Plant 1 thorium warehouse (67)[b]	Building type C, 40- x 100- x 22-ft single-level building, 22 ft high.	**Storage** - Stores drummed thorium compounds.	-Currently storing drums.
Pilot plant warehouse (68)[b]	Building type A, 50- x 100- x 14-ft single-level building, 14 ft high, with significant concrete content.	**Storage** - Stored a Co-60 source, thorium compounds, pilot plant equipment, and RCRA waste drums.	-Currently storing drums.
Decontamination building (69)	Building type B, 43- x 83- x 18-ft single-level building, 18 ft high.	**Decontamination** - Various processes are utilized for radiologically decontaminating equipment, tools, vehicles, and scrap: Acid soak vats, caustic soak vat, high pressure water, and steam spray.	-Tanks, vats, spray units.
General in-process storage warehouse (71)	Building type B, 100- x 241-ft single-level building, 13 ft high.	**Storage** - Built in 1964, acted as site's main receiving area for radioactive materials, and provided storage for miscellaneous materials. Now used for waste shipping. **Isotopic Verification** - Verified enrichment levels of off-site receipts. **Fuel Disassembly** - Non-irradiated fuel rod assemblies were disassembled in this building prior to transfer to pin cutter and Fitzpatrick mills in Plant 1 for reclamation of enriched uranium.	-Drums for RCRA sampling, Loft fuel rods. -Isotopic verification equipment. -None (only hand tools used).
Drum storage building (72)	Building type A, 31- x 41- x 11-ft single-level building, 11 ft high.	**Storage** - Stored industrial cleaning equipment and control panels for ore silo operation. Now used for enriched drum storage, enriched and normal fuel rods.	-Currently storing drums and fuel rods.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Fire brigade training center building (73A)	Building type B, 20- x 30- x 14-ft multilevel building, 14 ft high.	**Fire Brigade Training** - Used for "hot" and smoke drills for training site fire brigade members. Straw, wood, tires, etc. were used. A tanker truck and an office-type trailer are abandoned nearby.	-Building (empty and condemned), tanker truck, trailer.
Fire training pond (73B)[b]	A 45-ft diameter pond and drain pit.	**Fire Brigade Training** - Used for training brigade members in fighting combustible liquid fires. A small horizontal elevated tank in the center of the pond was used to simulate a combustible liquid tank (never filled). Excess water was drained from the area to the drain pit so that combustible liquids would not overflow the pond.	-Water, empty tank.
Fire training tank (73C)[b]	A small horizontal tank above the fire training pond.	See pond 73B.	-See pond 73B.
Fire training burn trough (73D)[b]	A steel trough, 4 x 20 ft.	**Fire Brigade Training** - A steel trough, partly subgrade, for volatile liquid fire training. Used oil was ignited for extinguisher training.	-Burn trough, water.
Confined space burn tank (73E)	An 8-ft diameter horizontal steel storage tank.	**Fire Brigade Training** - A steel storage tank from the old tank farm, with one end cut off, converted for use in simulated rescue training.	-Tank from tank farm (end removed).
Plant 2 east pad (74A)	Over 5,000 ft^2 of open controlled concrete storage pad.	**Storage** - Used as temporary storage of product UO_3 (in drums and mobile hoppers) and waste residues.	-Drums, subsurface drainage pump, and filter, sea/land containers.
Plant 2 west pad (74B)	Over 10,000 ft^2 of open controlled concrete storage pad.	**Storage** - Storage of feed materials (ore concentrates, residues, and uranium metal scrap) scheduled for consumption in refinery processes.	-Drums, metal skids, excess equipment.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 8 East Pad (74C)[b]	Concrete storage pads with approximately 10,000 ft^2 of open storage area east of Plant 8.	**Storage** - Open storage of drummed residues for processing, Plant 8 product, portable MgF_2 hoppers. **Airport Scrap** - Bulk MgF_2 from the Weldon Springs DOE facility (MCW) was unloaded from railroad gondolas onto the east pad area, where it was drummed and processed. Gondola residues were washed to the sand filter/decant basin near the unloading station. **Pyrophoric Drum Sprinkler** - Water was circulated from the railcar wash pit settling tank through a series of sprinklers located over a drum storage area on the east pad. Pyrophoric materials (uranium chips, turnings, and sawdust) were stored here awaiting oxidation in Plant 8 furnaces.	-Drummed residues, drummed oil, excess equipment. -Conveyor (removed). -Sprinkler system.
Plant 8 west pad (74D)[b]	Concrete storage pad with approximately 10,000 ft^2 of open storage west of Plant 8.	**Storage** - Open storage of drummed residues, and empty drums, both dirty and clean. **Drum Washing** - See drum washer (8E).	-Drummed residues, drum washer, subsurface drainage pump and filter.
Plant 4 pad (74E)	Uncontrolled concrete areas east and south of Plant 4 and west of Plant 4 warehouse totalling more than 15,000 ft^2.	**Temporary Storage** - Temporarily stored mobile hoppers of UO_3 and depleted UF_4, drummed uranium residues, *drummed HF residues (NW)*,[b] and drummed scrap UF_4.	-T-hoppers, J-hoppers, pipe rack, office trailer, nitrogen storage tanks, nitrogen generator, and drummed waste.
Plant 7 pad (74F)	Concrete areas west and south of Plant 7.	**Storage** - Used for receiving, shipping, and storage of UF_6 cylinders and receiving, shipping, and storage of "T" Hoppers (UF_4 from Paducah and UO_3 from Hanford). Four subgrade tanks were used to collect condensate from steam-heated UF_6 autoclaves west of Plant 7.	-Empty mobile hoppers, waste, empty UF_4 cans, J-hoppers, cylinder dolly, 3 storage tanks, 4 subgrade tanks (removed), and scale.
Plant 5 east pad (74G)	Over 5,000 ft^2 of open concrete storage area north and south of Plant 55.	**Temporary Storage** - Stored Plant 5 drummed residues, reduction pots, Plant 55 residues.	-Empty drums, excess equipment, metal skids, uranium metal.
Plant 5 south pad (74H)	Over 2,000 ft^2 of open concrete driveway.	**Temporary Storage** - This area was used for temporary storage of feed materials entering the south end of Plant 5 (UF_4, magnesium, etc.).	-Dicalite, sea/land containers, structural steel, pipe rack.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 6 pads (74J)	Concrete padded storage east, *north*,[b] and west of Plant 6.	**Temporary Storage** - Stored Plant 6 products and residues. Several diked areas had tanks involved with building processes.	-E - Overpacks, excess equipment. W - Cooling water tanks in dike. N - *Tank*[b].
Plant 9 pads (74K)	Reinforced concrete storage pads with approximately 15,000 ft^2 of open storage.	**Storage** - Used for temporary storage of process residues (CaF_2, MgF_2, thorium and uranium residues, sump cake, etc.) and thorium and uranium chips and turnings. Metal fires were common on the east pad. Portable tanks were filled by hose from spent Zirnlo acid tanks on the west pad.	-N - metal pallets, empty drums, pipe rack, coolant tank (diked). E - pallets, baskets, overpacks W - portable tanks, filtrate tanks, dust collector.
Building 65 west pad (74L)	Approximately 20,000 ft^2 of concrete padded storage west of building 65.	**Storage** - Used to store baled scrap drums, scrap metal awaiting decontamination, and uranium and thorium residues.	-Excess equipment, overpacks, concrete shielding.
Building 64 east pad and railroad dock (74M)	Approximately 20,000 ft^2 of concrete padded storage east and north of building 64.	**Storage** - Area used for loading/unloading trailers. Later used for storing drummed uranium and thorium residues and equipment awaiting decontamination. The railroad loading dock was never used.	-Drum storage, J-hoppers, wooden boxes, billet tubes, excess equipment, scrap furnace pots, and UO_3 pot burners.
Building 12 north pad (74N)	Approximately 7,000 ft^2 of concrete padded storage north of building 12A.	**Storage** - Used by plant stores for storage of pipe, drummed oils, and non-radioactive materials for on-site use.	-Diesel fuel tank, pipe, returnable drums, skids.
Decontamination pad (74P)	Approximately 50,000 ft^2 of controlled curbed concrete storage pad.	**Storage** - The scrap metal pile is primarily contained on this pad.	-Scrap pile.
Plant 8 old metal dissolver pad (74Q)	Approximately 1,500 ft^2 of acid bricked concrete pad west of building 8A.	**Metal Dissolver** - See building 8A for process description.	-Collected water, (all equipment removed).
Plant 8 north pad (74R)	Approximately 5,000 ft^2 of concrete padded storage north of building 8A.	**Storage** - Used for storage of drummed residues and scrap metal for furnacing in Plant 8. Also stored U_3O_8 furnace product prior to shipment to the refinery.	-2 NaOH tanks, 1 $Na_2C_2O_4$ tank, tank pit (2 tanks removed), drums of residues, pump house and effluent tanks, and empty drums.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Building 63 west pad (74S)	Approximately 2,000 ft^2 of concrete padded storage west of building 63.	**Storage** - Small storage area associated with building 63 operations.	-Pipe rack, excess equipment, refractory brick.
Plant 1 storage pad (74T)[b]	Concrete storage pad with over 375,000 ft^2 of open storage north, east and west of building 1A.	**Storage** - Primarily open storage of drums, hoppers, and scrap pallets. New tension support structures have been erected, covering ~100,000 ft^2.	-Scrap pallets removed. Two temporary structures erected to provide covered storage on parts of the pad.
Pilot plant pad (74U)	Approximately 5,000 ft^2 of concrete padded storage area south of building 54A.	**Storage** - Provide temporary storage of drummed uranium and thorium compounds, equipment and operating supplies. Cylinders of UF_6 were heated in a cubicle near building 13A for processing in the original UF_6 to UF_4 reduction facility of the pilot plant.	-Dust collector (N of building 13A), liquid N_2 storage (NE of building 13B), dust collectors (SE and SW of building 37), HF tank (E of building 37), portable dumpster containing HF (N of building 13A).
Laboratory pad (74V)[b]	Approximately 1,500 ft^2 concrete open storage and dock area west of building 15.	**Storage** - Provided temporary storage of drummed lab materials and wastes.	-Drums, construction equipment, sea/land containers, liquid N_2, and argon tanks.
Finished product/4A warehouse (77)	Building type C, 120- x 162- x 12-ft single-level building, 12 ft high.	**Storage** - (New) Used as a uranium metal storage facility for flat ingot products before shipment, reject products, material awaiting processing.	-Flat uranium ingots, drummed uranium metal (owned by DOD - Army)
Future D&D facility (78)	Building type C, 80- x 100- x 21-ft multilevel building, 21 ft high (under construction).	**Decontamination** - The facility will replace the current decontamination facility (building 69) when construction is completed.	-Construction equipment.
Plant 6 warehouse (79)[b]	Building type C, 100- x 170-ft single-level building, 15 ft high.	**Hazardous Waste Storage** - Facility currently storing drummed RCRA hazardous wastes.	-Currently storing drums.
Plant 8 warehouse (80)	Building type C, 60- x 170-ft single-level building, 15 ft high.	**Hazardous Waste Storage** - Facility currently storing drummed RCRA hazardous wastes.	-Currently storing drums.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Plant 9 warehouse (81)[b]	Building type C, 80- x 100- x 15-ft single-level building, 15 ft high.	**Hazardous Waste Storage** - Facility currently storing drummed hazardous wastes.	-Currently storing drums.
Receiving & incoming material inspection building (82)	Building type C, 100- x 100- x 17-ft single-level building, 17 ft high.	**Storage** - Receiving, inspection of non-radioactive supplies and equipment.	-Offices, daily receipts.
Clearwell line (88)	A pressurized transfer line approximately 2,000 ft long.	**Rainwater Collection** - Water entering the Clearwell area is collected and transferred via 6-in. line to the biodenitrification lagoon (structure 18A).	-Piping.
Parking lots (89)	2 asphalt-paved car parking lots,1 approximately 425 x 550 ft (East) and 1 approximately 500 x 700 ft (West).	**Parking Lot** - Provides paved parking for employee and visitor vehicles.	-Concrete barriers.
Skeet range building (90)	Building type C approximately 15- x 15-ft single-level building.	**Skeet Range** - The building was used to support the skeet range activities as a storage building.	-Unknown.
Railroad tracks (G-001)	Approximately 3 mi of track and associated hardware.	**Railroad** - Rail service is provided to the majority of the process area by a connection with CSX northwest of the site.	-Track, switches, crossings, 1 engine, and associated hardware.
Site roads (G-002)	Approximately 5.5 mi of paved roads.	**Roads** - Provides routes of transportation within the facility and between plants. Primarily constructed of concrete and later overpaved with asphalt. Additional roads exist in the non-process areas. Approximately 3 mi of paved road exists within the process area. Approximately 2.5 mi of paved road exists outside the process area.	-Asphalt, concrete.
Storm sewer system (G-003)	Subgrade piping and pumps for handling storm water runoff.	**Storm Sewers** - A network of piping, pumps, and associated equipment used to provide drainage for surface water from the site. Flow is continuously monitored and can be diverted or held in the storm water retention basins (SWRB).	-Drainage lines, 2 lift station pumps, and diverter valve.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Sumps (G-004)	Low point and pumps for controlled drainage areas.	**Sumps** - Provide a means of draining spilled liquids or collected rainwater from diked or controlled drainage areas throughout the site. Several larger volume sumps have been identified specifically in the table.	-Pumps, piping.
Dikes (G-005)	Reinforced concrete pads and half-walls for control of drainage.	**Dikes** - Many controlled drainage areas on the site are composed of concrete pads with integral surrounding half-walls to provide for retention of spilled liquids and segregation of potentially contaminated rainwater. Over 50 outside diked areas exist on the site, with an estimated volume of concrete of 50,000 ft^3 (assumes 3-ft footer with 2- to 3-ft thickness and 6-in. pad thickness).	-Concrete dikes.
Utility lines (G-006)	All site underground and above ground utilities, totaling approximately 900 mi.	**Utility Lines** - All utility lines, including: electrical piping, water, sewer, gas, and conduit.	-Utility piping, wires, conduit, insulation, and meters.
Underground storage tanks (G-007)	Generally steel tanks for petroleum products underground.	**Storage** - A variety of underground steel storage tanks have been used on the site, primarily for petroleum products. Most have been removed as part of the UST program to date and the surrounding areas are undergoing interim remediation.	-One remaining UST, other buried tanks unverified.
Aboveground storage tanks (G-008)	Generally steel tanks for liquids above ground.	**Storage** - Steel and stainless steel are the primary materials of construction for the bulk of site aboveground tanks. Liquids such as uranyl nitrate, hydrofluoric acid, nitric acid, and caustic have been stored on-site in above-ground tanks.	-Tanks.
Process side office trailers (G-009)	Various sizes of mobile office trailer.	**Offices** - Provide temporary office space for employees and subcontractors. The total quantity of office trailers in use in the non-process areas of the FEMP varies significantly.	-Trailers, office equipment.
Non-process side office trailers (G-010)	Various sizes of mobile office trailers, often linked into multiplexed units.	**Offices** - Provide temporary office space for employees and subcontractors. The total number of office trailers in use in the process areas of the site varies significantly.	-Trailers, office equipment.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Pipe bridges (G-011)	Over 1 mile of structural steel bridges for support of plant high lines.	**High Lines** - Structural steel supports are used extensively throughout the facility for utility lines and process piping. Total linear distance cover by the bridges is estimated at over 1 mile.	-Steel supports and trusses.
Drums (non-RCRA) (G-012)	Drummed non-RCRA wastes.	**Non-RCRA Wastes** - Drummed non-RCRA wastes are stored in a variety of locations throughout the FEMP.	-Drummed waste.
Drums (RCRA) (G-013)	Drummed RCRA wastes.	**RCRA Wastes** - Drummed RCRA designated wastes are primarily stored in 4 buildings: 79, 80, 81, and 63.	-Drummed waste.
Product inventory (G-014)	Inventory of FEMP products.	**Product Inventory** - Products such as uranium metal derbies, flat ingots, round ingots, thorium compounds, UO_3 and UF_4 are stored in a variety of locations at the FEMP.	-Product inventory.
Sea/land containers (G-015)	Steel containers for waste shipment.	**Sea/Land Containers** - A fluctuating inventory of sea/land containers is maintained at the site for use as shipping and burial containers for FEMP wastes destined for off-site shipment.	-Empty and full sea/land containers.
Respirator cleaning trailer (T-42)	A 12- x 50-ft truck trailer, specially outfitted (located south of building 7A).	**Respirator Cleaning** - A specially outfitted trailer used for cleaning respirators used on site.	-Trailer, cleaning equipment.
Bio-assay lab trailer (T-49)	A 12- x 50-ft truck trailer, specially outfitted (located north of building 53A).	**Bio-Assay Lab** - Performed bio-assay laboratory work (urinalysis) during construction activities in the health and safety building (53A).	-Trailer, exhaust equipment, and lab equipment.
Fire training trailer	A 12- x 50-ft truck trailer, specially outfitted (located in the east parking lot).	**Fire Brigade Training** - Provides for simulation of rescue maneuvers and confined space entry with live fires.	-Trailer.
Mobile emergency operations center	A 12- x 50-ft truck trailer, specially outfitted (located in the east parking lot).	**Mobile Emergency Operations Center** - Duplicates the emergency operations functions of the main emergency operations center (EOC) in the administration building (14A). During an extensive emergency, the mobile center could be removed from the site and still maintain emergency control operations.	-Trailer, communications equipment and electrical support equipment.

TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Duratek test trailer (T-306)	A 12- x 50-ft truck trailer specially outfitted (located in the sewage treatment plant).	**Waste Water Treatment Testing** - Ion exchange processes were tested on site effluents to determine the effectiveness of the process. Data gathered supports design of the advanced waste water treatment (AWWT) described in building 51.	-Trailer, 2 ion exchange tanks, 2 hold tanks, and a sampling manifold.
Scrap metal copper piles (P-017)	Two scrap metal piles north of facility 1D, both approximately 30 ft high, containing a total of 150,000 ft^3 (1350 tons) of copper scrap.	**Storage** - Stored copper from electrical operations at other DOE sites - awaiting reclamation.	-Copper and associated insulation coatings and miscellaneous conduit.
Coal pile (P-018)	Uncovered coal pile, approximately 115,000 ft^3.	**Coal Storage** - Coal is stored in a pile east of building 10A for use in the boilers.	-Coal pile.
Scrap metal pile (P-023)	A 15- to 20-ft-high scrap metal pile.	**Scrap Metal Pile** - Approximately 400,000 ft^3 (uncompacted) of various scrap metals from site operations.	-Scrap metal pile.
Outside equipment storage areas (P-025)	Two open field storage areas NE and NW of building 69.	**Scrap Equipment and Vehicle Storage** - Over 150 contaminated and junk vehicles and wheeled equipment from site operations are stored northwest of the decontamination building (69). Contaminated and junk process equipment from past operations are stored northeast of the decontamination facility building (69).	-2 junkyards.
Construction soil, debris, and rubble piles	Various contaminated soil and rubble piles around the site.	**Construction Rubble Piles** - A variety of contaminated soil, rubble, and debris piles generated from construction activities at the site totaling approximately 50,000 yd^3.	-Construction soil, debris, and rubble piles.
Construction gravel, sand, and soil piles	Various sand, gravel, and soil piles around the site.	**Construction Draw Piles** - A variety of sand, gravel, and clean soil piles drawn upon for fill and construction uses totaling approximately 600 yd^3.	-Clean gravel, sand, and soil piles.

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TABLE A.2.1 Description of Structures and Processes

Structure/Facility	Description	Processes/Uses	Equipment/Contents[a]
Tension support structure 1 (TS-1)	Self-supporting canvas-covered structure, approximately 90- x 300-ft single-level building north of building 71.	**Storage** - Used to provide cover for drummed materials stored on the Plant 1 pad (74T).	-Currently storing drums.
Tension support structure 2 (TS-2)	Self-supporting canvas-covered structure, approximately 90- x 300-ft single-level building north of building 71.	**Storage** - Used to provide cover for drummed materials stored on the Plant 1 pad (74T).	-Currently storing drums.
Tension support structure 3 (TS-3)	Self-supporting plastic-covered structure, approximately 60- x 90-ft single level building north of building 30A.	**Storage** - Used to provide cover for drummed materials stored on the Plant 1 pad (74T).	-Currently storing drums.

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TABLE A.3.0 AND TABLE A.3.1

POTENTIAL CONTAMINANTS AND CONTAMINANTS DETECTED BY RI/FS MEDIA SAMPLING

Table A.3.0 lists potential contaminants for each component (building or structure). Where applicable, potential contaminants are listed for each process which existed within a component. For each component or process, the table lists the historical source(s) that indicate possible presence of the contaminant(s). Any component or process that is a Hazardous Waste Management Unit (HWMU) is printed in italic type. Historical information sources are process knowledge, significant quantities of use, spill logs, history of FEMP, incident reports, perched water removal action data, RCRA drummed waste determinations, RCRA reports, and material distribution information. For many of the listed potential contaminants, related by-products, decay products, or breakdown products may also be possible. The listing is presented as a best summary of currently available information.

Table A.3.1 lists detectable contaminants near listed components as a result of RI/FS media sampling and analysis including subsurface soil data. The processes associated with listed components also are included. The component may or may not be the source of the media contamination. Similar contaminants may be possible for other OU3 components not affected by prior RI/FS media sampling activities.

The following legend applies to Tables A.3.0 and A.3.1:

Uranium	=	U-235/236, U-234, U-238, + Daughters (where it is known, the maximum enrichment is given in parenthesis as %E). This designation refers to purified process material.
Ore	=	Pitchblende, Q11, or other unrefined uranium-bearing ores.
Ore concentrates	=	Uranium ore material which was refined somewhat at the mine site (i.e., Kerr McGee, Australian, Colorado, Canadian ore feed materials).
Ore raffinate	=	Material stripped from uranium ores by the FEMP refinery extraction process (including but not limited to: radium, thorium, protactinium, and a variety of other radionuclides and metals).

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Thorium or thorium compounds	=	Material which originated as thorium 232. May include metal or any or all of the following compounds: thorium tetrafluoride, thorium hydroxide, thorium oxalate, thorium oxide, or thorium nitrate.
Uranium compounds	=	Any or all of the following compounds; U_3O_8, UO_3, UF_4, UO_2, UNH (where possible, the specific compound is identified).
Solvent residues	=	The residual material from solvents used at the FEMP (primarily 1,1,1 trichloroethane, trichloroethylene, and perchloroethylene).
Sump cake	=	Precipitants from the filtration of uranium or thorium solutions.
High grade residues	=	UF_4, U_3O_8, UO_3, UO_2, uranyl ammonium phosphate (UAP), ammonium diuranate (ADU).
Low grade residues	=	Residual material from magnesium fluoride (MgF_2), sump cakes, heat treating salts.
Prill	=	Metallic beads and blobs of uranium, and magnesium from FEMP reduction process.
Metals	=	Aluminum, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, cyanide, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, potassium, silver, sodium, thallium, vanadium, zinc.
*	=	For every structure/facility within the uncontrolled nonprocess side of the FEMP, potential contaminants of concern include uranium, asbestos, lead (in paints and building structure) PCBs, and mercury. These contaminants are in addition to any potential contaminates listed in this table.

**	=	For every structure/facility within the controlled process area of the FEMP, potential contaminants of concern include uranium, asbestos, lead (in paints and building structure), PCBs, diuron (herbicide), and mercury. These contaminants are in addition to any listed in this table.
Italic type	=	Identifies Hazardous Waste Management Unit (HWMU).

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Preparation Plant (Plant 1) (1A) **	Uranium (up to 20%E), UO_3, UF_4, U_3O_8, thorium, thorium oxalate, ore concentrates, MgF_2, HF	Drum Sampling	Process knowledge/significant quantities, history of FEMP, RCRA reports, spill log
	Halon 1301, MgF_2, ore, ore concentrates	Crushing/milling	Incident reports, history of FEMP, process knowledge/significant quantities
	Uranium (U^{235} up to 20%E), ammonia, cesium-137, radium-226, americium-241, arsenic, cadmium, chromium, lead	Enriched materials reclamation	RCRA reports, process knowledge/significant quantities
	NaOH, solvent residues, ore, ore concentrates	Drum washing	History of FEMP, process knowledge/significant quantities
	Still bottoms, 1,1,1-trichloroethane, trichloroethylene, perchloroethylene, carbon tetrachloride, chlordane, chloroform, 1,2-dichloroethane, 1,1-dichloroethylene	Solvent reclamation	Process knowledge/significant quantities, RCRA reports, RCRA drummed waste determinations
	Ammonia, sump cakes	Waste water handling	Process knowledge/significant quantities
	Ammonia, sump cakes	Repackaging	Process knowledge/significant quantities
Plant 1 storage shelter (1B) **	Ores, ore concentrates, 1,1,1-trichloroethane, trichloroethylene, perchloroethylene, copper	Covered storage	Process knowledge/significant quantities
	Copper, asbestos	Copper shredding	Process knowledge/significant quantities
	Sump cake	Drum straightening	Process knowledge/significant quantities
Plant 1 ore silos (1C) **	U-234, U-235, U-238, Th-234, Th-232, Ra-228, lead, barium, selenium, mercury, arsenic, cadmium, chromium, metal oxide	Milled ore storage	Samples of ore from ore silos release, spill log

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Ore refinery plant (2A) **	Uranium (up to 5% E), uranyl nitrate, Al_2O_3, ore concentrates, ores, high & low grade residues, ammonia, silver, lead, chromium, arsenic, tetrachloroethylene	Digestion	1,1,1-Trichloroethane up to 100 ppb in perched water wells, process knowledge/ significant quantities, incident reports, history of FEMP, RCRA drummed waste determinations
	Uranium (5%E), uranyl nitrate, ores, high grade residues, ammonia	Drum digestion	Process knowledge/significant quantities, history of FEMP
	Uranyl nitrate, ammonia, H_2SO_4, kerosene, tributyl phosphate, NaOH	Extraction	Process knowledge/significant quantities, incident reports
	Uranium (up to 2% E), uranyl nitrate, UO_3, H_2SO_4	Denitration	Process knowledge/significant quantities, history of FEMP
	Uranium (up to 10% E), U_3O_8, uranyl nitrate, ammonia	Enriched calcining	Process knowledge/significant quantities, history of FEMP
General sump-refinery sump control building annex (2B)	**	Sump monitoring & control	
Bulk lime handling building (2C) **	CaO, $Ca(OH)_2$	Bulk lime handling	Process knowledge/significant quantities
Metal dissolver building (2D) **	Uranium metal (up to 1.25%), ammonia, tetrachloroethane	Metal dissolution	Process knowledge/significant quantities, spill logs, RCRA drummed waste determinations
	Uranium oxides (up to 5%), ammonia	West metal dissolution	Process knowledge/significant quantities, spill logs, RCRA drummed waste determinations
	Kerosene, tributyl phosphate, ammonia	Charcoal treatment	Process knowledge/significant quantities, spill logs, RCRA drummed waste determinations

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
NFS storage & pump house (2E) **	Uranium (up to 5% E), uranyl nitrate, plutonium/neptunium	NFS storage	Process knowledge/significant quantities
Tanks outside plant 2 (2A) **	Uranyl nitrate, ammonia, plutonium/ neptunium	*Uranyl nitrate storage* (6 tanks)	Process knowledge/significant quantities, RCRA reports
	Tributyl phosphate, kerosene	Tributyl phosphate/kerosene storage (5 tanks)	Same as above
	Tributyl phosphate, kerosene	Clean storage (3 tanks)	Same as above
	Tributyl phosphate, kerosene, ammonia	Bulk unloading	Same as above
	Uranyl nitrate, ammonia, plutonium/ neptunium	*Uranyl nitrate storage* (4 tanks)	Same as above
	Ammonia	ammonia storage (3 tanks)	Same as above
	H_2SO_4	H_2SO_4 storage (1 tank)	Same as above
Plant 2 cold side ore conveyor (2F) **	Ore concentrates, high & low grade residues	Cold side elevator pit	Process knowledge/significant quantities
Plant 2 hot side ore conveyor (2G) **	Uranium (up to 1.25%E), ore, ore concentrate, high & low grade residues	Hot side elevator pit	Process knowledge/significant quantities
Conveyor from Plant 1 ore silos (2H)	**	Ore conveying	Ore conveying system never used
Maintenance building (3A) **	Uranium (up to 5%E), 1,1,1-trichloroethane	Maintenance and spare parts storage	Process knowledge/significant quantities. Area contains 2 satellite accumulation areas and parts cleaner.
Ozone building (3B) **	**	Acid bleaching	

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
NAR control house (3C)	**	NAR control	
NAR towers & tanks (3D) **	Ammonia, urea	ammonia recovery	Process knowledge/significant quantities
	Ammonia	Concentrator	Process knowledge/significant quantities
Hot raffinate building (3E) **	Tributyl phosphate, NaOH, kerosene, MgF_2, low grade residue, ore raffinate, tetrachloroethylene, 1,1,1-trichloroethane	Hot raffinate	Process knowledge/significant quantities, RCRA drummed waste determinations
Harshaw digestion fume recovery (3F) **	Ammonia	Harshaw fume recovery	Process knowledge/significant quantities, spill log
Refrigeration building (3G) **	Refrigerant	Refrigeration	Process knowledge/significant quantities
Refinery sump (3H) **	Uranyl nitrate, MgO, tributyl phosphate, kerosene, magnesium uranate, ammonia	Refinery sump	Process knowledge/significant quantities, RCRA reports
Combined raffinate tank area (3J) **	Barium carbonate, alum, ore raffinates	Combined raffinate	Process knowledge/significant quantities
	Ore raffinates	Spray calcination	Process knowledge/significant quantities
	Perchloroethylene, lubricating & cutting oil, trichloroethylene, 1,1,1-trichloroethane	Contaminated oil storage	Process knowledge/significant quantities, oil stored in drums
Old cooling water tower (3K)	**	Process water cooling	The cooling water tower has been removed from this location (only foundation remains).
Electrical substation north of building 3A (3L) **	PCB oils	Electrical distribution	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Green salt plant (4A) **	Anhydrous ammonia, catalyst	Ammonia dissociation	Process knowledge/significant quantities, spill log
	UF_4, U_3O_8, UO_3, UO_2, anhydrous HF, mercury	Hydrofluorination	Process knowledge/significant quantities, incident reports, spill log, history of FEMP
	Anhydrous HF, mercury, ammonia	AHF vaporization	Process knowledge/significant quantities, incident reports, spill log
	UF_4, HF (up to 30 wt%), KOH, KF	HF recovery	Process knowledge/significant quantities, incident reports, spill log, history of FEMP
	UF_4 (depleted and enriched up to 1.25%E)	UF_4 repackaging	Process knowledge/significant quantities, incident reports
	UO_3, UF_4	Moving bed experimental reactor (Never in production use)	Process knowledge/significant quantities. The reactor was tested experimentally, but never placed into product use.
	Ammonia	Nitrogen generation	Process knowledge/significant quantities
	HF (anhydrous and aqueous)	HF refrigeration	Process knowledge/significant quantities. Refrigerants were also used in this process. Refrigeration system operated from 1954-1956, then was removed.
	Thorium oxide, HF, thorium tetrafluoride	Thorium tetrafluoride	Process knowledge/significant quantities. Process only operated in 1954.
	UF_4, UO_3, UO_2, HF	Water treatment	Process knowledge/significant quantities, incident reports, history of FEMP
	UF_4, UO_3, depleted UF_4, U_3O_8	Storage	Process knowledge/significant quantities, incident reports, history of FEMP

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Plant 4 warehouse (4B) **	UF_4, UO_3	UF_4 storage	Process knowledge/significant quantities, history of FEMP
Plant 4 maintenance building (4C) **	UF_4, trichloroethylene, 1,1,1-trichloroethane, hydraulic oil	Maintenance	Process knowledge/significant quantities, spill log, incident reports
Metal production plant (5A) **	UF_4, UO_3, magnesium, MgF_2	South staging & storage	Process knowledge/significant quantities, history of FEMP, incident reports
	Uranium metal (up to 1.25%E), UF_4, UO_3, MgF_2, magnesium, mercury, lead, chromium, cadmium, MgO	Reduction	Process knowledge/significant quantities, history of FEMP, spill logs, incident reports, RCRA reports
	U_3O_8, lubricating oil, MgO, magnesium, lead, zirconium, chromium, yttria	Casting (remelt)	Process knowledge/significant quantities, incident reports, RCRA reports
	Uranium metal (up to 1.25%E), lubricating oil	Ingot cropping	Process knowledge/significant quantities, incident reports
	*	Saw sharpening	
	U_3O_8, zirconium oxide, MgO, yttria	Mold preparation & reconditioning	Process knowledge/significant quantities, RCRA reports
	Uranium, cooling oil, (Shell Turbo 68 oil) perchloroethylene, benzene	*Hilco Oil Reclaimer* (Uranium-contaminated filter cake)	Process knowledge/significant quantities, RCRA reports
	U_3O_8, uranium (up to 1.25%E)	North staging & storage	Process knowledge/significant quantities
	U_3O_8	Graphite machining	Process knowledge/significant quantities
	U_3O_8, UF_4, hydraulic oil, lubricating oil, cooling oil	Water treatment	Process knowledge/significant quantities, RCRA reports
	Zirconium, zirconium oxide	Plasma spraying	Process knowledge/significant quantities. Process never used for production.

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Metal production plant (5A) (Cont'd)	U_3O_8, UF_4, trichloroethylene, 1,1,1-trichloroethane	Maintenance	Process knowledge/significant quantities
Plant 5 west side separation and pickling (5B)	**	Ingot separation and pickling	New unit, never used
Plant 5 electrical substation (5C) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Plant 5 west side slag milling & derby breakout (5D)	**	Slag milling	New unit, never used
	**	Derby breakout	New unit, never used
Plant 5 filter building (5E)	**	Storage	Stored excess equipment and clean filters
Plant 5 covered storage (5F) **	Uranium (up to 1.25%E)	Storage (Uranium residues)	Process knowledge/significant quantities
Plant 5 ingot storage shelter (5G) **	Uranium (depleted)	Metal storage	Process knowledge/significant quantities
Metals fabrication plant (6A) **	Uranium metal, lithium carbonate, potassium carbonate	Rolling mill	Process knowledge/significant quantities. Mill out of service since 1970.
	Uranium metal, U_3O_8, hydraulic oils, water-soluble oils	Core machining	Process knowledge/significant quantities
	Uranium metal, cooling and hydraulic oils	Misc. machining	Process knowledge/significant quantities, history of FEMP
	Uranium metal, cooling oil, water-soluble oil, hydraulic oil	Coolant oil clarifiers	Process knowledge/significant quantities, history of FEMP
	Uranium metal, U_3O_8, lubricating oil, hydraulic oil, coolant oil, ammonia	Chip briquetting	Process knowledge/significant quantities, history of FEMP

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Metals fabrication plant (6A) (Cont'd)	Uranyl nitrate cooling oils, U_3O_8, ammonia, cadmium, chromium, lead, benzene, chlorobenzene, toluene, trichloroethylene	Scrap metal pickling	Process knowledge/significant quantities, history of FEMP, RCRA drummed waste determinations
	Ammonia, hydraulic oil	Slug pickling	Process knowledge/significant quantities
	Uranium metal, cooling oil, sodium chloride, potassium chloride,	Tocco furnaces oil quench	Process knowledge/significant quantities
	Uranium metal, sodium chloride, potassium chloride	Salt-water (Nu-Sal) heat treating	Process knowledge/significant quantities
	Sodium sulfide, NaOH	NO_x destructor	Process knowledge/significant quantities
	*	Inspection	
	Uranium	Storage (Uranium-contaminated sump cake and residues)	Process knowledge/significant quantities
	**	Robot	Never used for production.
	Uranyl nitrate, chromium	Perched water & clarifier pit	
	MgO, lithium chloride, NaOH, cooling oils, lubricating oils, trichloroethylene, 1,1,1-trichloroethane	Water treatment	Process knowledge/significant quantities
	Machining oils	Tool fabrication room	Process knowledge/significant quantities
	Uranium metal, copper, tin	Bronze/tin heat treating	Process knowledge/significant quantities
Plant 6 covered storage area (6B) **	Uranium metal, low & high grade residues	Storage east side	Process knowledge/significant quantities
Plant 6 electrostatic precipitator south (6C) **	U_3O_8, cooling oils	Precipitron	Process knowledge/significant quantities

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Plant 6 electrostatic precipitator central (6D) **	U_3O_8, cooling oils	Precipitron	Process knowledge/significant quantities
Plant 6 electrostatic precipitator north (6E) **	U_3O_8, cooling oils	Precipitron	Process knowledge/significant quantities
Plant 6 salt-oil heat treat building (6F) **	Uranium metal, sodium chloride, potassium chloride, cooling oil (quench oil)	Salt-oil heat treating	Process knowledge/significant quantities
Plant 6 sump (new) (6G)	**	Water treatment	Never used.
Plant 7 (7A) **	UF_6, UF_4, UO_2, UO_2, F_2HF (aqueous and anhydrous), ammonia	UF_6 to UF_4 reduction	Process knowledge/significant quantities. Plant 7 represents a biohazard due to bird droppings.
	Ammonia, catalyst	N_2 generator	Process knowledge/significant quantities
Plant 7 overhead crane (7B) **	UF_4, UO_3, UO_2F_2	Storage	Process knowledge/significant quantities
	UF_6, UF_4, UO_3, UO_2F_2	Loading and unloading	Process knowledge/significant quantities
Scrap recovery plant (8A)**	UF_4, uranium (up to 0.95%E), thorium, NaOH, high grade/low grade residues, tributyl phosphate, lubricating, hydraulic, cooling oil sludges	Drying (rotary kiln) (Uranium-contaminated sump cakes)	Process knowledge/significant quantities, history of FEMP, spill log, incident reports
	Uranium (up to 0.95%E), NaOH, MgF_2, mercury	*Primary calciner* (Uranium-contaminated dust collector bags and gloves)	Process knowledge/significant quantities, history of FEMP, spill log, RCRA reports

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Scrap recovery plant (8A) (Cont'd)	U_3O_8, uranium metal (up to 1.25%E), high grade residues, oily sludges, ammonium diuranate cakes, mercury	*Oxidation furnace 1*	Process knowledge/significant quantities, history of FEMP, spill log, RCRA reports
	U_3O_8, UF_4, NaOH, calcium uranate, calcium fluoride, mercury	Oxidation furnace 2	Process knowledge/significant quantities, history of FEMP, spill log, incident reports
	Uranyl ammonium phosphate cake, ammonium diuranate cake, wet low grade scrap cake, mercury, NaOH	Uranyl ammonium phosphate furnace	Process knowledge/significant quantities, history of FEMP, spill log. Furnace out of service since early 1970s.
	Uranium metal (up to 1.25%E), oil and solvents (1,1,1-trichloroethane, trichloroethylene, perchloroethylene), magnesium	*Box furnace* (Oil- and solvent-contaminated gloves and rags, uranium-contaminated filters)	Process knowledge/significant quantities, RCRA reports
	U_3O_8, MgF_2, arsenic, lead, wet low grade sump cakes, prill, lithium & potassium carbonate	Muffle furnace	Process knowledge/significant quantities, history of FEMP, RCRA reports
	Uranium metal (up to 0.71%E), graphite	Graphite furnace	Process knowledge/significant quantities, RCRA reports. Graphite only burned for 3 months.
	Uranium metal, HCl, prill, magnesium	Metal dissolver	Process knowledge/significant quantities
	UF_4, HF (aqueous & anhydrous), KOH	Greensalt reversion	Process knowledge/significant quantities
	Uranium (up to 0.95%E), MgF_2	Milling	Process knowledge/significant quantities, history of FEMP
	Lithium & calcium carbonates	Crushing	Process knowledge/significant quantities
	MgF_2 slag	Ball mill	Process knowledge/significant quantities, history of FEMP

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Scrap recovery plant (8A) ** (Cont'd)	U_3O_8, UF_4	Rotexing	Process knowledge/significant quantities, incident reports
	Uranium (up to 0.95%E), MgF_2, HCl, copper, phosphoric acid, ammonium hydroxide	Hydrometallurgical system	Process knowledge/significant quantities, history of FEMP, RCRA reports
	U_3O_8, uranyl ammonium phosphate cake, HCl, ammonia, aqueous HF, $CuSO_4$, SO_2, UF_4	WINLO	Process knowledge/significant quantities, history of FEMP. WINLO process operated 1962-1964; was removed in mid-1970s.
	Uranium, thorium, NaOH, HCl, diatomaceous earth	Water treatment & filtration (Uranium- and thorium-contaminated waters)	Process knowledge/significant quantities, spill logs
	Carbon tetrachloride, tetrachlorethylene, trichloroethylene 1,1,1-trichloroethane, acetone, ethylbenzene, methyl ethyl ketone, toluene, xylene	Oil centrifuge	Process knowledge/significant quantities, RCRA drummed waste determinations
	Thorium oxalate, thorium hydroxide	Thorium residue recovery	Process knowledge/significant quantities
	Thorium hydroxide, thorium tetrafluoride, HF (aqueous & anhydrous), KOH	Thorium reversions	Process knowledge/significant quantities
	Thorium hydroxide, thorium oxalate, thorium oxides	Thorium storage	Process knowledge/significant quantities
	NaOH, H_3PO_4	Bulk storage	Process knowledge/significant quantities, spill log

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Plant 8 maintenance building (8B) **	Lubricating, cooling, hydraulic oils, degreasing solvents	Maintenance	Process knowledge/significant quantities
Rotary kiln/drum reconditioner (8C) **	**	New rotary kiln New drum reconditioning	
Plant 8 railroad filter building (8D) **	U_3O_8, uranium (up to 1.25%E), MgF_2	Filtration	Process knowledge/significant quantities, history of FEMP
Plant 8 old drum washer (8F) **	Uranium metal, thorium, NaOH	Drum washing	Process knowledge/significant quantities, history of FEMP
Special products plant (9A) **	Uranium (up to 2.1%E), zirconium	Enriched uranium casting	Process knowledge/significant quantities, history of FEMP
	Uranium (up to 2.1%E), NaOH, aqueous HF, ammonia, copper, zirconium, nickel, aluminum	Zirnlo decladding	Process knowledge/significant quantities, history of FEMP, spill log
	Uranium (up to 2.1%E), U_3O_8, lubricating oil	Uranium machining	Process knowledge/significant quantities
	Depleted uranium, lithium & potassium carbonate, magnesium, MgF_2	Derby cleaning	Process knowledge/significant quantities, incident report
	Uranium (up to 2.1%E), NaCl, KCl	Heat treating	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Special products plant (9A) ** (Cont'd)	Thorium tetrafluoride, zinc fluoride	Triple beta, thorium metal	Process knowledge/significant quantities
	UF_4, dolomite, MgF_2, magnesium, prill	Uranium reduction	Process knowledge/significant quantities, spill log
	Lubricating/cooling oil	I & E remelt furnaces	Process knowledge/significant quantities, (furnaces removed and location filled with concrete)
	U_3O_8, ammonia, hydraulic oil, cooling oil, lube oil	Briquetting	Process knowledge/significant quantities
	U_3O_8, uranyl nitrate, ammonia	Scrap metal pickling	Process knowledge/significant quantities
Plant 9 sump treatment (9B) **	Uranium (up to 2.1%E), uranyl nitrate, trichlorethylene, copper, zirconium, nickel, aluminum, NaOH, HF	Water treatment	Process knowledge/significant quantities, history of FEMP, incident report. Uranium- and solvent-contaminated perched water detected by removal action sampling of wells in and near Plant 9.
Plant 9 dust collector (9C) **	UF_4, MgF_2, dolomite	Dust collection	Process knowledge/significant quantities
Plant 9 electrical substation (9D) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Plant 9 cylinder shed (9E)	**	Cylinder storage	
Plant 9 electrostatic precipitator house (9F) **	U_3O_8, uranium metal (up to 2.1%E)	Precipitron	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Boiler plant (10A) **	Sulfur, flyash, mercury, 1,1,1-trichloroethane, lead, oil	Steam production	Process knowledge/significant quantities, RCRA reports, spill log
Boiler plant maintenance building (10B) **	Degreasing solvents (1,1,1-trichloroethane), lubricating oils	Boiler plant maintenance	Process knowledge/significant quantities, RCRA reports
Wet salt storage bin (10C)	**	Wet salt storage	
Oil burner/graphite burner pad (10D) **	Uranium (up to 1.25%E), tributyl phosphate, kerosene, lubricating, hydraulic, machine oils. spent solvents 1,1,1-trichloroethane, perchloroethylene, trichloroethylene	Oil and graphite burner	Process knowledge/significant quantities
Service building (11) *	Uranium, perchloroethylene, trichloroethylene, lead, magnesium	Laundry	Process knowledge/significant quantities, RCRA reports, incident reports, RCRA drummed waste determinations
	Uranium	Locker rooms (Uranium-contaminated clothes)	Process knowledge/significant quantities
	*	Cafeteria	
Main maintenance building (12A) **	Uranium, thorium, solvents, (1,1,1-trichloroethane, perchloroethylene), motor oils, lubricating oils, hydraulic oil, paint, mercury, silver	Main maintenance, stores, and offices	Process knowledge/significant quantities, spill log, RCRA reports
Cylinder storage building (12B)	**	Cylinder storage	
Lumber storage building (12C) **	**	Lumber storage	

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Pilot Plant wet side (13A) **	Uranium (up to 1.0%E), thorium, tributyl phosphate, kerosene, di amyl amyl phosphonate, radium	Solvent extraction	Process knowledge/significant quantities
	Uranium, thorium, NaOH, ammonia, magnesium oxide, MgF_2, lead, 1,1,1-trichloroethane, NaCl, HF, oxalic acid, tributyl phosphate, kerosene, mercury, copper, nickel, chromium, HF, ammonia, MgO, barium, cadmium	Sump process	Process knowledge/significant quantities, RCRA reports, spill logs, RCRA sampling of pilot plant sump
	Thorium, ammonia	Thorium digestion	Process knowledge/significant quantities
	Thorium oxalate, thorium nitrate, oxalic acid	Thorium oxalate	Process knowledge/significant quantities
	Ammonia, thorium hydroxide	Thoria gel (hydrated oxide)	Process knowledge/significant quantities
	Thorium tetrafluoride, thorium nitrate, HCl	Thorium tetraflouride precipitation	Process knowledge/significant quantities
	Zinc fluoride, HF (aqueous)	ZnF_2 precipitation	Process knowledge/significant quantities
	Calcium fluoride, MgF_2	Pot liner preparation	Process knowledge/significant quantities
	Uranium, aluminum, ammonia, NaOH, nickel	Decladding fuel elements	Process knowledge/significant quantities
	Uranium (up to 2.5%E), U_3O_8	Enriched oxidation furnace	Process knowledge/significant quantities
	Barium chloride, barium sulfate	*Barium chloride conversion*	Process knowledge/significant quantities, RCRA reports
Pilot Plant maintenance building (13B) **	Hydraulic, lubricating oils, mercury	Maintenance	Process knowledge/significant quantities. Oils are potentially contaminated with uranium and thorium.
Sump pump house (13C) **	Uranium, thorium, NaOH, magnesium oxide	Sump pump house	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Pilot Plant thorium tank farm (13D) **	Uranyl nitrate, thorium, thorium nitrate, 1,1,1-trichloroethane, mineral spirits, ammonia, NaOH, di amyl amyl phosphonate, tributyl phosphate, kerosene	Thorium tank farm	Process knowledge/significant quantities, RCRA reports
Administration building (14A)	•	Offices	
EOC emergency electrical generator (14B) **	Diesel fuel	Emergency operations	Process knowledge/significant quantities. New, approximately 1986.
Laboratory building (15) **	Uranyl nitrate, U_3O_8, thorium, mercury, 1,1,1-trichloroethane, acetone, PCB's, asbestos, chloroform, ammonia, europium-152, thorium nitrate, tetrachloroethylene, niobium, lanthanum, lead, silver, platinum, acids (nitric, sulfuric, acetic, hydrochloric, hydrofluoric, chromic, perchloric), solvents, plutonium	Laboratories	Process knowledge/significant quantities, RCRA reports, incident reports, spill log. Europium used in rare earth analysis. Many other small quantity compounds and standards have been utilized.
Main electrical station (16A) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Electrical substation (16B) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Electrical panels & transformer (16C) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Main electrical switch house (16D)	**	Electrical distribution	
Main electrical transformers (16E) **	PCB oils	Electrical distribution	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Trailer electrical substation 1 (16F) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Trailer electrical substation 2 (16G) **	PCB oils	Electrical distribution	Process knowledge/significant quantities
Bio-denitrification surge lagoon (18A) **	Uranium, 1,1,1-trichloroethane, nitrates	Lagoon	RCRA reports, process knowledge/significant quantities
General sump (18B) **	Uranium, thorium, spent solvents (1,1,1-trichloroethane, trichloroethylene, perchloroethylene)	General sump (Uranium- and thorium- contaminated waters)	Process knowledge/significant quantities
Coal pile runoff basin (18C) **	Uranium	Runoff retention Uranium-contaminated water	Process knowledge/significant quantities, RCRA reports
Bio-denitrification towers building (18D) **	**	Biodenitrification	
Storm water retention basin (18E) **	Uranium	Storm water retention (Uranium-contaminated waters and sludges)	Process knowledge/significant quantities, incident reports
Clearwell pump house (18G) **	Uranium, 1,1,1-trichloroethane	Clearwell pumping (uranium-contaminated water)	Process knowledge/significant quantities, RCRA reports
Bio-denitrification effluent treatment facility (18H) **	Uranium, oil	Effluent treatment (Uranium-contaminated water)	Process knowledge/significant quantities, incident reports, spill log

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Methanol tank (18J) **	Methanol	Methanol storage	Process knowledge/significant quantities
Low nitrate tank (18K) **	Uranium, nitrates, 1,1,1-trichloroethane	Low nitrate tank	Process knowledge/significant quantities, RCRA reports
High nitrate tank (18L) **	Uranium, nitrates, 1,1,1-trichloroethane	High nitrate tank	Process knowledge/significant quantities, RCRA reports
High nitrate storage tank (18M)	**	High nitrate storage	Never used
Main tank farm (19A) **	Ammonia, dilute HF, anhydrous HF, KF, tributyl phosphate, kerosene, HCl, oil	Bulk storage	Process knowledge/significant quantities, incident reports, spill log
Pilot Plant ammonia tank farm (19B) **	Anhydrous ammonia	Ammonia storage	Process knowledge/significant quantities
Main tank farm control room (19C)	**	Offices	
Old north tank farm (19D) **	Anhydrous ammonia & HF, KF, HCl, dilute HF	Bulk storage	Process knowledge/significant quantities
	Anhydrous HF	*Sump* (neutralizing pit)	Process knowledge/significant quantities, RCRA reports
Pump station & power center building (20A) **	Chlorine (as hypochlorite)	Pumps	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Water plant building (20B) **	Alum, lime	Water treatment	Process knowledge/significant quantities
Cooling towers (20C) **	** Chromium	Water cooling	
Elevated potable storage tank (20D)	**	Water storage	
Well house 1 (20E) **	**	Water pumping	
Well house 2 (20F)	**	Water pumping	
Well house 3 (20G)	**	Water pumping	
Process water storage tank (20H) **	**	Water storage	
Gas meter building (22A)	**	Gas metering and distribution	
Storm sewer lift station (22B) **	Uranium	Lift station (Uranium-contaminated water)	Process knowledge/significant quantities
Truck scale (22C)	**	Truck scale	
Scale house and weigh scale (22D)	**	Scale operation	

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Utility trench to K-65 area (22E)**	Uranium (up to 0.71%E), MgF_2, raffinates, ore raffinates	Transfer lines	Process knowledge/significant quantities
Meteorological tower (23)	**	Meteorological tower	
Railroad scale house (24A)	**	Scale house	
Railroad engine house (24B) **	Ethylene glycol & lubricating oils	Engine storage	Process knowledge/significant quantities
Chlorination building (25A) **	Chlorine	Chlorination	Process knowledge/significant quantities
Manhole 175 and sampling building (25B) **	Uranium	Manhole 175 & effluent line (Uranium-contaminated water)	Process knowledge/significant quantities
Sewage lift station building (25C) **	Hydrogen sulfide	Lift station	Process knowledge/significant quantities
U.V. disinfection building (25D)	**	Ultraviolet disinfection	
Digester and control building (25E)	**	Anaerobic sewage digestion	
Sludge drying beds (25F) **	1,1,1-trichloroethane, uranium	Sludge settling	RCRA reports
Primary settling basins (25G)	**	Sand filtering	Elevated levels from radiological field survey equipment

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Trickling filters (25H)	**	Trickling filters	
Pump house-HP fire protection (26A) **	Lubricating oils	Fire protection water pumping	Process knowledge/significant quantities
Elevated water storage tank (26B)	**	Water storage	
Main electrical strainer house (26C) **	Halon	Main electrical deluge system	Process knowledge/significant quantities
Security building (28A)	*	Security services	
Human resources building (28B)	*	Offices	
Security checkpoint (28C)	**	Checkpoint	
Guard post west end of 2nd St. (28D)	**	Checkpoint	
Chemical warehouse (30A) **	Paint, lime, MgO, diatomaceous earth, lithium carbonate, potassium carbonate	Chemical storage	Process knowledge/significant quantities
Drum storage warehouse (30B)	**	Drum storage	
Old ten ton scale (30C)	**	Scale operations	

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Garage - engine house (31A) **	Waste oil, solvents, 1,1,1-trichloroethane, asbestos, gasoline, H_2SO_4, mercury, ethylene glycol	Garage	Process knowledge/significant quantities, spill log, RCRA reports
Old truck scale platform (31B)	**	Scale operation (Limited use)	
Magnesium storage building (32A) **	Magnesium	Magnesium storage	Process knowledge/significant quantities
Magnesium storage covered dock (32B) **	Uranium, thorium, magnesium	Dock	Process knowledge/significant quantities
Pilot Plant annex (37) **	U_3O_8, uranium	Grit-blasting furnace crucibles (Uranium-contaminated graphite)	Process knowledge/significant quantities. Steel shot was used.
	Zirconia, MgO	Plasma spraying of crucibles	Process knowledge/significant quantities
	Uranium (up to 1.25%E), thorium, lubricating oils, zinc	Oil reclaimer	Process knowledge/significant quantities
	Uranium (up to 1.25%E), thorium, zinc	De-zincing furnace	Process knowledge/significant quantities
	UF_4, magnesium	Briquetting	Process knowledge/significant quantities
	Uranium metal (up to 0.71%E), MgF_2	Uranium derby cleaning (Rotoblaster)	Process knowledge/significant quantities
	ThF_4, ZnF_2	Milling thorium tetraflouride	Process knowledge/significant quantities
	Calcium	Calcium metal storage	Process knowledge/significant quantities
	Uranium metal (up to 1.25%E)	Box furnace	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Pilot Plant annex (37) ** (Cont'd)	**	Flats outgassing	Process knowledge/significant quantities
	Quench oil, sodium & potassium chloride	NuSal heat treating	Process knowledge/significant quantities
	Uranium metal (up to 5%E)	Enriched derby production	Process knowledge/significant quantities. Reduction furnace out of service since 1970.
Propane storage (38A) **	Propane	Propane storage	Process knowledge/significant quantities
Cylinder filling shed (38B)	**	Propane cylinder filling	
Incinerator building (39A) **	Uranium	Trash baler operation (Uranium-contaminated trash)	Process knowledge/significant quantities
	Uranium, 1,1,1-trichloroethane, acetone	Solid waste incinerator (Uranium-contaminated paper and wooden pallets)	Process knowledge/significant quantities, RCRA reports
	Uranium, spent solvents, 1,1,1-trichloroethane, trichloroethylene, perchloroethlyene, spent lubricating/hydraulic oils	*Liquid waste incinerator*	Process knowledge/significant quantities, RCRA reports. Uranium- and solvent-contaminated perched groundwater detected by removal action sampling.
	Uranium, UO_3, ammonia, raffinates	Drum dryer (Uranium-contaminated sump cakes)	Process knowledge/significant quantities, spill log
Waste oil decant shelter (39B) **	Spent solvents, (1,1,1-trichloroethane, trichloroethylene, perchloroethylene) spent lubricating and hydraulic oils	Oil-water separation	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Incinerator building sprinkler riser house (39C) **	**	Incinerator sprinkler riser	
Sewage treatment plant incinerator (39D) **	Uranium, hydraulic and lubricating oil	Waste incineration (Uranium-contaminated trash)	Process knowledge/significant quantities
Rust Engineering building (45A)	**	Offices	Present use
	Uranium metal, uranium carbide, ammonium sulfate, U_3O_8, oil	Machine shop	Process knowledge/significant quantities, RCRA reports, incident reports, (past use)
	Cutting oil	Miscellaneous processes	Process knowledge/significant quantities. Rust's fabrication shop is the present use of this facility.
Utility shed (45B)	**	Storage	
Heavy equipment building (46)	Oil	Heavy equipment storage	Process knowledge/significant quantities, RCRA reports. Spent spray paint cans were also stored in this area.
UF_6 to UF_4 reduction facility 2 (51)	**	UF_6 to UF_4 (new advanced waste water treatment)	Never used
Safety and health building (53A)	*	Offices	
	Mercury	Medical services	Process knowledge/significant quantities, spill log
	*	Security	

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
In-vivo monitoring building (53B)	•	In-vivo monitoring	
Pilot Plant UF_6 to UF_4 facility (54A) **	UF_6, UF_4, ammonia, anhydrous HF, UO_2F_2	UF_6 to UF_4	Process knowledge/significant quantities, incident report
	ThF_4, calcium fluoride, magnesium	Jolter	Process knowledge/significant quantities
	UF_4, ThF_4, calcium & zinc fluoride, MgF_2	Furnace pot loading	Process knowledge/significant quantities, incident report
	UF_4, ThF_4, MgF_2, calcium & zinc	Reduction furnaces	Process knowledge/significant quantities, incident report
	Uranium, thorium, water soluble oil, coolant	Thorium metal sampling (Uranium- and thorium-contaminated sawdust)	Process knowledge/significant quantities
	Uranium metal, thorium metal, zinc, perchloroethylene	De-zincing zinc-Th metal	Process knowledge/significant quantities
	ThF_4	ThF_4 dehydration	Process knowledge/significant quantities
	UF_4, UF_6, UO_2F_2	Original UF_6 to UF_4 reduction process	Process knowledge/significant quantities, incident report
	UF_4, magnesium	PLT furnace	Process knowledge/significant quantities, incident report
	Uranium metal (up to 1.25%E), perchloroethylene	Casting	Process knowledge/significant quantities

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Pilot Plant shelter (54B) **	Uranium, UF_4, ThF_4, thorium oxalate, thorium hydroxide	Storage (Uranium-contaminated sump cakes)	Process knowledge/significant quantities
	UF_4, kerosene	UF_4 from paraffin	Process knowledge/significant quantities
Pilot Plant dissociator shelter (54C) **	Ammonia	Ammonia dissociation	Process knowledge/significant quantities
Slag recycling building (55A) **	MgF_2, prill, magnesium, uranium	Slag milling	Process knowledge/significant quantities, RCRA reports
Slag recycling pit/elevator (55B) **	MgF_2, prill, magnesium, uranium	Slag processing	Process knowledge/significant quantities, RCRA reports
CP warehouse (Butler building) (56A) **	KOH, acetic acid, silver nitrate, oil	Storage	Process knowledge/significant quantities, spill log, RCRA reports
Storage shed west (56B)	**	Construction tool storage	
Storage shed east (56C)	**	Construction tool storage	
Quonset hut 1 (60) **	Thorium oxide, thorium hydroxide, thorium oxalate	Storage	Process knowledge/significant quantities
Quonset hut 2 (61) **	Thorium	Storage (Thorium-contaminated equipment)	Process knowledge/significant quantities
Quonset hut 3 (62) **	**	Storage	K-65 silos 1 and 2 samples are stored in this facility

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
KC-2 warehouse (63) **	1,1,1-trichloroethane, perchloroethylene, fuel oil, acetone, kerosene, PCBs	Storage	Process knowledge/significant quantities, spill log
Thorium warehouse (64) **	Uranium metal (up to 1.25%E), U_3O_8, uranyl nitrate, thorium compounds and metal, hydraulic oil	Storage	Process knowledge/significant quantities, spill log. Paint was also stored at this facility.
Old Plant 5 warehouse (65) **	Thorium oxide	Overpacking	Process knowledge/significant quantities
	Thorium hydroxide, thorium oxalate	Storage	Process knowledge/significant quantities
Drum reconditioning building (66) **	Cadmium, xylene	Drum reconditioning	Process knowledge/significant quantities, RCRA reports. Paint was also stored in this facility.
Plant 1 thorium warehouse (67) **	Uranium compounds, thorium oxides	Storage	Process knowledge/significant quantities
Pilot Plant Warehouse (68) **	Uranium compounds & metal, thorium compounds & metal	Storage	Process knowledge/significant quantities
Decontamination building (69) **	NaOH, ammonia, sodium silicate, lead, methyl ethyl ketone	Decontamination (Sodium silicate cleaners used)	Process knowledge/significant quantities, RCRA reports, spill log
General in-process storage warehouse (71) **	Uranium (up to 20%E), U_3O_8, thorium oxides, oil	Storage	Process knowledge/significant quantities, spill log
	Uranium (up to 20%E), U_3O_8, thorium oxides	Isotopic verification	Process knowledge/significant quantities
	Uranium (up to 4.6%E)	Fuel disassembly	Process knowledge/significant quantities
Drum storage building (72) **	Uranium (up to 1.25%E)	Storage	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Fire brigade training center building (73A) **	Uranium	Fire brigade training (Uranium-contaminated wood and tires)	Process knowledge/significant quantities
Fire training pond (73B & 73C) w/tank **	Uranium, used oils (hydraulic, lubricating), toluene, waste paint solvents & thinners	Fire brigade training (Uranium-contaminated oils and solvents)	Process knowledge/significant quantities, RCRA reports
Confined space burn tank (73E) **	HF	Fire brigade training	Process knowledge/significant quantities. This tank was a "cleaned" tank from the old tank farm and was never used in the fire training area (probably an out-of-service HF tank).
Fire training burn trough (73D) **	Uranium, PCB, used oils (hydraulic, lubricating), magnesium	Fire brigade training	Process knowledge/significant quantities, RCRA reports. The burn trough is a reclaimed salt bath trough from Plant 6.
Plant 2 east pad (74A) **	Uranyl nitrate, UO_3 (up to 3%E), uranium (up to 5%E)	Storage	Process knowledge/significant quantities
Plant 2 west pad (74B) **	UO_3, U_3O_8, UO_2, uranyl nitrate, uranyl ammonium phosphate cakes, ore, lead, ore concentrates, ammonium diuranate, MgF_2, aluminum oxide, urea, oil	Storage	Process knowledge/significant quantities, incident reports, spill log, RCRA construction waste sampling
Plant 8 east pad (74C) **	Uranium, uranium metal (up to 1.25%E), thorium compounds	Storage (Uranium-contaminated sludges and dust collector residues)	Process knowledge/significant quantities
	MgF_2	Airport scrap	Process knowledge/significant quantities
	Oil, uranium	Pyrophoric drum sprinkler (Oil- and uranium-contaminated water)	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Plant 8 west pad (74D) **	Uranium, 1,1,1-trichloroethane, copper	Storage (Uranium-contaminated sump cakes)	Process knowledge/significant quantities, spill log, RCRA reports. Uranium- and solvent-contaminated perched water has been detected in this area.
	Uranium, thorium, oil residues, NaOH	Drum washing	Process knowledge/significant quantities
Plant 4 pad (74E) **	Uranium, UF_4, UO_3, UO_2, U_3O_8	Temporary storage	Process knowledge/significant quantities
Plant 7 pad (74F) **	UF_4, UO_3, UF_6, UO_2F_2	Storage	Process knowledge/significant quantities
Plant 5 east pad (74G) **	Uranium (up to 1.25%E), UF_4, magnesium	Temporary storage	Process knowledge/significant quantities
Plant 5 south pad (74H) **	UF_4, MgF_2	Temporary storage	Process knowledge/significant quantities
Plant 6 pads (74J) **	Uranium metal (up to 1.25%E)	Storage	Process knowledge/significant quantities, incident report
Plant 9 pad (74K) **	Uranium, uranium metal (up to 2.1%E), U_3O_8, thorium, thorium compounds, ThF_4, radium, strontium-90, MgF_2, CaF_2	Storage (Uranium- and thorium-contaminated sump cake and dust collector residue)	Process knowledge/significant quantities, incident report
Building 65 west pad (74L) **	Uranium and thorium metal, thorium compounds,	Storage (Uranium and thorium ingots and baled drums and lids)	Process knowledge/significant quantities
Building 64 east pad and railroad dock (74M) **	Uranium and thorium compounds, magnesium	Storage	Process knowledge/significant quantities

TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Building 12 north pad (74N) **	Diesel fuel, ethylene glycol, solvents (1,1,1-trichloroethane, trichloroethylene), lubricating and hydraulic oils	Storage	Process knowledge/significant quantities
Decontam. pad (74P) **	Uranium, thorium, oil	Storage (Uranium- and thorium-contaminated metal, equipment, and tanks)	Process knowledge/significant quantities, spill log
Plant 8 old metal dissolver pad (74Q) **	HCl, magnesium, prill	Metal dissolver	
Plant 8 north pad (74R) **	Uranium, U_3O_8, uranium metal (up to 1.25%E), thorium metal, magnesium, SO_2, ammonium hydroxide	Storage (Uranium-contaminated gloves, rags and bags)	
Building 63 west Pad (74S)	**	Storage	
Plant 1 storage pad (74T) **	Uranium (up to 1.25%E) UO_3, U_3O_8, thorium compounds, ore concentrates, ores, radium, technetium-99 residues, MgF_2, methylene chloride, acetone, lead, barium, 1,1,1-trichloroethane, perchloroethylene, lithium carbonate	Storage	Process knowledge/significant quantities, history of FEMP, incident reports, spill log, RCRA reports
Pilot Plant pad (74U) **	Uranium and thorium compounds, UF_6, aqueous HF, ammonia, oil	Storage	Process knowledge/significant quantities, spill log
Laboratory pad (74V) **	Uranium and thorium samples, ammonia, HF, tributyl phosphate, kerosene, diamyl amyl phosphonate,	Storage truck dock	Process knowledge/significant quantities

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Finished product/4A warehouse (77) **	Uranium metal	Storage	Process knowledge/significant quantities. Product inventory of this facility is owned by the Department of Defense.
Future D&D facility (78)	**	Decontamination	
Plant 6 warehouse (79) **	Drummed uranium & RCRA wastes, hazardous waste	Storage	All drums have been previously RCRA characterized. Facility constructed approx. 1985.
Plant 8 warehouse (80) **	Drummed RCRA wastes & uranium, hazardous waste	Storage	All drums have been previously RCRA characterized.
Plant 9 warehouse (81) **	Drummed RCRA wastes & uranium, hazardous waste	Storage	All drums have been previously RCRA characterized.
Receiving & incoming material inspection building (82)	*	Storage	
Clearwell line (88)	**	Rainwater collection	
Parking lots (89) *	Motor oils, ethylene glycol, gasoline	Parked cars	Process knowledge/significant quantities
Skeet range building (90) *	Lead	Skeet range	Process knowledge/significant quantities
Railroad tracks (G-1) **	Uranium ore, creosote, MgF_2, ammonia	Railroad	Process knowledge/significant quantities
Site roads (G-2) **	Motor oils, hydraulic fluids, ethylene glycol, gasoline, uranium	Roads	

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Storm sewer system (G-3) **	Uranium	Storm sewers (Uranium-contaminated waters, residues, and sludges)	Process knowledge/significant quantities
Miscellaneous Sumps (G-4)	**, thorium	Sumps	
Dikes (G-5)	**	Dikes	
Utility lines (G-6) **	Asbestos, uranium (ores, raffinates, and compounds)	Utility lines	Process knowledge/significant quantities
Underground storage tanks (G-7) **	**	Storage	
Aboveground storage tanks (G-8) **	Uranyl nitrate, HF, ammonia, NaOH	Storage	Process knowledge/significant quantities
Process side trailers (G-9)	**	Offices	
Nonprocess side trailers (G-10)	*	Offices	
Pipe bridges (G-11) **	Uranium, asbestos, lead	High lines	Process knowledge/significant quantities
Respirator cleaning trailer (T-42)	**	Respirator cleaning	
Bio-assay lab trailer (T-49)	**	Bio-assay lab	

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TABLE A.3.0 Potential Contaminants

Structure/Facility	Potential Contaminants	Associated Process	Reference Source/Comments
Fire training trailer	•	Fire brigade training	
Mobile emergency operations center	*	Mobile emergency operations center	
Duratek test trailer (T-306) **	Uranium-contaminated water	Waste water treatment testing	Process knowledge/significant quantities
Scrap metal copper piles (P-017) **	Copper, asbestos	Storage	Process knowledge/significant quantities
Coal pile (P-018)	**	Coal storage	Process knowledge/significant quantities
Scrap metal pile (P-023) **	Uranium	Scrap metal pile (Uranium-contaminated metal)	Process knowledge/significant quantities
Outside equipment storage areas (P-025) **	Uranium, H_2SO_4, ethylene glycol, lead, motor oil	Scrap-equipment/vehicle storage (Uranium-contaminated equipment and vehicles)	Process knowledge/significant quantities
Construction soil/debris piles **	Uranium	Soil, debris, construction rubble, and street sweepings (Uranium-contaminated soil and rubble)	Process knowledge/significant quantities
Construction gravel & sand piles	**	Gravel & sand	
Tension support structure 1 (TS-1)	**	Storage	

TABLE A.3.0 Potential Contaminants

Structure/Facility		Potential Contaminants	Associated Process	Reference Source/Comments
Tension support structure 2 (TS-2)	**		Storage	
Tension support structure 3 (TS-3)	**		Storage	

TABLE A.3.1 Contaminants Detected by RI/FS Media Sampling

Structure/Facility	Potential Contaminants	Associated Process
Plant 1 storage shelter (1B)	Uranium, thorium	Covered storage
Plant 1 ore silos (1C)	Uranium	Milled ore storage
Ore refinery plant (2A)	Benzoic acid, bis[2-ethylehexyl]-phthalate, methylene chloride, N-nitrosodi-phenylamine, PCB-1254, toluene, metals, 2-butanone, acetone, fluoranthene, phenanthrene, 1,1,1-trichloroethane, 1,1-dichloroethane	Digestion
	Uranium, thorium, radium	Denitration
Bulk lime handling building (2C)	Uranium, thorium, radium	Bulk lime handling
Metal dissolver building (2D)	Uranium	Metal dissolution
	Uranium	West metal dissolution
Maintenance building (3A)	Thorium	Maintenance and spare parts storage
Ozone building (3B)	Uranium	Acid bleaching
Hot raffinate building (3E)	Uranium, thorium	Hot raffinate
Refrigeration building (3G)	Uranium, radium	Refrigeration
Refinery sump (3H)	Uranium, thorium, radium, cesium-137	Refinery sump
Plant 4 warehouse (4B)	Uranium	UF_4 storage

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TABLE A.3.1 Contaminants Detected by RI/FS Media Sampling

Structure/Facility	Potential Contaminants	Associated Process
Metal production plant (5A)	Uranium	South staging & storage
	Uranium	Reduction
Metals fabrication plant (6A)	Methylene chloride, tetrachloroethane, toluene, trichloroethene, 1,1-dichloroethene, 1,2-dichloroethene, 2-butanone, acetone	Scrap metal pickling
	Trichloroethylene, 1,1,1-trichloroethane, 1,1- dichloroethane, chromium	Perched water & clarifier pit
Plant 8 maintenance building (8B)	1,1,1-trichloroethane, trichloroethylene, uranium, methylene chloride, toluene, acetone	Maintenance
Rotary kiln/drum reconditioner (8C)	Uranium, thorium, radium	New rotary kiln
		New drum reconditioning
Plant 9 sump treatment (9B)	Trichloroethylene, 1,1,1-trichloroethane, carbon disulfide, methylene chloride, tetrachloroethene, toluene, 1,1-dichloroethene, 1,2-dichloroethene, 2-butanone, acetone, 4-methyl-2-pentanone, uranium	Water treatment
Boiler plant (10A)	Uranium, thorium, radium	Steam production
Oil burner/graphite burner pad (10D)	Benzo [k] fluoranthene, 1,2,-dichloroethene, acetone, beta-BHC, bis [2-ethylhexyl]-phthalate, chloroform, chrysene, di-n-butyl-phthalate, dibenzofuran, ethylbenzene, fluoranthene, methylene chloride, N-nitrosodi-phenylamine, naphthalene, PCB-1254, PCB-1260, phenanthrene, pyrene, toluene, total xylenes, metals, 2-butanone, 2-methylnaphthalene, benzo[a] anthracene	Oil and graphite burner
Service building (11)	Benzo[b]fluoranthene, 1,2-dichloroethene, acetone, benzo[k]fluoroanthene, beta-BHC, bis[2-ethylhexyl]-phthalate, chloroform, chrysene, di-n-butyl-phthalate, dibenzofuran, ethylbenzene, fluoranthene, methylene chloride, N-nitrosodi-phenylamine	Laundry

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TABLE A.3.1 Contaminants Detected by RI/FS Media Sampling

Structure/Facility	Potential Contaminants	Associated Process
Main maintenance building (12A)	Benzo [g,h,i]-perylene, benzo [k] fluoranthene, acetone, bis[2-ethylhexyl]-phthalate, chrysene, dibenzo [a,h]-anthracene, dibenzo-furan, fluoranthene, fluorene, indeno [1,2,3-cd]-pyrene, methylene chloride, N-nitrosodi-phenylamine, naphthalene, PCB-1254, PCB-1260, phenanthrene, phenol, pyrene, toluene, trichloroethene, metals, 1,1-dichloroethane, 2-butanone, 2-methylnaphthalene, 4-methyl-2-pentanone, acenaphthene, anthracene, benzo[a]-anthracene, benzo [a]pyrene, benzo[b]fluoranthene, chloroform, tetrachloroethene	Main maintenance, stores, and offices
Lumber storage Building (12C)	Metals	Lumber storage
Pilot Plant wet side (13A)	Thorium, uranium [up to 1.0% E], radium, benzo[g,h,i]-perylene, benzo[k]-fluoroanthene, beta-BHC, bis[2-ethylhexyl)-phthalate, chlorobenzene, chrysene, di-n-butyl-phthalate, dibenzo [a,h]-anthracene, dibenzofuran, fluoranthene, fluorene, indeno [1,2,3-cd]-pyrene, methylene chloride, PCB-1254, PCB-1260, phenanthrene, phenolp, pyrene, tetrachloroethene, toluene, trichloroethene, metals, 1,1,2,2-Tetrachloroethane, 1,1-dichloroethene, 1,2-dichloroethene, 2-butanone, 2-methyl-naphthalene, acetone, 4-methyl-2-pentanone, acenaphthene, anthracene, benzene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]-fluoranthene	Solvent extraction
Laboratory building (15)	Uranium, benzo[g,h,i] perylene, benzo[k]-fluoranthene, bis[2-ethylhexyl]-phthalate, chrysene, fluoranthene, indeno[1,2,3-cd]-pyrene, phenanthrene, pyrene, metals, benzo[a]anthracene, benzo[a]-pyrene, benzo[b]-fluoranthene	Laboratories
Coal pile runoff basin (18C)	Uranium, radium, thorium, 1,1,1-trichloroethane, metals	Runoff retention
Biodenitrification towers building (18D)	Thorium	Biodenitrification
Biodenitrification effluent treatment facility (18H)	Uranium, thorium	Effluent treatment

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TABLE A.3.1 Contaminants Detected by RI/FS Media Sampling

Structure/Facility	Potential Contaminants	Associated Process
Water plant building (20B)	Uranium	Water treatment
Cooling towers (20C)	Uranium, thorium	Water cooling
Well house 1 (20E)	Uranium	Water pumping
Process water storage tank (20H)	Uranium	Water storage
Utility trench to K-65 area (22E)	Methylene chloride, toluene, trichloroethene, metals, 2-butanone, acetone	Transfer lines
Sludge drying beds (25F)	Uranium, thorium, radium, strontium-90, technetium-99	Sludge settling
Chemical warehouse (30A)	Uranium, thorium	Chemical storage
Garage - engine house (31A)	Ethyl benzene, methylene chloride, toluene, total xylenes, 2-butanone, 4-methyl-2-pentanone, benzene	Garage
Magnesium storage building (32A)	Uranium, thorium, strontium-90, cesium-137, technetium-99, methylene chloride, tetrachloroethene, 1,1,1-trichloroethane, 2-butanone, acetone	Magnesium storage
Pilot Plant annex (37)	Chloroform, methylene chloride, N-nitrosodi-phenylamine, toluene, trichloroethene, metals, 2-butanone, acetone	Grit-blasting furnace crucibles
Incinerator building (39A)	Uranium, thorium, methylene chloride, acetone	Drum dryer
Incinerator building sprinkler riser house (39C)	Uranium	Incinerator sprinkler riser

TABLE A.3.1 Contaminants Detected by RI/FS Media Sampling

Structure/Facility	Potential Contaminants	Associated Process
Rust Engineering Building (45B)	Uranium	Machine shop
Heavy equipment building (46)	Uranium, thorium, radium, ethyl benzene, methylene chloride, toluene, total xylenes, 2-butanone, 4-methyl-2-pentanone, benzene	Heavy equipment storage
Quonset hut 3 (62)	Uranium	Storage
Thorium warehouse (64)	Radium, strontium-90, thorium, uranium	Storage
Old Plant 5 warehouse (65)	Radium, strontium-90, uranium, thorium	Storage
Drum reconditioning building (66)	Radium, strontium-90, uranium, thorium	Drum reconditioning
Plant 1 thorium warehouse (67)	Uranium	Storage
Pilot Plant warehouse (68)	Uranium	Storage
Decontamination building (69)	Uranium, thorium	Decontamination
General in-process storage warehouse (71)	Uranium	Storage
	Uranium	Isotopic verification
	Uranium	Fuel disassembly
Fire training pond (73B) w/tank (73C)	1,1,1-Trichloroethane, methylene chloride, PCB-1260, tetrachloroethene, trichloroethene, metals, 2-butanone, 1-2-dichloroethene, 1,1-dichloroethane, acetone	Fire brigade training

TABLE A.3.1 Contaminants Detected by RI/FS Media Sampling

Structure/Facility	Potential Contaminants	Associated Process
Fire training burn trough (73D)	Benzoic acid, chloroform, bis[2-ethylhexyl] phthalate, methylene chloride, N-nitrosodi-phenylamine, pentachlorophenol, metals, 2-butanone, acetone	Fire brigade training
Plant 2 west pad (74B)	Uranium	Storage
Plant 9 pad (74K)	Technetium-99	Storage
Decontamination pad (74P)	Uranium, thorium, radium, technetium-99	Storage
Plant 1 storage pad (74T)	Uranium, thorium	Storage
Laboratory pad (74V)	Uranium, radium, thorium	Storage truck dock
Finished product/4A warehouse (77)	Uranium	Storage
Underground storage Tanks (G-7)	Uranium, thorium, strontium-90, technetium-99, radium	Storage
Scrap metal copper piles (P-017)	Uranium, thorium, radium	Storage
Coal pile (P-018)	Uranium, radium, thorium, metals	Coal storage
Outside equipment storage areas (P-025)	Uranium, thorium, strontium-90, radium	Scrap-equipment/vehicle storage
Construction soil/debris piles	Uranium, radium, thorium, metals, bis[2-ethylhexyl]phthalate, methylene chloride, toluene, trichloroethene, 2-butanone, acetone	Soil, debris, construction rubble, and street sweepings

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TABLE A.3.2

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COMPONENT-SPECIFIC CONTAMINANTS OF INTEREST

Table A.3.2, formed by combining information from Tables A.3.0 and A.3.1, lists component-specific contaminants categorized by analyte type (radiological, inorganic, etc.). The purpose of this table is to convert the information presented in Tables A.3.0 and A.3.1 into a format for use in the Sampling and Analysis Plan. The table represents a consolidation of all data and process knowledge into the specific contaminants of interest for each component. A condensed form of this table is presented in Section D.4 of Appendix D, which lists potential component-specific analyses to be performed.

The notes throughout the table refer to the following:

A = Lead-210; polonium-210; radium-226; radon-219, 222; thorium-227, 230; and uranium-234, 235, 238

B = All sampling to occur on a case-by-case basis based upon process knowledge.

C = Uranium-234, 235, 238.

D = Radon-219; thorium-227; and uranium-234, 235, 238.

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Preparation plant (1A)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	Chloroform 1,1-Dichloroethane 1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene		Arsenic Cadmium Chromium Cobalt Lead Magnesium Sodium	
Plant 1 storage shelter (1B)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane Trichloroethene		Copper	
Plant 1 ore silos (1C)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232			Arsenic Barium Cadmium Chromium Lead Mercury Selenium	

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Ore refinery plant (2A)	*A* Actinium-228 Americium-241 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232	Acetone 2-Butanone 1,1-Dichloroethane Methylene chloride Toluene 1,1,1-Trichloroethane	Benzoic acid Bis(2-ethylhexyl)-phthalate Fluoranthene N-nitrosodi-phenylamine Phenanthrene	Arsenic Chromium Lead Molybdenum Silver Sodium Vanadium	PCBs
General/refinery sump control building (2B)	*A*				
Bulk lime handling building (2C)	*A* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232			Calcium	
Metal dissolver building (2D)	*A* Americium-241 Neptunium-237 Plutonium-239, 241 Radium-228 Technetium-99 Thallium-208 Thorium-228, 232				
NFS storage & pump house (2E)	*A* Americium-241 Neptunium-237 Plutonium-239/241 Technetium-99				

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Cold side ore conveyor (2F)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232			Arsenic Chromium Lead Molybdenum Vanadium	
Hot side ore conveyor (2G)	*A* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232			Arsenic Chromium Lead Molybdenum Vanadium	
Conveyor tunnel (from Plant 1) (2H)	*A*			Arsenic Chromium Lead Molybdenum Vanadium	

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Maintenance building (3A)	*A* Actinium-228 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Arsenic Beryllium Chromium Lead Mercury	PCBs Total petroleum hydrocarbons
Ozone building (3B)	*A*				PCBs
NAR control house (3C)	*A*				
NAR towers (3D)	*A*				
Hot raffinate building (3E)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane		Arsenic Chromium Lead Magnesium Molybdenum Sodium Vanadium	

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Harshaw system (3F)	*C*				
Refrigeration building (3G)	*C*				
Refinery sump (3H)	*A* Actinium-228 Americium-241 Neptunium-237 Plutonium-239, 241 Radium-228 Thallium-208 Thorium-228, 232			Magnesium	
Combined raffinate tanks (3J)	*A* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane Trichloroethene		Aluminum Barium Iron	Total petroleum hydrocarbons
Old cooling water tower (3K)	*C*			Chromium	
Electrical power center building (3L)	*C*				PCBs
Green salt plant (4A)	*D* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232			Mercury Nickel Potassium	
Plant 4 warehouse (4B)	*D* Technetium-99				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 4 maintenance building (4C)	*D*	1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Chromium Lead Mercury Nickel	PCBs Total petroleum hydrocarbons
Metals production plant (5A)	*D* Technetium-99	Benzene Tetrachloroethene 1,1,1-Trichloroethane Trichloroethene		Cadmium Chromium Lead Magnesium Mercury Zinc Zirconium	Total petroleum hydrocarbons
Plant 5 ingot pickling (5B)	*D*				
Plant 5 electrical substation (5C)	*D*				PCBs

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
West derby breakout/slag milling (5D)	*D*				
Plant 5 filter building (5E)	*D*				
Plant 5 covered storage pad (5F)	*D*				
Plant 5 ingot storage shelter (5G)	*D* Technetium-99				
Metals fabrication plant (6A)	*D*	Acetone Benzene 2-Butanone Chlorobenzene 1,1-Dichloroethane 1,1-Dichloroethene 1,2-Dichloroethene Methylene chloride Toluene 1,1,1-Trichloroethane Trichloroethene		Cadmium Chromium Lead Magnesium Potassium Sodium	PCBs Total petroleum hydrocarbons
Plant 6 covered storage area (6B)	*A*				
Plant 6 electrostatic precipitator (south) (6C)	*D*			Lead	Total petroleum hydrocarbons
Plant 6 electrostatic precipitator (central) (6D)	*D*			Lead	Total petroleum hydrocarbons
Plant 6 electrostatic precipitator (north) (6E)	*D*			Lead	Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 6 salt oil heat treat building (6F)	*D*			Potassium Sodium	Total petroleum hydrocarbons
Plant 6 sump building (6G)	*D*				
Plant 7 (7A)	*D*			Nickel	Biological Hazard
Plant 7 overhead crane (7B)	*D*				
Recovery plant (8A)	*A* Actinium-228 Americium-241 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232	Acetone 2-Butanone Ethylbenzene Toluene 1,1,1-Trichloroethane Trichloroethene Xylenes	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Arsenic Calcium Copper Lead Magnesium Mercury Potassium Sodium	PCBs Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 8 maintenance building (8B)	*A* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232	Acetone Methylene chloride Toluene 1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Lead Magnesium Mercury	PCBs Total petroleum hydrocarbons
Rotary kiln/drum reconditioning (8C)	*A* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232				
Plant 8 railroad filter building (8D)	*A*			Magnesium	
Drum conveyor shelter (8E)	*A*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 8 old drum washer (8F)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232			Sodium	
Special products plant (9A)	*A* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane Trichloroethene		Aluminum Copper Magnesium Nickel Potassium Sodium Zinc Zirconium	Total petroleum hydrocarbons
Plant 9 sump treatment facility (9B)	*D* Technetium-99	Acetone 2-Butanone Carbon disulfide 1,1-Dichloroethene 1,2-Dichloroethene 4-Methyl-2-Pentanone Methylene chloride Tetrachloroethene Toluene 1,1,1-Trichloroethane Trichloroethene		Aluminum Copper Nickel Sodium Zirconium	Total petroleum hydrocarbons
Plant 9 dust collector (9C)	*D*			Magnesium	
Plant 9 substation (9D)	*D*				PCBs
Plant 9 cylinder shed (9E)	*D*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Electrostatic precipitator (9F)	*D* Technetium-99			Lead	Total petroleum hydrocarbons
Boiler plant (10A)	*A* Actinium-228 Radium-228 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane		Lead Mercury	Total petroleum hydrocarbons
Boiler plant maintenance bldg. (10B)	*A*	1,1,1-Trichloroethane		Lead	Total petroleum hydrocarbons
Wet salt storage bin (10C)	*A*				Total petroleum hydrocarbons
Cont. oil/graphite burn pad (10D)	*A* Technetium-99	Acetone 2-Butanone Chloroform 1,2-Dichloroethene Ethylbenzene Methylene chloride Toluene 1,1,1-Trichloroethane Trichloroethene Xylenes	Benzo (a) anthracene Benzo (k) fluoranthene Beta-BHC Bis (2-ethylhexyl)-phthalate Chrysene Di-n-butylphthalate Dibenzofuran Fluoranthene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Pyrene	Lead Sodium	PCBs Total petroleum hydrocarbons

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Service building (11)	*A*	Acetone Chloroform 1,2-Dichloroethene Ethylbenzene Methylene chloride Tetrachloroethene Trichloroethene	Benzo (b) fluoranthene Benzo (k) fluoranthene Beta-BHC Bis (2-ethylhexyl)-phthalate Chrysene Di-n-butylphthalate Dibenzofuran Fluoranthene	Lead Magnesium	Total petroleum hydrocarbons
Main maintenance building (12A)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	Acetone 2-Butanone Chloroform 1,1-Dichloroethane 4-Methyl-2-pentanone Methylene chloride Tetrachloroethene Toluene 1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Beryllium Lead Mercury Silver	PCBs Total petroleum hydrocarbons
Cylinder storage building (12B)	*A*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Lumber storage building (12C)	*A*			Chromium	
Pilot Plant wet side (13A)	*A* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232	Acetone Benzene 2-Butanone Chlorobenzene 1,1-Dichloroethene 1,2-Dichloroethene 4-Methyl-2-pentanone Methylene chloride Tetrachloroethene Toluene 1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Beta-BHC Bis (2-ethylhexyl)-phthalate Chrysene Di-n-butylphthalate Dibenzo (a,h) anthracene Dibenzofuran Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Aluminum Barium Cadmium Calcium Chromium Copper Lead Magnesium Mercury Nickel Sodium Zinc	PCBs

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Pilot Plant maintenance bldg. (13B)	*A*	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Lead Mercury	PCBs Total petroleum hydrocarbons
Sump pump house (13C)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232			Magnesium Sodium	
Pilot Plant thorium tank farm (13D)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane		Sodium	

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Administration building (14A)	*A*				
Building 14 EOC generator set (14B)	*A*				Total petroleum hydrocarbons
Laboratory (15)	*A* Actinium-228 Americium-241 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	Acetone 1,1,1-Trichloroethane	Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Fluoranthene Indeno (1,2,3-cd) pyrene Phenanthrene Phenol Pyrene	Aluminum Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Mercury Silver	PCBs Total petroleum hydrocarbons
Main electrical station (16A)	*A*				PCBs
Electrical substation (16B)	*A*				PCBs
Electrical panels & transformer (16C)	*A*				PCBs
Main electrical switch house (16D)	*A*				PCBs
Main electrical transformers (16E)	*A*				PCBs

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Trailer substation #1 (16F)	*A*				PCBs
Trailer substation #2 (16G)	*A*				PCBs
BDN surge lagoon (18A)	*A*	1,1,1-Trichloroethane			
General sump (18B)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane Trichloroethene			
Coal pile runoff basin (18C)	*A*	1,1,1-Trichloroethane			
Biodenitrification towers (18D)	*A* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232				
Storm-water retention basin (18E)	*A*				
Clearwell pump house (18G)	*A*	1,1,1-Trichloroethane			
BDN effluent treatment facility (18H)	*A* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232				Total petroleum hydrocarbons
Methanol tank (18J)	*A*				
Low nitrate tank (18K)	*A*	1,1,1-Trichloroethane			

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
High nitrate tank (18L)	*A*	1,1,1-Trichloroethane			
High nitrate storage tank (18M)	*A*				
Main tank farm (19A)	*D*			Potassium	Total petroleum hydrocarbons
Pilot Plant ammonia tank farm (19B)	*D*				
Tank farm control house (19C)	*D*				
Old north tank farm (19D)	*D*			Potassium	
Pump station & power center (20A)	*D* Thorium-230				
Water plant (20B)	*D* Thorium-230			Aluminum Calcium	
Cooling towers (20C)	*D* Actinium-228 Radium-228 Thallium-208 Thorium-228, 230, 232			Chromium	
Elevated potable storage tank (20D)	*D*				
Well house #1 (20E)	*D*				
Well house #2 (20F)	*D*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Well house #3 (20G)	*D*				
Process water storage tank (20H)	*D*				
Gas meter building (22A)	*A*				
Storm sewer lift station (22B)	*A*				
Truck scale (22C)	*A*				
Scale house & weigh scale (22D)	*A*				
Utility trench to pit area (22E)	*A* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene		Magnesium	
Meteorological tower (23)	*C*				
Railroad scale house (24A)	*C*				
Railroad engine house (24B)	*C*				Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Chlorination building (25A)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				
M.H.#175/effluent line/sampling building (25B)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Lead Arsenic	PCBs Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Sewage lift station building (25C)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				
U.V. disinfection building (25D)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Digester & control building (25E)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Arsenic Lead	Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Sludge drying beds (25F)	A Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Arsenic Lead	Total petroleum hydrocarbons

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Primary settling basins (25G)	A Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Arsenic Lead	Total petroleum hydrocarbons

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Trickling filters (25H)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	1,1,1-Trichloroethane	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Arsenic Lead	Total petroleum hydrocarbons
Pump house-HP fire protection (26A)	*C*				Total petroleum hydrocarbons
Elevated water storage tank (26B)	*C*				
Main electrical strainer house (26C)	*C*				
Security building (28A)	*C*				

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Human resources building (28B)	*C*				
Guard post on south end of 'D' St. (28C)	*C*				
Guard post on west end of 2nd St. (28D)	*C*				
Chemical warehouse (30A)	*D* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232			Calcium Magnesium Potassium	
Drum storage warehouse (30B)	*A*				
Old ten ton scale (30C)	*A*				
Engine house/garage (31A)	*A*	Benzene 2-Butanone Ethylbenzene 4-Methyl-2-pentanone Methylene chloride Toluene 1,1,1-Trichloroethane Xylenes		Beryllium Lead Mercury	Total petroleum hydrocarbons
Old truck scale (31B)	*A*				

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Magnesium storage building (32A)	*A* Actinium-228 Cesium-137 Radium-228 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	Acetone 2-Butanone Methylene chloride Tetrachloroethene 1,1,1-Trichloroethane		Magnesium	
Building 32 covered loading dock (32B)	*A* Actinium-228 Cesium-137 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232			Magnesium	
Pilot plant annex (37)	*D* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232	Acetone 2-Butanone Chloroform Methylene chloride Toluene Trichloroethene	N-nitrosodi-phenylamine	Magnesium Potassium Sodium Zinc Zirconium	Total petroleum hydrocarbons
Propane storage (38A)	*D*				
Cylinder filling station (38B)	*D*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Incinerator Building (39A)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	Acetone Methylene chloride 1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Lead	Total petroleum hydrocarbons

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Waste oil decant shelter (39B)	*A*	1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene		Total petroleum hydrocarbons
Incinerator sprinkler riser house (39C)	*A*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Sewage treatment plant incinerator (39D)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232			Lead	Total petroleum hydrocarbons
Rust Engineering Building (45A)	*D*	1,1,1-Trichloroethane			Total petroleum hydrocarbons
Utility shed east of Rust trailers (45B)	*D*				
Heavy equipment building (46)	*A* Actinium-228 Radium-228 Strontium-90 Thallium-208 Thorium-228, 232	Benzene 2-Butanone Ethylbenzene 4-Methyl-2-pentanone Toluene Xylenes			Total petroleum hydrocarbons
Six to four reduction facility #2 (51)	*C*				
Health & safety building (53A)	*D*			Mercury	
In-vivo building (53B)	*D*				

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Six to four reduction facility #1 (54A)	*C* Actinium-228 Radium-228 Technetium-99 Thallium-208 Thorium-228, 232	Tetrachloroethene		Calcium Magnesium Zinc	PCBs Total petroleum hydrocarbons
Pilot Plant shelter (54B)	*C* Actinium-228 Radium-228 Thallium-208 Thorium-228, 232				
Pilot Plant dissociator shelter (54C)	*C* Thallium-208 Thorium-228, 232			Nickel	
Slag recycling building (55A)	*C* Technetium-99			Magnesium	
Slag recycling pit/elevator (55B)	*C* Technetium-99			Magnesium	
CP storage warehouse (56A)	*D*			Potassium	PCBs Total petroleum hydrocarbons
Storage shed (west) (56B)	*D*				
Storage shed (east) (56C)	*D*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Quonset hut #1 (60)	*C* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-227, 228, 232				
Quonset hut #2 (61)	*C* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-227, 228, 232				
Quonset hut #3 (62)	*A* Actinium-2228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232				
KC-2 warehouse 63)	*C* Thorium-227	Acetone 1,1,1-Trichloroethane			PCBs Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Thorium warehouse (64)	*A* Actinium-228 Cesium-137 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				Total petroleum hydrocarbons
(Old) Plant 5 warehouse (65)	*A* Actinium-228 Cesium-137 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				
Drum reconditioning building (66)	*A* Actinium-228 Cesium-137 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	Xylenes		Cadmium	

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 1 thorium warehouse (67)	*D* Actinium-228 Radium-228 Radon-220, 222 Thallium-208 Thorium-228, 230, 232				
Pilot Plant warehouse (68)	*D* Actinium-228 Radium-228 Radon-220, 222 Thallium-208 Thorium-228, 230, 232			Cobalt	
Decontamination building (69)	*D* Actinium-228 Americium-241 Cesium-137 Radium-228 Radon-220, 222 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 230, 232	2-Butanone		Arsenic Chromium Lead Magnesium Mercury Nickel Sodium	PCBs Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
General in-process warehouse (71)	*D* Actinium-228 Radium-228 Radon-220, 222 Technetium-99 Thallium-208 Thorium-228, 230, 232				Total petroleum hydrocarbons
Drum storage building (72)	*D* Technetium-99 Thorium-232				
Fire brigade training center bldg. (73A)	*C*				
Fire training pond (73B)	*C*	Acetone 2-Butanone 1,1-Dichloroethane 1,2-Dichloroethene Methyl chloride Tetrachloroethene Toluene 1,1,1-Trichloroethane Trichloroethene			PCBs Total petroleum hydrocarbons
Fire training tank (73C)	*C*				
Fire training burn trough (73D)	*C*	Acetone 2-Butanone Chloroform Methylene chloride	Benzoic acid Bis(2-ethylhexyl)-phthalate N-nitrosodi-phenylamine Pentachlorophenol	Magnesium	PCBs Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Confined space burn tank (73E)	*C*				
Plant 2 east pad (74A)	*C* Radon-219 Technetium-99				
Plant 2 west pad (74B)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232			Lead Magnesium	Total petroleum hydrocarbons
Plant 8 east pad (74C)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 230, 232			Magnesium	Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 8 west pad (74D)	*C* Radon-219	1,1,1-Trichloroethane		Copper Sodium	Total petroleum hydrocarbons
Plant 4 pad (74E)	*C* Radon-219 Technetium-99				
Plant 7 pad (74F)	*D* Technetium-99				
Plant 5 east pad (74G)	*D* Technetium-99 Thorium-230			Magnesium	
Plant 5 south pad (74H)	*D*			Magnesium	
Plant 6 pads (74J)	*D* Technetium-99				
Plant 9 pad (74K)	*A* Actinium-228 Cesium-137 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 230				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Building 65 west pad (74L)	*D* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232				
Building 64 east pad & R.R. dock (74M)	*D* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 230, 232	Acetone 2-Butanone Methylene Chloride Tetrachloroethene 1,1,1-Trichloroethane		Magnesium	

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Building 12 north pad (74N)	*C*	1,1,1-Trichloroethane Trichloroethene	Acenapthene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (g,h,i) perylene Bis (2-ethylhexyl)-phthalate Chrysene Dibenzo (a,h) anthracene Dibenzofuran Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnapthalene N-nitrosodi-phenylamine Naphthalene Phenanthrene Phenol Pyrene	Beryllium Lead Mercury	PCBs Total petroleum hydrocarbons
Decontamination pad (74P)	*A* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232			Arsenic Chromium Lead Magnesium Mercury Nickel Sodium	PCBs Total petroleum hydrocarbons
Plant 8 old metal dissolver pad (74Q)	*C*			Magnesium	

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TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Plant 8 north pad (74R)	*D* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232			Magnesium	
Building 63 west pad (74S)	*C* Radon-219				
Plant 1 storage pad (74T)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232	Acetone Methylene chloride 1,1,1-Trichloroethane		Barium Lead Magnesium	
Pilot Plant pad (74U)	*D* Actinium-228 Radium-228 Radon-220 Thallium-208 Thorium-228, 232				Total petroleum hydrocarbons

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Laboratory pad (74V)	*A* Actinium-228 Americium-241 Cesium-137 Neptunium-237 Plutonium-239, 241 Radium-228 Radon-220 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232			Chromium Lead Mercury	
Finished products warehouse (4A) (77)	*D* Technetium-99				
D & D building (under construction) (78)	*C*				
Plant 6 warehouse (79)	*D*				
Plant 8 warehouse (80)	*D*				
Plant 9 warehouse (81)	*D*				
Receiving/incoming materials inspection (82)	*D*				
Clearwell line (88)	*A* Actinium-228 Radium-228 Radon-220 Technetium-99 Thallium-208 Thorium-228, 232				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Parking lot (89)	*C*				Total petroleum hydrocarbons
Skeet range building (90)	*C*			Lead	
Railroad tracks (G-001)	*C* Lead-210 Polonium-210 Radium-228 Radon-222 Thorium-230			Magnesium	
Roads (G-002)	*C* Actinium-228 Cesium-137 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232				Total petroleum hydrocarbons
Storm sewer system (G-003)	*C* Actinium-228 Cesium-137 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Sumps (G-004)	*A* Actinium-228 Cesium-137 Radium-228 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				
Dikes (G-005)	*A* Actinium-228 Cesium-137 Radium-228 Strontium-90 Technetium-99 Thallium-208 Thorium-228, 232				
Utility lines (G-006)	*C*				
Underground storage tanks (G-007)	*C* Actinium-228 Cesium-137 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232				
Aboveground storage tanks (G-008)	*C*				

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Process trailers (G-009)	*C*				
Non-process trailers (G-010)	*C*				
Pipe bridges (G-011)	*C*			Lead	
Drums (non-RCRA) (G-012)	*C* Actinium-228 Radium-226, 228 Technetium-99 Thallium-208 Thorium-228, 232	B	B	B	
RCRA drums (G-013)	*C* Actinium-228 Radium-226, 228 Technetium-99 Thallium-208 Thorium-228, 232	B	B	B	
Inventory (G-014)	*C* Actinium-228 Radium-228 Technetium-99 Thallium-208 Thorium-227, 228, 232	B	B	B	

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Mobile containers (Sea-Land) (G-015)	*C* Actinium-228 Cesium-137 Lead-210 Polonium-210 Radium-226, 228 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232				
East of Plant 2 (P-001)	*C* Actinium-228 Americium-241 Cesium-137 Lead-210 Neptunium-237 Plutonium-239, 241 Polonium-210 Radium-226, 228 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
South of Plant 8 (west) (P-002)	*C* Actinium-228 Americium-241 Cesium-137 Lead-210 Neptunium-237 Plutonium-239, 241 Polonium-210 Radium-226, 228 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
South of Plant 8 (mid) (P-003)	*C* Actinium-228 Americium-241 Cesium-137 Lead-210 Neptunium-237 Plutonium-239, 241 Polonium-210 Radium-226, 228 Thorium-227, 230	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
South of Plant 8 (east) (P-004)	*C* Actinium-228 Americium-241 Cesium-137 Lead-210 Neptunium-237 Plutonium-239, 241 Polonium-210 Radium-226, 228 Thorium-227, 230	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
South of Building 80 (P-005)	*C* Thorium-227	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
West of Plant 5 (P-006)	*C* Thorium-227	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
West of 7 Plex (north) (P-007)	*C* Thorium-227	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Covered west of 7 Plex (South) (P-008)	*C*	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
North of Plant 9 (near basin) (P-009)	*C* Lead-210 Polonium-210 Radium-226 Technetium-99 Thorium-227	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Covered dirt pile between R.R. tracks #6 and #9 (P-010)	*C* Actinium-228 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Construction rubble pile east of coal pile runoff basin (P-011)	*C* Actinium-228 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
East of coal pile runoff basin (P-012)	*C* Actinium-228 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Rock salt pile south of Building 61 (P-013)	*C*				
Sand piles south of Building 61 (P-014)	*C*				
Covered east of Building 56 (P-015)	*C*	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Gravel north of Building 56 (P-016)	*C*				
Copper metal scrap pile (P-017)	*C* Actinium-228 Lead-210 Polonium-210 Radium-226, 228 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232			Copper	

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
Coal pile (P-018)	*C* Actinium-228 Lead-210 Polonium-210 Radium-226, 228 Technetium-99 Thorium-227, 230				
Third Street dirt pile (P-019)	*C* Actinium-228 Cesium-137 Lead-210 Polonium-210 Radium-226, 228 Technetium-99 Thallium-208 Thorium-227, 228, 230, 232	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Partially covered along track #11 (P-020)	*C*	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Southwest corner of lab (P-021)	*C*	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		

TABLE A.3.2 Component-Specific Contaminants of Interest

Component	Contaminants of Interest				
	Radiological	VOCs	SVOCs	Inorganics	Other
North of Building 67 (P-022)	*C*	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Scrap metal pile (P-023)	*C* Actinium-228 Cesium-137 Radium-228 Strontium-90 Thallium-208 Thorium-228, 232			Iron	
NW rubble piles (P-024)	*C*	Acetone 2-Butanone Methylene chloride Toluene Trichloroethene	Bis (2-ethylhexyl)-phthalate		
Outside equipment storage area (P-025)	*C* Actinium-228 Cesium-137 Lead-210 Polonium-210 Radium-226, 228 Strontium-90 Thallium-208 Thorium-227, 228, 230, 232			Lead	Total petroleum hydrocarbons
Tension support structure #1 (TS-001)	*C* Thorium-227				

TABLE A.3.2 Component-Specific Contaminants of Interest

	Contaminants of Interest				
Component	Radiological	VOCs	SVOCs	Inorganics	Other
Tension support structure #2 (TS-002)	*C* Thorium-227				
Tension support structure #3 (TS-003)	*C* Thorium-227				

TABLE A.4.0

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OPERABLE UNIT 3 NATURE AND EXTENT OF CONTAMINATION

Table A.4.0 is an alphabetical listing of potential contaminants for Operable Unit 3. The source of contamination, including the component (building or structure) and the specific location within the component (by function, process, or equipment), is provided for each contaminant. Most of the information used to generate this table was obtained from Table A.3.0 (Potential Contaminant List), and is, therefore, composed of process knowledge, significant quantities, RCRA reports, spill logs, incident reports, RI/FS subsurface media sampling, history of FEMP, waste characterization, material distribution information, and additional sampling performed by interim actions and related activities.

TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT

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Contaminant	Component	Component Designation	Source of Contamination
Acenaphthene	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
Acetic Acid (CH3CO2H)	Laboratory	15	Laboratories
	CP Warehouse	56 A	Storage
Acetone	Ore Refinery Plant	2 A	Digestion
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Scrap Recovery Plant	8 A	Oil Centrifuge
	Plant 8 Maintenance Building	8 B	Maintenance
	Plant 9 Sump Treatment	9 B	
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
	Utility Trench to Pit Area	22 E	Transfer Lines
	Magnesium Storage Building	32 A	Magnesium Storage
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Incinerator Building	39 A	Solid Waste Incinerator
			Drum Dryer
	KC-2 Warehouse	63	Storage
	Fire Training Pond	73 B	Fire Brigade Training
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Plant 1 Storage Pad	74 T	Storage
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
ADU (ADU Cakes)	Scrap Recovery Plant	8 A	Oxidation Furnace #1
			UAP Furnace
	Plant 2 West Pad	74 B	Storage UO3
Aluminum Oxide (Al2O3)	Ore Refinery Plant	2 A	Digestion
	Plant 2 West Pad	74 B	Storage UO3
Aluminum (Al)	Combined Raffinate Tanks	3 J	Combined Raffinate
	Special Products Plant	9 A	Zirnlo Decladding
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Wet Side	13 A	Decladding Fuel Elements
	Water Plant Building	20 B	Water Treatment
Americium 241	Preparation Plant	1 A	Enriched Materials Reclamation
Ammonium Hydroxide (NH4OH)	Scrap Recovery Plant	8 A	Hydrometallurgical System
	Plant 8 North Pad	74 R	Storage
Ammonia (NH3)	Ore Refinery Plant	2 A	Digestion
			Extraction
	Harshaw Digestion Fume Recovery	3 F	Harshaw Fume Recovery
	Green Salt Plant	4 A	AHF Vaporization
			Ammonia Dissociator
			Nitrogen Generation
	Plant 7	7 A	UF6 to UF4 Reduction
			N2 Generator
	Scrap Recovery Plant	8 A	Hydrometallurgical System
	Pilot Plant Wet Side	13 A	Sump Process
			Thoria Gel (Hydrated Oxide)
	Main Tank Farm	19 A	Bulk Storage
	Pilot Plant Ammonia Tank Farm	19 B	Ammonia Storage
	Old North Tank Farm	19 D	Bulk Storage
	UF6 to UF4 Reduction Facility #1	54 A	UF6 to UF4
	Pilot Plant Dissociator Shed	54 C	Ammonia Dissociation
Ammonium Sulfate	Rust Engineering Building	45 A	Machine Shop
Anthracene	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
Arsenic (As)	Preparation Plant	1 A	Enriched Materials Reclamation
	Plant 1 Ore Silos	1 C	Milled Ore Storage
	Ore Refinery Plant	2 A	Digestion
	Scrap Recovery Plant	8 A	Muffle Furnace

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Asbestos *			
Baled Drums and Lids	Building 65 West Pad	74 L	Storage
Barium Carbonate (BaCO3)	Combined Raffinate Tank	3 J	Combined Raffinate
Barium Chloride (BaCl2)	Pilot Plant Wet Side	13 A	Barium Chloride Conversion
Barium Sulfate (BaSO4)	Pilot Plant Wet Side	13 A	Barium Chloride Conversion
Barium (Ba)	Plant 1 Ore Silos	1 C	Milled Ore Storage
	Pilot Plant Wet Side	13 A	Sump Process
	Plant 1 Storage Pad	74 T	Storage
Benzene (C6H6)	Metals Production Plant	5 A	Hilco Oil Reclaimer
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Garage/Engine House	31 A	Garage
	Heavy Equipment Building	46	Heavy Equipment Storage
Benzo [a] anthracene	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Benzo [b] fluoranthene	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Benzo [k] fluoranthene	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Benzoic Acid	Ore Refinery Plant	2 A	Digestion
	Fire Training Burn Trough	73 D	Fire Brigade Training
Benzo [a]-pyrene	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Benzo [g,h,i]-perylene	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Beta-BHC	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Pilot Plant Wet Side	13 A	Solvent Extraction
Bird Droppings	Plant 7	7 A	UF6 to UF4 Reduction
Bis(2-ethylhexyl) phthalate	Ore Refinery Plant	2 A	Digestion
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
Calcium carbonate (CaCO3)	Scrap Recovery Plant	8 A	Crushing
Cadmium (Cd)	Preparation Plant	1 A	Enriched Materials Reclamation
	Plant 1 Ore Silos	1 C	Milled Ore Storage
	Metals Production Plant	5 A	Reduction
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Pilot Plant Wet Side	13 A	Sump Process
	Drum Reconditioning Building	66	Drum Reconditioning

TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Calcium Fluoride (CaF2)	Scrap Recovery Plant	8 A	Oxidation Furnace #2
	Pilot Plant Wet Side	13 A	Pot Liner Preparation
	UF6 to UF4 Reduction Facility #1	54 A	Jolter
			Furnace Pot Loading
Calcium Hydroxide (Ca(OH)2)	Bulk Lime Handling Building	2 C	Bulk Lime Handling
Calcium Oxide or 'Lime'(CaO)	Bulk Lime Handling Building	2 C	Bulk Lime Handling
	Water Plant	20 B	Water Treatment
	Chemical Warehouse	30 A	Chemical Storage
Calcium Uranate	Scrap Recovery Plant	8 A	Oxidation Furnace #2
Calcium (Ca)	UF6 to UF4 Reduction Facility #1	54 A	Reduction Furnaces
Carbon Disulfide (CS2)	Plant 9 Sump Treatment	9 B	
Carbon Tetrachloride (CCl4)	Preparation Plant	1 A	Solvent Reclamation
	Scrap Recovery Plant	8 A	Oil Centrifuge
Catalyst	Green Salt Plant	4 A	Ammonia Dissociation
	Plant 7	7 A	N2 Generator
Cesium 137	Preparation Plant	1 A	Enriched Materials Reclamation
	Refinery Sump	3 H	Refinery Sump
	Magnesium Storage Building	32 A	Magnesium Storage
Chlorine (Cl2)	Pump Station and Power Center	20 A	Pumps
	Chlorination Building	25 A	Chlorination
Chlorobenzene	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Pilot plant Wet Side	13 A	Solvent Extraction
Chlordane	Preparation Plant	1 A	Solvent Reclamation
Chloroform	Preparation Plant	1 A	Solvent Reclamation
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Fire Training Burn Trough	73 D	Fire Brigade Training
Chromic Acid	Laboratory	15	Laboratories
Chromium (Cr)	Preparation Plant	1 A	Enriched Materials Reclamation
	Plant 1 Ore Silos	1 C	Milled Ore Storage
	Ore Refinery Plant	2 A	Digestion
	Metals Production Plant	5 A	Reduction
			Casting (Remelt)
	Metals Fabrication Plant	6 A	Perched Water and Clarifier Pit
			Scrap Metal Pickling
	Pilot Plant Wet Side	13 A	Sump Process
	Cooling Towers	20 C	Water Cooling
Chrysene	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Copper Sulfate (CuSO4)	Scrap Recovery Plant	8 A	WINLO
Copper (Cu)	Plant 1 Storage Building	1 B	Covered Storage
			Copper Shredding
	Scrap Recovery Plant	8 A	Hydrometallurgical System
	Special Products Plant	9 A	Zirnlo Decladding
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Wet Side	13 A	Sump Process
	Plant 8 West Pad	74 D	Storage
	Copper Metal Scrap Pile	P-017	Storage
Creosote	Railroad Tracks	G-001	Railroad

TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Di Amyl Amyl Phosphonate (DAAP)	Pilot Plant Wet Side	13 A	Solvent Extraction
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Laboratory Pad	74 V	Storage Truck Dock
Degreasing Solvents	Plant 8 Maintenance Building	8 B	Maintenance
	Boiler Plant Maintenance Building	10 B	Boiler Plant Maintenance
Dibenzo[a,h]-anthracene	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
Dibenzo-furan	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
Diatomaceous Earth (Dicalite)	Chemical Warehouse	30 A	Chemical Warehouse
	Scrap Recovery Plant	8 A	Water Treatment and Filtration
1,1-Dichloroethane	Preparation Plant	1 A	Solvent Reclamation
	Ore Refinery Plant	2 A	Digestion
	Metals Fabrication Plant	6 A	Perched Water and Clarifier Pit
	Main Maintenance Building	12 A	Main Maintenance, Stores, ande Offices
	Fire Training Pond	73 B	Fire Brigade Training
1,1-Dichloroethene	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Wet Side	13 A	Solvent Extraction
1,2-Dichloroethene	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Plant 9 Sump Treatment	9 B	
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Fire Training Pond	73 B	Fire Brigade Training
Dichloroethylene	Preparation Plant	1 A	Solvent Reclamation
Diesel Fuel	Building 14 EOC Generator Set	14 B	Emergency Operations
	Building 12 North Pad	74 N	Storage
Di-n-butyl-phthalate	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Pilot Plant Wet Side	13 A	Solvent Extraction
Diuron (Herbicide) *			
Dolomite	Special Products Plant	9 A	Uranium Reduction
	Plant 9 Dust Collector	9 C	
Dust Collector Bags and Used Gloves (Spent)	Scrap Recovery Plant	8 A	Primary Calciner Box Furnace
	Plant 8 North Pad	74 R	Storage
Ethylbenzene	Scrap Recovery Plant	8 A	Oil Centrifuge
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Garage/Engine House	31 A	Garage
	Heavy Equipment Building	46	Heavy Equipment Storage
Ethylene Glycol (Anti-Freeze)	Railroad Engine House	24 B	Engine Storage
	Outside Equipment Storage Area	P-025	Scrap Equipment/Vehicle Storage
	Garage/Engine House	31 A	Garage
	Building 12 North Pad	74 N	Storage
	Parking Lots	89	Parked Cars
	Site Roads	G-002	Roads
Europium (Eu) 152	Laboratory	15	Laboratories
Extraction Ore	Combined Raffinate Tanks	3 J	Combined Raffinate
Filters (Spent)	Scrap Recovery Plant	8 A	Box Furnace

TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Filter Cake	Metals Production Plant	5 A	Hilco Oil Reclaimer
Fluorene	Main Maintenance Building	12 A	Main Maintenance, Stores, ande Offices
	Pilot plant Wet Side	13 A	Solvent Extraction
Fluoride (NaF)	Plant 7	7 A	UF6 to UF4 Reduction
	Special Products Plant	9 A	Thorium Metal
Fluoranthene	Ore Refinery Plant	2 A	Digestion
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Pilot plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Flyash	Boiler Plant	10 A	Steam Production
Gasoline	Garage/Engine House	31 A	Garage
	Parking Lots	89	Parked Cars
	Site Roads	G-002	Roads
Glycol	Building 12 North Pad	74 N	Storage
Graphite	Scrap Recovery Plant	8 A	Graphite Furnace
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
Halon 1301	Preparation Plant	1 A	Crushing/Milling
	Main Electrical Strainer House	26 C	Main Electrical Deluge System
Hydraulic Oil	Plant 4 Maintenance Building	4 C	Maintenance
	Metals Production Plant	5 A	Water Treatment
	Metals Fabrication Plant	6 A	Core Machining
			Coolant Oil Clarifiers
			Chip Briquetting
			Slug Pickling
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln)
	Plant 8 Maintenance Building	8 B	Maintenance
	Special Products Plant	9 A	Briquetting
	Contaminated Oil/Graphite Burn Pad	10 C	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Maintenance Building	13 B	Maintenance
	Incinerator Building	39 A	Liquid Waste Incinerator
	Waste Oil Decant Shelter	39 B	Oil-Water Separation
	Sewage Treatment Plant Incinerator	39 D	Waste Incineration
	Thorium Warehouse	64	Storage
	Fire Training Pond	73 B	Fire Brigade Training
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Building 12 North Pad	74 N	Storage
	Site Roads	G-002	Roads
Hydrochloric Acid (HCl)	Scrap Recovery Plant	8 A	Metal Dissolver
			Hydrometallurgical System
			WINLO
			Water Treatment & Filtration
	Pilot Plant Wet Side	13 A	Thorium Tetrafluoride Precipitation
	Laboratory	15	Laboratories
	Main Tank Farm	19 A	Bulk Storage
	Old North Tank Farm	19 D	Bulk Storage
	Plant 8 Old Metal Dissolver Pad	74 Q	Metal Dissolver
Hydrofluoric Acid (HF) (Aqueous & Anhydrous)	Preparation Plant	1 A	Drum Sampling
	Green Salt Plant	4 A	Hydrofluorination
			AHF Vaporization
			Hydrofluoric Acid Recovery
			HF Refrigeration
			Thorium Tetrafluoride
			Water Treatment
	Plant 7	7 A	UF6 to UF4 Reduction
	Scrap Recovery Plant	8 A	Greensalt/Thorium Reversion
			WINLO
	Special Products Plant	9 A	Zimlo Decladding
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Wet Side	13 A	Sump Process
			ZnF2 Precipitation

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Hydrofluoric Acid (Cont'd)	Laboratory	15	Laboratories
	Main Tank Farm	19 A	Bulk Storage
	Old North Tank Farm	19 D	Bulk Storage
			Sump (Neutralizing Pit)
	UF6 to UF4 Reduction Facility #1	54 A	UF6 to UF4
	Confined Space Burn Tank	73 E	Fire Brigade Training
	Pilot Plant Pad	74 U	Storage
	Laboratory Pad	74 V	Storage Truck Dock
Hydrogen Sulfide (H2S)	Sewage Lift Station	25 C	Lift Station
Indeno[1,2,3-cd]-pyrene	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	L:aboratory	15	Laboratories
Iron (Fe)	Combined Raffinate Tanks	3 J	Combined Raffinate
Iron Raffinates	Combined Raffinate Tanks	3 J	Combined Raffinate
K-65 Silo Samples	Quonset Hut #3	60	Storage
Kerosene	Ore Refinery Plant	2 A	Extraction
	Metal Dissolver Building	2 D	Charcoal Treatment
	Tanks Outside Plant 2A	2 A	TPB/Kerosene Storage (5 Tanks)
			Clean Storage
			Bulk Unloading
	Hot Raffinate Building	3 E	Hot Raffinate
	Refinery Sump	3 H	Refinery Sump
	Contaminated Oil/Graphite Burn Pad	10 C	
	Pilot Plant Wet Side	13 A	Solvent Extraction
			Sump Process
	Main Tank Farm	19 A	Bulk Storage
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Pilot Plant Shelter	54 B	UF4 from Paraffin
	KC-2 Warehouse	63	Storage
	Laboratory Pad	74 V	Storage Truck Dock
Lanthanum (La)	Laboratory	15	Laboratories
Lead (Pb) *			
Lithium Carbonate (Li2CO3)	Metals Fabrication Plant	6 A	Rolling Mill
	Scrap Recovery Plant	8 A	Muffle Furnace
			Crushing
	Special Products Plant	9 A	Metal Cleaning
	Chemical Warehouse	30 A	Chemical Storage
	Plant 1 Storage Pad	74 T	Storage
Lithium Chloride (LiCl)	Metals Fabrication Plant	6 A	Water Treatment
Low Grade Scrap Cake	Scrap Recovery Plant	8 A	UAP Furnace
Magnesium Fluoride (MgF2)	Preparation Plant	1 A	Drum Sampling
			Crushing/Milling
	Hot Raffinate Building	3 E	Hot Raffinate
	Metals Production Plant	5 A	South Staging and Storage
			Reduction
	Scrap Recovery Plant	8 A	Primary Calciner
			Muffle Furnace
			Milling
			Ball Mill
			Hydrometallurgical System
	Plant 8 Railroad Filter Building	8 D	Filtration
	Special Products Plant	9 A	Metal Cleaning
			Uranium Reduction
	Plant 9 Dust Collector	9 C	
	Pilot Plant Wet Side	13 A	Sump Process
			Pot Liner Preparation
	Utility Trench to Pit Area	22 E	Transfer Lines
	Pilot Plant Annex	37	Uranium Metal Cleaning (Rotoblaster)
	UF6 to UF4 Reduction Facility #1	54 A	Furnace Pot Loading
			Reduction Furnaces
	Slag Recycling Plant	55 A	Slag Milling

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Magnesium Fluoride (Cont'd)	Slag Recycling Pit/Elevator	55 B	Slag Processing
	Plant 2 West Pad	74 B	Storage UO3
	Plant 8 East Pad	74 C	Airport Scrap
	Plant 5 South Pad	74 H	Temporary Storage
	Plant 9 Pad	74 K	Storage
	Plant 1 Storage Pad	74 T	Storage
	Railroad Tracks	G-001	Railroad
Magnesium Oxide (MgO) (MnO2)	Refinery Sump	3 H	Refinery Sump
	Metals Production Plant	5 A	Reduction
			Casting (Remelt)
			Mold Preparation & Reconditioning
	Metals Fabrication Plant	6 A	Water Treatment
	Pilot Plant Wet Side	13 A	Sump Process
	Sump Pump House	13 C	Sump Pump House
	Chemical Warehouse	30 A	Chemical Storage
	Pilot Plant Annex	37	Plasma Spraying of Crucibles
Magnesium Uranate	Refinery Sump	3 H	Refinery Sump
Magnesium (Mg)	Metals Production Plant	5 A	South Staging and Storage
			Reduction
			Casting (Remelt)
	Scrap Recovery Plant	8 A	Box Furnace
			Metal Dissolver
	Special Products Plant	9 A	Metal Cleaning
			Uranium Reduction
	Service Building	11	Laundry
	Magnesium Storage Building	32 A	Magnesium Storage
	Magnesium Storage Covered Dock	32 B	Dock
	Pilot Plant Annex	37	Briquetting
	UF6 to UF4 Reduction Facility #1	54 A	PLT Furnace
			Jolter
	Slag Recycling Building	55 A	Slag Milling
	Slag Recycling Pit/Elevator	55 B	Slag Processing
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Plant 5 East Pad	74 G	Temporary Storage
	Building 64 East Pad	74 M	Storage
	Plant 8 Old Metal Dissolver Pad	74 Q	Metal Dissolver
	Plant 8 North Pad	74 R	Storage
Mercury (Hg) *			
Metal Oxide	Plant 1 Ore Silos	1 C	Milled Ore Storage
Metals (Misc.)	Ore Refinery Plant	2 A	Digestion
	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Lumber Storage Building	12 C	Lumber Storage
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
	Coal pile Runoff Basin	18 C	Runoff Retention
	Utility Trench to Pit Area	22 E	Transfer Lines
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Fire Training Pond	73 C	Fire Brigade Training
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Coal Pile	P- 018	Coal Storage
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
Methanol (CH3OH)	BDN Surge Lagoon	18 A	Methanol Storage
Methyl ethyl ketone also Butanone (MEK)	Ore Refinery Plant	2 A	Digestion
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Scrap Recovery Plant	8 A	Oil Centrifuge
	Plant 9 Sump Treatment	9 B	
	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Utility Trench to Pit Area	22 E	Transfer Lines
	Garage/Engine House	31 A	Garage
	Magnesium Storage Building	32 A	Magnesium Storage
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Heavy Equipment Building	46	Heavy Equipment Storage

TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Methyl ethyl ketone (Cont'd)	Decontamination Building	69	Decontamination
	Fire Training Pond	73 B	Fire Brigade Training
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
Methylene Chloride (Dichloromethane)	Ore Refinery Plant	2 A	Digestion
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Plant 8 Maintenance Building	8 B	Maintenance
	Plant 9 Sump Treatment	9 B	
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Utility Trench to Pit Area	22 E	Transfer Lines
	Garage/Engine House	31 A	Garage
	Magnesium Storage Building	32 A	Magnesium Storage
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Incinerator Building	39 A	Drum Dryer
	Heavy Equipment Building	46	Heavy Equipment Storage
	Fire Training Pond	73 B	Fire Brigade Training
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Plant 1 Storage Pad	74 T	Storage
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
2-Methyl-naphthalene	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
4-Methyl-2-Pentanone (MIBK)	Plant 9 Sump Treatment	9 B	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Garage/Engine House	31 A	Garage
	Heavy Equipment Building	46	Heavy Equipment Storage
Mineral Spirits	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
N-nitrosodi-phenylamine	Ore Refinery Plant	2 A	Extraction
	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot PLant Annex	37	Grit-Blasting Furnace Crucibles
	Fire Training Burn Trough	73 D	Fire Brigade Training
Naphthalene	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
Neptunium	Preparation Plant	1 A	Drum Sampling
	Tanks Outside Plant 2	2 A	Uranyl Nitrate Storage (6 Tanks)
			Uranyl Nitrate Storage (4 Tanks)
	NFS Storage and Pump House	2 E	NFS Storage
Nickel (Ni)	Special Products Plant	9 A	Zirnlo Decladding
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Wet Side	13 A	Sump Process
			Decladding Fuel Elements
Niobium (Nb)	Laboratory	15	Laboratories
Nitrates	BDN Surge Lagoon	18 A	Lagoon
	Low Nitrate Tank	18 K	Low Nitrate Tank
	High Nitrate Tank	18 L	High Nitrate Tank
Nitric Acid (HNO3)	Preparation Plant	1 A	Enriched Materials Reclamation
			Waste Water Handling
			Repackaging
	Ore Refinery Plant	2 A	Digestion
			Drum Digestion
			Extraction
			Enriched Calcining
	Tanks outside Plant 2A	2 A	Bulk Unloading
			Uranyl Nitrate Storage
			Nitric Acid Storage (3 Tanks)
	Metal Dissolver Building	2 D	Metal Dissolution
			West Metal Dissolution

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
Nitric Acid (Cont'd)	Metal Dissolver Building (Cont'd)	2 D	Charcoal Treatment
	Nitric Acid Recovery (NAR) Towers	3 D	Nitric Acid Recovery Concentrator
	Harshaw Digestion Fume Recovery	3 F	Harshaw Fume Recovery
	Refinery Sump	3 H	Refinery Sump
	Metals Fabrication Plant	6 A	Chip Briquetting Scrap Metal Pickling Slug Pickling
	Scrap Recovery Plant	8 A	WINLO
	Special Products Plant	9 A	Zirnlo Decladding Briquetting Scrap Metal Pickling
	Pilot Plant Wet Side	13 A	Thorium Digestion Sump Process Decladding Fuel Elements
	Laboratory Building	15	Laboratories
	Main Tank Farm	19 A	Bulk Storage
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Incinerator Building	39 A	Drum Dryer
	Decontamination Building	69	Decontamination
	Pilot Plant Pad	74 U	Storage
	Laboratory Pad	74 V	Storage and Truck Dock
	Railroad Tracks	G-001	Railroad
Oil (Cooling)	Metals Production Plant	5 A	Hilco Oil Reclaimer Water Treatment
	Metals Fabrication Plant	6 A	Misc. Machining Coolant Oil Clarifiers Chip Briquetting Scrap Metal Pickling Tocco Oil Quench Water Treatment
	Plant 6 Electrostatic Precipitator (South)	6 C	Electrostatic Precipitator
	Plant 6 Electrostatic Precipitator (Central)	6 D	Dust Collector Cyclone
	Plant 6 Electrostatic Precipitator (North)	6 E	Electrostatic Precipitator
	Plant 6 Salt-Oil Heat Treat Building	6 F	Salt-Oil Heat Treating
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln)
	Plant 8 Maintenance Building	8 B	Maintenance
	Special Products Plant	9 A	I & E Remelt Furnaces Briquetting
	UF6 to UF4 Reduction Facility #1	54 A	Thorium Metal Sampling
Oil (Lubricating, Cutting, Fuel, & Motor Oils)	Combined Raffinate Tanks	3 J	Contaminated Oil Storage Drums
	Metals Production Plant	5 A	Casting (Remelt) Ingot Cropping Water Treatment
	Metals Fabrication Plant	6 A	Chip Briquetting Water Treatment
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln) Oxidation Furnace #1
	Plant 8 Maintenance Building	8 B	Maintenance
	Special Products Plant	9 A	Uranium Machining I & E Remelt Furnaces Briquetting
	Boiler Plant	10 A	Steam Production
	Boiler Plant Maintenance Building	10 B	Boiler Plant Maintenance
	Contaminated Oil/Graphite Burn Pad	10 C	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Maintenance Building	13 B	Maintenance
	BDN Effluent Treatment Facility	18 H	Effluent Treatment
	Main Tank Farm	19 A	Bulk Storage
	Railroad Engine House	24 B	Engine Storage
	Pump House-HP Fire Protection	26 A	Fire Protection Water Pumping
	Garage/Engine House	31 A	Garage
	Pilot Plant Annex	37	Oil Reclaimer NuSal Heat Treating
	Incinerator Building	39 A	Liquid Waste Incinerator
	Waste Oil Decaant Shelter	39 B	Oil-Water Separation
	Sewage Treatment Plant Incinerator	39 D	Waste Incinerator
	Rusty Engineering Building	45 A	Machine Shop Misc. Processes
	Heavy Equipment Building	46	Heavy Equipment Storage
	CP Warehouse	56 A	Storage

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
Oil (Cont'd)	KC-2 Warehouse	63	Storage
	General In-Process Warehouse	71	Storage
	Fire Training Pond	73 B	Fire Brigade Training
	Fire Training Burn Trough	73 D	Fire Brigade Training
	Plant 2 West Pad	74 B	Storage UO3
	Plant 8 East Pad	74 C	Pyrophoric Drum Sprinkler
	Plant 8 West Pad	74 D	Drum Washing
	Building 12 North Pad	74 N	Storage
	Pilot Plant Pad	74 U	Storage
	Decontamination Pad	74 P	Storage
	Parking Lot	89	Parked Cars
	Site Roads	G-002	Roads
	Outside Equipment Storage Areas	P-025	Scrap Equipment/Vehicle Storage
Water Soluble Oil	Metals Fabrication Plant	6 A	Core machining Coolant Oil Clarifiers
	UF6 to UF4 Reduction Facility #1	54 A	Thorium Metal Sampling
Ore Concentrates	Preparation Plant	1 A	Drum Sampling Crushing/Milling Drum Washing
	Plant 1 Storage Building	1 B	Covered Storage
	Ore Refinery Plant	2 A	Digestion
	Plant 2 Cold Side Ore Conveyor	2 F	Cold Side Elevator Pit
	Plant 2 Hot Side Ore Conveyor	2 G	Hot Side Elevator Pit
	Plant 2 West Pad	74 B	Storage UO3
	Building 56 Pad	74 R	Storage
	Plant 1 Storage Pad	74 T	Storage
Ore Raffinate	Hot Raffinate Building	3 E	Hot Raffinate
	Combined Raffinate Tanks	3 J	Spray Calcination Combined Raffinate
	Utility Trench to K-65 Area	22 E	Transfer Lines
Ores (Includes Extraction Ore)	Preparation Plant	1 A	Crushing/Milling Drum Washing
	Plant 1 Storage Building	1 B	Covered Storage
	Ore Refinery Plant	2 A	Digestion Drum Digestion
	Plant 2 Hot Side Ore Conveyor	2 G	Hot Side Elevator Pit
	Combined Raffinate Tanks	3 J	Combined Raffinate
	Plant 2 West Pad	74 B	Storage UO3
	Plant 1 Storage Pad	74 T	Storage
Oxalic Acid	Pilot Plant Wet Side	13 A	Sump Process Thorium Oxalate
Paint	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Chemical Warehouse	30 A	Chemical Storage
	Thorium Warehouse	64	Storage
	Drum Reconditioning Building	66	Drum Reconditioning
Spent Spray Paint Cans	Heavy Equipment Building	46	Heavy Equipment Storage
PCB's *			
Pentachlorophenol	Fire Training Burn Trough	73 D	Fire Brigade Training
Perchloric Acid	Laboratory	15	Laboratories
Perchloroethylene	Preparation Plant	1 A	Solvent Reclamation
	Plant 1 Storage Building	1 B	Covered Storage
	Combined Raffinate Tanks	3 J	Contaminated Oil Storage Drums
	Metals Production Plant	5 A	Hilco Oil Reclaimer
	Scrap Recovery Plant	8 A	Box Furnace
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	General Sump	18 B	General Sump
	Incinerator Building	39 A	Liquid Waste Incinerator
	Waste Oil Decant Shelter	39 B	Oil-Water Separation
	UF6 to UF4 Reduction Facility #1	54 A	De-Zincing Zn-Th Metal Casting

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
Perchloroethylene (Cont'd)	KC-2 Warehouse	63	Storage
	Plant 1 Storage Pad	74 T	Storage
Phenol	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
Phenanthrene	Ore Refinery Plant	2 A	Digestion
	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Phosphoric Acid (H3PO4)	Scrap Recovery Plant	8 A	Hydrometallurgical System
			Bulk Storage
Plant 6 & 9 Sludges	Plant 8 East Pad	74 C	Storage
Platinum (Pt)	Laboratory	15	Laboratories
Plutonium (Pu)	Preparation Plant	1 A	Drum Sampling
	Tanks Outside Plant 2	2 A	Uranyl Nitrate Storage (6 Tanks)
			Uranyl Nitrate Storage (4 Tanks)
	NFS Storage and Pump House	2 E	NFS Storage
	Laboratory	15	Laboratories
	Thorium Warehouse	64	Storage
Potassium Carbonate (K2CO3)	Metals Fabrication Plant	6 A	Rolling Mill
	Scrap Recovery Plant	8 A	Muffle Furnace
	Special Products Plant	9 A	Metal Cleaning
	Chemical Warehouse	30 A	Chemical Storage
Potassium Chloride (KCl)	Metals Fabrication Plant	6 A	Tocco Oil Quench
			Salt-Water (Nu-Sal) Heat Treating
	Plant 6 Salt-Oil Heat Treat Building	6 F	Salt-Oil Heat Treating
	Special Products Plant	9 A	Heat Treating
	Pilot Plant Annex	37	NuSal Heat Treating
Potassium Fluoride (KF)	Green Salt Plant	4 A	HF Recovery
	Main Tank Farm	19 A	Bulk Storage
	Old North Tank Farm	19 D	Bulk Storage
Potassium Hydroxide (KOH)	Green Salt Plant	4 A	Hydrofluoric Acid Recovery
	Scrap Recovery Plant	8 A	Greensalt/Thorium Reversion
	CP Warehouse	56 A	Storage
Prill	Scrap Recovery Plant	8 A	Muffle Furnace
			Metal Dissolver
	Special Products Plant	9 A	Uranium Reduction
	Slag Recycling Building	55 A	Slag Milling
	Slag Recycling Pit/Elevator	55 B	Slag Processing
	Plant 8 Old Metal Dissolver Pad	74 Q	Metal Dissolver
Propane	Propane Storage Building	38 A	Propane Storage
Pyrene	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Laboratory	15	Laboratories
Radium (Ra)	Preparation Plant	1 A	Enriched Materials Reclamation
	Plant 1 Ore Silos	1 C	Milled Ore Storage
	Ore Refinery Plant	2 A	Denitration
	Bulk Lime Handling Building	2 C	Bulk Lime Handling
	Refrigeration Building	3 G	Refrigeration
	Refinery Sump	3 H	Refinery Sump
	Rotary Kiln/Drum Reconditioning	8 C	New Rotary Kiln/Drum Reconditioning
	Boiler Plant	10 A	Steam Production
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Coal Pile Runoff Basin	18 C	Runoff Retention
	Sludge Drying Beds	25 F	Sludge Settling
	Heavy Equipment Building	46	Heavy Equipment Storage
	Thorium Warehouse	64	Storage
	Old Plant 5 Warehouse	65	Storage

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
Radium (Cont'd)	Drum Reconditioning Building	66	Drum Reconditioning
	Plant 9 Pad	74 K	Storage
	Decontamination Pad	74 P	Storage
	Plant 1 Storage Pad	74 T	Storage
	Laboratory Pad	74 V	Storage Truck Dock
	Underground Storage Tanks	G-007	Storage
	Scrap Metal Copper Pile	P-017	Storage
	Coal Pile	P-018	Coal Storage
	Outside Equipment Storage Areas	P-025	Scrap Equipment/Vehicle Storage
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
Raffinates (Misc.)	Utility Trench to Pit Area	22 E	Transfer Lines
	Incinerator Building	39 A	Drum Dryer
RCRA Wastes	Plant 6 Warehouse	79	Storage
	Plant 8 Warehouse	80	Storage
	Plant 9 Warehouse	81	Storage
Refrigerant	Refrigeration Building	3 G	Refrigeration
	Green Salt Plant	4 A	HF Refrigeration
Residues (Misc.) (High And Low Grade)	Ore Refinery Plant	2 A	Digestion
			Drum Digestion
	Plant 2 Cold Side Ore Conveyor	2 F	Cold Side Elevator Pit
	Plant 2 Hot Side Ore Conveyor	2 G	Hot Side Elevator Pit
	Hot Raffinate Building	3 E	Hot Raffinate
	Plant 5 Covered Storage	5 F	Storage
	Metals Fabrication Plant	6 A	Storage
	Plant 6 Covered Storage Area	6 B	Storage East Side
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln)
			Oxidation Furnace #1
	Plant 8 East Pad	74 C	Storage
	Plant 9 Pad	74 K	Storage
	Plant 1 Storage Pad	74 T	Storage
Scrap Cake (Wet and Low Grade)	Scrap Recovery Plant	8 A	UAP Furnace
Selenium (Se)	Plant 1 Ore Silos	1 C	Milled Ore Storage
Silver Nitrate (AgNO3)	CP Warehouse	56 A	Storage
Silver (Ag)	Ore Refinery Plant	2 A	Digestion
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Laboratory	15	Laboratories
Sodium Chloride (NaCl)	Metals Fabrication Plant	6 A	Tocco Oil Quench
			Salt-Water (Nu-Sal) Heat Treating
	Plant 6 Salt-Oil Heat Treat Building	6 F	Salt-Oil Heat Treating
	Special Products Plant	9 A	Heat Treating
	Wet Salt Storage Bin	10 D	
	Pilot PLant Wet Side	13 A	Sump Process
	Pilot Plant Annex	37	Nu-Sal Heat Treating
Sodium Hydroxide (NaOH)	Preparation Plant	1 A	Drum Washing
	Ore Refinery Plant	2 A	Extraction
	Hot Raffinate Building	3 E	Hot Raffinate
	Metals Fabrication Building	6 A	NOx Destructor
			Water Treatment
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln)
			Primary Calciner
			Oxidation Furnace #2
			UAP Furnace
			Water Treatment and Filtration
	Scrap Recovery Plant	8 A	Bulk Storage
	Plant 8 Old Drum Washer	8 F	Drum Washing
	Special Products Plant	9 A	Zirnlo Decladding
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Wet Side	13 A	Sump Process
			Decladding Fuel Elements
	Sump Pump House	13 C	Sump Pump House
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Decontamination Building	69	Decontamination
	Plant 8 West Pad	74 D	Drum Washing

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Sodium Silicate	Decontamination Building	69	Decontamination
Sodium Sulfide	Metals Fabrication Plant	6 A	NOx Destructor
Solvent Residues	Preparation Plant	1 A	Drum Washing Solvent Reclamation
Solvents	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Laboratory	15	Laboratories
	Garage/Engine House	31 A	Garage
	Building 12 North Pad	74 N	Storage
Spent Solvents	Scrap Recovery Plant	8 A	Box Furnace
	Contaminated Oil/Graphite Burn Pad	10 C	
	General Sump	18 B	General Sump
	Incinerator Building	39 A	Liquid Waste Incinerator
	Waste Oil Decant Shelter	39 B	Oil-Water Separation
Waste Paint Solvents and Thinners	Fire Training Pond	73 B	Fire Brigade Training
Still Bottoms	Preparation Plant	1 A	Solvent Reclamation
Strontium (Sr) 90	Sludge Drying Beds	25 F	Sludge Settling
	Magnesium Storage Building	32 A	Magnesium Storage
	Thorium Warehouse	64	Storage
	Old Plant 5 Warehouse	65	Storage
	Drum Reconditioning Building	66	Drum Reconditioning
	Plant 9 Pad	74 K	Storage
	Underground Storage Tanks	G-007	Storage
	Outside Equipment Storage Area	P-025	Scrap Equipment/Vehicle Storage
Sulfur Dioxide (SO2)	Scrap Recovery Plant	8 A	WINLO
	Plant 8 North Pad	74 R	Storage
Sulfur (S)	Boiler Plant	10 A	Steam Production
Sulfuric Acid (H2SO4)	Ore Refinery Plant	2 A	Extraction Denitration Sulfuric Acid Storage (1 Tank)
	Laboratory	15	Laboratories
	Garage/Engine House	31 A	Garage
	Outside Equipment Storage Area	P-025	Scrap Equipment/Vehicle Storage
Sump Cakes	Preparation Plant	1 A	Waste Water Handling Repackaging
	Plant 1 Storage Building	1 B	Drum Straightening
	Metals Fabrication Plant	6 A	Storage
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln) Muffle Furnace
	Incinerator Building	39 A	Drum Dryer
	Pilot Plant Shelter	54 B	Storage
	Plant 8 West Pad	74 D	Storage
	Plant 9 Pad	74 K	Storage
Technetium (Tc) 99	Sludge Drying Beds	25 F	Sludge Settling
	Magnesium Storage Building	32 A	Magnesium Storage
	Plant 9 Pad	74 K	Storage
	Decontamination Pad	74 P	Storage
	Plant 1 Storage Pad	74 T	Storage
	Underground Storage Tanks	G-007	Storage
Terrapaint	Metals Production Plant	5 A	Casting (Remelt) Mold Preparation and Conditioning
	Special Products Plant	9 A	Enriched Uranium Casting
1,1,2,2-Tetrachloroethane	Pilot Plant Wet Side	13 A	Solvent Extraction
Tetrachloroethane	Metal Dissolver Building	2 D	Metal Dissolution
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
Tetrachloroethene	Plant 9 Sump Treatment	9 B	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
Tetrachloroethene (Cont'd)	Pilot Plant Wet Side	13 A	Solvent Extraction
	Magnesium Storage Building	32 A	Magnesium Storage
	Fire Training Pond	73 B	Fire Brigade Training
Tetrachloroethylene (Cl2C)	Preparation Plant	1 A	Solvent Reclamation
	Ore Refinery Plant	2 A	Digestion
	Hot Raffinate Building	3 E	Hot Raffinate
	Scrap Recovery Plant	8 A	Oil Centrifuge
	Service Building	11	Laundry
	Laboratory	15	Laboratories
Thorium (Th) (Includes Thorium Contaminated Waters and Oils)	Preparation Plant	1 A	Drum Sampling
	Plant 1 Storage Building	1 B	Covered Storage
	Plant 1 Ore Silos	1 C	Milled Ore Storage
	Ore Refinery Plant	2 A	Denitration
	Bulk Lime Handling Building	2 C	Bulk Lime Handling
	Maintenance Building	3 A	Maintenance
	Hot Raffinate Building	3 E	Hot Raffinate
	Refinery Sump	3 H	Refinery Sump
	Scrap Recovery Plant	8 A	Drying(Rotary Kiln)
			Water Treatment & Filtration
	Rotary Kiln/Drum Reconditioning	8 C	New Rotary Kiln/Drum Reconditioning
	Plant 8 Old Drum Washer	8 F	Drum Washing
	Boiler Plant	10 A	Steam Production
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
			Sump Process
			Thorium Digestion
	Pilot Plant Maintenance Building	13 B	Maintenance
	Sump Pump House	13 C	Sump Pump House
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Laboratory Building	15	Laboratories
	General Sump	18 B	General Sump
	Coal Pile Runoff Basin	18 C	Runoff Retention
	BDN Towers	18 D	Biodenitrification
	BDN Effluent Treatment Facility	18 H	Effluent Treatment
	Cooling Towers	20 C	Water Cooling
	Sludge Drying Beds	25 F	Sludge Settling
	Chemical Warehouse	30 A	Chemical Storage
	Magnesium Storage Building	32 A	Magnesium Storage
	Building 32 Covered Loading Dock	32 B	Dock
	Pilot Plant Annex	37	Oil Reclaimer
			De-Zincing Furnace
	Incinerator Building	39 A	Drum Dryer
	Heavy Equipment Building	46	Heavy Equipment Storage
	UF6 - UF4 Reduction Facility #1	54 A	Thorium Metal Sampling
			De-Zincing Zn-Th Metal
	Quonset Hut #2	61	Storage
	Thorium Warehouse	64	Storage
	Old Plant 5 Warehouse	65	Storage
	Drum Reconditioning Building	66	Drum Reconditioning
	Pilot Plant Warehouse	68	Storage
	Decontamination Building	69	Decontamination
	Plant 8 East Pad	74 C	Storage
	Plant 8 West Pad	74 D	Drum Washing
	Plant 9 Pad	74 K	Storage
	Building 65 West Pad	74 L	Storage
	Building 64 Pad and R.R. Dock	74 M	Storage
	Decontamination Pad	74 P	Storage
	Plant 8 North Pad	74 R	Storage
	Plant 1 Storage Pad	74 T	Storage
	Pilot Plant Pad	74 U	Storage
	Laboratory Pad	74 V	Storage and Truck Dock
	Miscellaneous Sumps	G-004	Sumps
	Underground Storage Tanks	G-007	Storage
	Scrap Metal Copper Piles	P-017	Storage
	Coal Pile	P-018	Coal Storage
	Outside Equipment Storage Area	P-025	Scrap Equipment/Vehicle Storage
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
Thorium Hydroxide	Scrap Recovery Plant	8 A	Greensalt/Thorium Reversion
	Pilot Plant Wet Side	13 A	Thoria Gel (hydrated oxide)

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
Thorium Nitrate	Pilot Plant Wet Side	13 A	Thorium Tetrafluoride Precipitation
	Laboratory	15	Laboratories
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
Thorium Oxalate	Preparation Plant	1 A	Drum Sampling
	Scrap Recovery Plant	8 A	Thorium Residue Recovery
	Pilot Plant Wet Side	13 A	Thorium Oxalate
	Pilot Plant Shelter	54 B	Storage
Thorium Oxides	Green Salt Plant	4 A	Thorium Tetrafluoride
	Scrap Recovery Plant	8 A	Thorium Storage
Thorium Tetrafluoride (ThF4)	Green Salt Plant	4 A	Thorium Tetrafluoride
	Scrap Recovery Plant	8 A	Greensalt/Thorium Reversion
	Special Products Plant	9 A	Thorium Metal
	Pilot Plant Wet Side	13 A	Thorium Tetrafluoride Precipitation
	Pilot Plant Annex	37	Milling Thorium Tetrafluoride
	UF6 to UF4 Reduction Facility #1	54 A	Jolter
			Furnace Pot Loading
			Reduction Furnaces
			ThF4 Dehydration
	Pilot Plant Shelter	54 B	Storage
	Plant 9 Pad	74 K	Storage
Tires	Fire Brigade Training Center Bldg.	73 A	Fire Brigade Training
Toluene	Ore Refinery Plant	2 A	Digestion
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
	Scrap Recovery Plant	8 A	Oil Centrifuge
	Plant 8 Maintenance Building	8 B	Maintenance
	Plant 9 Sump Treatment	9 B	
	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	Utility Trench to Pit Area	22 E	Transfer Lines
	Garage/Engine House	31 A	Garage
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Heavy Equipment Building	46	Heavy Equipment Storage
	Fire Training Pond	73 B	Fire Brigade Training
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
Tributyl phosphate (TBP)	Ore Refinery Plant	2 A	Extraction
	Metal Dissolver Building	2 D	Charcoal Treatment
	Tanks Outside Plant 2A	2 A	TPB/Kerosene Storage (5 Tanks)
			Clean Storage
			Bulk Unloading
	Hot Raffinate Building	3 E	Hot Raffinate
	Refinery Sump	3 H	Refinery Sump
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln)
	Contaminated Oil/Graphite Burn Pad	10 C	
	Pilot Plant Wet Side	13 A	Solvent Extraction
			Sump Process
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Main Tank Farm	19 A	Bulk Storage
	Laboratory Pad	74 V	Storage Truck Dock
1,1,1-Trichloroethane	Preparation Plant	1 A	Solvent Reclamation
	Plant 1 Storage Building	1 B	Covered Storage
	Ore Refinery Plant	2 A	Digestion
	Maintenance Building	3 A	Maintenance and Spare Parts Storage
	Hot Raffinate Building	3 E	Hot Raffinate
	Combined Raffinate Tanks	3 J	Contaminated Oil Storage
	Plant 4 Maintenance Building	4 C	Maintenance
	Metal Production Plant	5 A	Maintenance
	Metals Fabrication Plant	6 A	Water Treatment
			Perched Water and Clarifier Pit
	Scrap Recovery Plant	8 A	Box Furnace
			Oil Centrifuge
	Plant 8 Maintenance Building	8 B	Maintenance

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
1,1,1-Trichloroethane (Cont'd)	Special Products Plant	9 A	Water Treatment
	Plant 9 Sump Treatment	9 B	
	Boiler Plant	10 A	Steam Production
	Boiler Plant Maintenance	10 B	Boiler Plant Maintenance
	Contaminated Oil/Graphite Burn Pad	10 D	
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Sump Process
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Laboratory Building	15	Laboratories
	BDN Surge Lagoon	18 A	Lagoon
	General Sump	18 B	General Sump
	Coal Pile Runoff Basin	18 C	Runoff Retention
	Clearwell Pump House	18 G	Clearwell Pumping
	Low Nitrate Tank	18 K	Low Nitrate Tank
	High Nitrate Tank	18 L	High Nitrate Tank
	Sludge Settling Tanks	25 F	Sludge Settling (Drying Beds)
	Engine House/Garage	31 A	Garage
	Magnesium Storage Building	32 A	Magnesium Storage
	Incinerator Building	39 A	Liquid Waste Incinerator
			Solid Waste Incinerator
	Waste Oil Decant Shelter	39 B	Oil-Water Separation
	KC-2 Warehouse	63	Storage
	Fire Training Pond	73 B	Fire Brigade Training
	Plant 8 West Pad	74 D	Storage
	Building 12 North Pad	74 N	Storage
	Plant 1 Storage Pad	74 T	Storage
Trichloroethylene (TCE)	Preparation Plant	1 A	Solvent Reclamation
	Plant 1 Storage Building	1 B	Covered Storage
	Combined Raffinate Tanks	3 J	Contaminated Oil Storage Drums
	Plant 4 Maintenance Building	4 C	Maintenance
	Metals Production Plant	5 A	Maintenance
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
			Perched Water and Clarifier Pit
			Water Treatment
	Scrap Recovery Plant	8 A	Box Furnace
	Plant 8 Maintenance Building	8 B	Maintenance
	Special Products Plant	9 A	Water Treatment
	Plant 9 Sump Treatment	9 B	
	Contaminated Oil/Graphite Burn Pad	10 D	
	Service Building	11	Laundry
	Main Maintenance Building	12 A	Main Maintenance, Stores, and Offices
	Pilot Plant Wet Side	13 A	Solvent Extraction
	General Sump	18 B	General Sump
	Utility Trench to Pit Area	22 E	Transfer Lines
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Incinerator Building	39 A	Liquid Waste Incinerator
	Waste Oil Decant Shelter	39 B	Oil-Water Separation
	Fire Training Pond	73 B	Fire Brigade Training
	Building 12 North Pad	74 N	Storage
	Construction Soil/Debris Piles		Construction Rubble, Street Sweepings, etc...
U3O8 (Black Oxide)	Preparation Plant	1 A	Drum Sampling
	Ore Refinery Plant	2 A	Enriched Calcining
	Green Salt Plant	4 A	Hydrofluorination
			Storage
	Metals Production Plant	5 A	Casting (Remelt)
			Mold Preparation & Reconditioning
			North Staging and Storage
			Graphite Machining
			Water Treatment
			Maintenance
	Metals Fabrication Plant	6 A	Core Machining
			Chip Briquetting
			Scrap Metal Pickling
	Plant 6 Electrostatic Precipitator (S)	6 C	Electrostatic Precipitator
	Plant 6 Electrostatic Precipitator (C)	6 D	Electrostatic Precipitator
	Plant 6 Electrostatic Precipitator (N)	6 E	Electrostatic Precipitator
	Scrap Recovery Plant	8 A	Oxidation Furnace #2

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

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Contaminant	Component	Component Designation	Source of Contamination
U3O8 (Cont'd)	Scrap Recovery Plant (Cont'd)	8 A	Muffle Furnace
			Rotexing
			WINLO
	Plant 8 Railroad Filter Building	8 D	Filtration
	Special Products Plant	9 A	Uranium Machining
			Briquetting
			Scrap Metal Pickling
	Plant 9 Electrostatic Precipitator	9 G	Precipitron
	Pilot Plant Wet Side	13 A	Enriched Oxidation Furnace
	Laboratory	15	Laboratories
	Pilot Plant Annex	37	Grit-Blasting Furnace Crucibles
	Rust Engineering Building	45	Machine Shop
	General In-Process Warehouse	71	Storage
			Isotopic Verification
	Plant 2 West Pad	74 B	Storage UO3
	Plant 4 Pad	74 E	Temporary Storage
	Plant 9 Pad	74 K	Storage
	Plant 8 North Pad	74 R	Storage
	Plant 1 Storage Pad	74 T	Storage
UAP (UAP Cake)	Scrap Recovery Plant	8 A	UAP Furnace
			WINLO
UF4 (Green Salt)	Preparation Plant	1 A	Drum Sampling
	Green Salt Plant	4 A	Hydrofluorination
			Hydrofluoric Acid Recovery
			UF4 Repackaging
			Moving Bed Experimental Reactor
			Water Treatment
			Storage
	Plant 4 Warehouse	4 B	UF4 Storage
	Plant 4 Maintenance Building	4 C	Maintenance
	Metals Production Plant	5 A	South Staging and Storage
			Reduction
			Water Treatment
			Maintenance
	Plant 7	7 A	UF6 to UF4 Reduction
			Storage
	Plant 7 Overhead Crane	7 B	Loading and Unloading
	Scrap Recovery Plant	8 A	Drying (Rotary Kiln)
			Oxidation Furnace #2
			Greensalt/Thorium Reversion
			Rotexing
			WINLO
	Special Products Plant	9 A	Uranium Reduction
	Plant 9 Dust Collector	9 C	
	Pilot Plant Annex	37	Briquetting
	UF6 to UF4 Reduction Facility #1	54 A	UF6 to UF4
			Furnace Pot Loading
			Reduction Furnaces
			Original UF6 to UF4 Reduction Process
			PLT Furnace
	Pilot Plant Shelter	54 B	Storage
			UF4 from Paraffin
	Plant 4 Pad	74 E	Temporary Storage
	Plant 7 Pad	74 F	Storage
	Plant 5 East Pad	74 G	Temporary Storage
	Plant 5 South Pad	74 H	Temporary Storage
	Plant 9 Pad	74 K	Storage
UF6	Plant 7	7 A	UF6 to UF4 Reduction
	Plant 7 Overhead Crane	7 B	Loading and Unloading
	UF6 to UF4 Reduction Facility #1	54 A	UF6 to UF4
			Original UF6 to UF4 Reduction Process
	Plant 7 Pad	74 F	Storage
	Pilot Plant Pad	74 U	Storage
UO2	Green Salt Plant	4 A	Hydrofluorination
			Water Treatment
	Plant 7	7 A	UF6 to UF4 Reduction
	Plant 2 West Pad	74 B	Storage UO3
	Plant 4 Pad	74 E	Temporary Storage

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
UO2F2	Plant 7	7 A	UF6 to UF4 Reduction
			Storage
	Plant 7 Overhead Crane	7 B	Loading and Unloading
	UF6 to UF4 Reduction Facility #1	54 A	Original UF6 to UF4 Reduction
			UF6 to UF4
	Plant 7 Pad	74 F	Storage
UO3 (Orange Oxide)	Preparation Plant	1 A	Drum Sampling
	Ore Refinery Plant	2 A	Denitration
	Green Salt Plant	4 A	Hydrofluorination
			Moving Bed Experimental Reactor
			Water Treatment
			Storage
	Plant 4 Warehouse	4 B	UF4 Storage
	Metals Production Plant	5 A	South Staging and Storage
			Reduction
	Plant 7	7 A	Storage
	Plant 7 Overhead Crane	7 B	Loading and Unloading
	Incinerator Building	39 A	Drum Dryer
	Plant 2 East Pad	74 A	Storage
	Plant 4 Pad	74 E	Temporary Storage
	Plant 7 Pad	74 F	Storage
	Building 64 North Pad	74 M	Storage
	Plant 1 Storage Pad	74 T	Storage
Uranium Carbide	Rust Engineering Building	45 A	Machine Shop
Uranium Oxides	Metal Dissolver Building	2 D	West Metal Dissolution
Uranium *			
Uranyl Nitrate	Ore Refinery Plant	2 A	Digestion
			Drum Digestion
			Extraction
			Denitration
			Enriched Calcining
	Tanks Outside Plant 2A	2 A	Uranyl Nitrate Storage
	NFS Storage and Pump House	2 E	NFS Storage
	Refinery Sump	3 H	Refinery Sump
	Metals Fabrication Plant	6 A	Scrap Metal Pickling
			Perched Water & Clarifier Pit
	Special Products Plant	9 A	Scrap Metal Pickling
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Thorium Tank Farm	13 D	Thorium Tank Farm
	Laboratory	15	Laboratories
	Thorium Warehouse	64	Storage
	Plant 2 East Pad	74 A	Storage
	Plant 2 West Pad	74 B	Storage UO3
Urea	NAR Towers	3 D	Nitric Acid Recovery
	Plant 2 West Pad	74 B	Storage UO3
Xylene (Includes Total Xylenes)	Scrap Recovery Plant	8 A	Oil Centrifuge
	Contaminated Oil/Graphite Burn Pad	10 D	
	Garage/Engine House	31 A	Garage
	Heavy Equipment Building	46	Heavy Equipment Storage
	Drum Reconditioning Building	66	Drum Reconditioning
Yttria/Yttrium (Y)	Metals Production Plant	5 A	Casting (Remelt)
			Mold Preparation and Conditioning
Zinc fluoride (ZnF2)	Special Products Plant	9 A	Thorium Metal
	Pilot Plant Wet Side	13 A	ZnF2 Precipitation
	Pilot Plant Annex	37	Milling Thorium Tetrafluoride
	UF6 to UF4 Reduction Facility #1	54 A	Furnace Pot Loading
Zinc Silicate (ZnSi)	Metals Production Plant	5 A	Plasma Spraying
Zinc (Zn)	Pilot Plant Annex	37	Oil Reclaimer
			De-Zincing Furnace
	UF6 to UF4 Reduction Facility #1	54 A	Reduction Furnaces
			De-Zincing Zn-Th Metal

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TABLE A.4-0. POTENTIAL CONTAMINANTS BY COMPONENT (Cont'd)

Contaminant	Component	Component Designation	Source of Contamination
Zirconia/Zirconium (Zr) (ZrO2)	Metals Production Plant	5 A	Casting (Remelt) Mold Preparation and Conditioning Plasma Spraying
	Special Products Plant	9 A	Enriched Uranium Casting Zirnlo Decladding
	Plant 9 Sump Treatment	9 B	
	Pilot Plant Annex	37	Plasma Spraying of Crucibles

TABLE A.4.1

OPERABLE UNIT 3 STRUCTURES/EQUIPMENT RADIOLOGICAL SURVEYS

This table details, by component, radiological survey results obtained by the on-site Industrial Radiation Safety and Technicians (IRS&T) Department. Survey results are reported for alpha and combined beta and gamma detection. Two types of contamination are measured:

- Removable: Loose contamination that readily transfers to a smear with moderate pressure, and
- Total: A combination of removable and fixed contamination.

This combination survey factors leads to the possibility of four reported values for every survey report: alpha removable, alpha total, beta-gamma removable, and beta-gamma total. All removable contamination is collected by swipe samples on a 100-cm^2 area after total contamination levels are measured by a direct frisk of the area with an alpha or beta-gamma instrument. Total contamination values have background subtracted and are normalized to a 100-cm^2 area. Components are surveyed at different frequencies, and not all on-site facilities are monitored, depending on this level of contamination. (See Section 2.4.1 for further discussion.)

For each category of reported data, the average of all values, the maximum value, and the sample size are reported. "NA" represents no available data of that type for the component. All of the data presented in this table were collected throughout 1991 and were compiled as of November 15, 1991. New data are continually gathered and are processed as they become available.

Four categories have been established within each component to differentiate between the sample locations and their impact on risk assessment:

- *Accessible* represents any accessible surface (i.e. equipment, walls, desks, etc.);
- *Floors* represent drain grates, metal platforms, concrete, etc.;

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- *Sumps* represent dikes and sumps; and
- *Unaccessible* represents overhead structures or any unaccessible areas.

With survey values separated into these categories, a more detailed assessment can be made of contamination within the components.

TABLE A.4-1. OPERABLE UNIT 3 STRUCTURES/EQUIPMENT RADIOLOGICAL SURVEYS

Component	Category	Alpha Removable (DPM/100sq. cm)			Alpha Total (DPM/100sq. cm)			Beta-Gamma Removable (DPM/100sq. cm)			Beta-Gamma Total (DPM/100sq. cm)		
		Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size
Preparation Plant (1A)	Accessible	242	638	18	NA	NA	NA	538	1,770	18	NA	NA	NA
	Floor	146	1,140	62	NA	NA	NA	200	1,120	62	NA	NA	NA
Plant 1 Ore Silos (1C)	Accessible	497	12,200	41	60,000	60,000	1	243	5,920	42	NA	NA	NA
	Floor	5,585	23,100	85	108,000	140,000	5	2,873	14,400	85	NA	NA	NA
	Sump	1,403	4,860	9	NA	NA	NA	629	2,180	9	NA	NA	NA
	Unaccess.	423	731	4	NA	NA	NA	209	286	4	NA	NA	NA
Ore Refinery Plant (2A)	Accessible	533	10,800	178	9,000	100,000	134	1,541	50,200	179	232,000	1,599,000	176
	Floor	216	42,200	675	8,000	100,000	673	505	115,000	675	85,000	999,000	676
	Unaccess.	456	2,350	15	4,000	40,000	15	1,259	5,010	15	81,000	289,000	15
General/Refinery Sump Control Bldg (2B)	Accessible	78	433	31	1,000	5,000	19	139	1,390	31	40,000	220,000	23
	Floor	51	51	46	1,000	7,000	32	54	77	46	7,000	59,000	40
Bulk Lime Handling Building (2C)	Accessible	42	42	2	180	400	6	47	55	2	1,000	5,000	13
	Floors	42	42	4	170	400	7	36	36	4	9,000	52,000	13
Metal Dissolver Building (2D)	Accessible	70	156	19	4,000	21,000	19	129	323	19	39,000	108,000	18
	Floor	203	1,890	76	9,000	70,000	46	552	6,430	76	71,000	399,000	46
Maintenance Building (3A)	Accessible	60	288	45	1,000	5,000	58	108	755	45	14,000	89,000	60
	Floor	61	340	27	1,000	3,000	55	101	551	27	12,000	69,000	64
	Unaccess.	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	1,000	1
Ozone Building (3B)	Accessible	84	261	12	2,000	16,000	15	133	288	12	18,000	150,000	15
	Floor	94	191	12	1,000	2,000	25	184	370	12	17,000	200,000	25
NAR Control House (3C)	Accessible	31	51	26	240	1,000	14	40	59	27	4,700	24,000	37
	Floor	27	51	21	340	1,000	16	35	54	22	2,000	47,000	78
NAR Towers (3D)	All Fixed Beta-Gamma values greater than 25,000 DPM Fixed												
Hot Raffinate Building (3E)	Accessible	184	1,296	37	10,000	31,000	36	316	4,250	37	89,000	199,000	36
	Floor	120	840	80	6,000	30,000	81	225	4,100	80	51,000	379,000	81
Harshaw System (3F)	Accessible	106	209	4	1,000	1,000	15	256	673	5	19,000	70,000	16
	Floor	NA	NA	NA	280	1,000	6	148	148	1	3,000	11,000	9
Refrigeration Building (3G)	Accessible	32	121	11	1,000	2,000	10	96	475	11	8,000	29,000	8
	Floor	20	20	3	1,000	4,000	7	44	73	3	9,000	29,000	7
Combined Raffinate Tanks (3J)	Accessible	384	1,870	8	NA	NA	NA	810	3,180	8	NA	NA	NA
	Floor	268	2,400	16	NA	NA	NA	585	5,560	16	NA	NA	NA
	Sump	137	159	2	NA	NA	NA	304	324	2	NA	NA	NA
	Unaccess.	155	312	4	NA	NA	NA	164	338	4	NA	NA	NA
Green Salt Plant (4A)													
First Floor - Elev. 580	Accessible	2,156	18,100	67	NA	NA	NA	13,263	143,000	67	NA	NA	NA
	Floor	779	26,200	91	NA	NA	NA	2,621	89,200	91	NA	NA	NA
	Unaccess.	4,366	16,200	33	NA	NA	NA	13,529	49,500	33	NA	NA	NA
Elev 588	Accessible	4,982	28,200	25	NA	NA	NA	21,662	109,000	25	NA	NA	NA
	Floor	796	3,670	16	NA	NA	NA	3,139	19,800	16	NA	NA	NA
	Unaccess.	2,604	5,520	9	NA	NA	NA	6,253	16,600	9	NA	NA	NA
Second Floor - Elev 597	Accessible	2,965	31,900	95	NA	NA	NA	16,037	176,000	95	NA	NA	NA
	Floor	1,212	11,800	75	NA	NA	NA	6,072	48,800	75	NA	NA	NA
Elev 605	Accessible	1,432	3,440	14	NA	NA	NA	3,590	9,990	14	NA	NA	NA
	Floor	613	2,070	26	NA	NA	NA	1,065	4,790	26	NA	NA	NA

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TABLE A.4-1. OPERABLE UNIT 3 STRUCTURES/EQUIPMENT RADIOLOGICAL SURVEYS (Cont'd)

Component	Category	Alpha Removable (DPM/100sq. cm)			Alpha Total (DPM/100sq. cm)			Beta-Gamma Removable (DPM/100sq. cm)			Beta-Gamma Total (DPM/100sq. cm)		
		Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size
Green Salt Plant (Cont'd) - Elev 610	Accessible	1,429	12,200	27	NA	NA	NA	3,039	26,700	27	NA	NA	NA
	Floor	292	1,070	32	NA	NA	NA	526	1,690	32	NA	NA	NA
	Unaccess.	10,951	10,951	1	NA	NA	NA	28,138	28,138	1	NA	NA	NA
Third Floor - Elev 619	Accessible	624	3,530	54	NA	NA	NA	1,672	17,600	54	NA	NA	NA
	Floor	270	3,330	103	NA	NA	NA	541	9,650	103	NA	NA	NA
	Unaccess.	4,213	9,020	3	NA	NA	NA	9,421	20,000	3	NA	NA	NA
Fourth Floor - Elev 629	Accessible	2,210	8,840	15	NA	NA	NA	6,212	18,400	15	NA	NA	NA
	Floor	985	8,020	125	NA	NA	NA	2,343	26,600	125	NA	NA	NA
Plant 4 Warehouse (4B)	Accessible	312	1,680	30	NA	NA	NA	949	3,360	30	NA	NA	NA
Plant 4 Maintenance Building (4C)	Floor	54	54	20	NA	NA	NA	39	69	20	NA	NA	NA
Metals Production Plant (5A)													
First Floor	Accessible	679	125	860	4,000	200,000	841	6,537	187,000	867	197,000	4,000,000	882
	Floor	297	5,620	1,465	3,000	200,000	1,490	2,007	109,000	1,487	148,000	4,000,000	1,498
	Sump	2,574	4,950	2	2,000	2,000	1	81,115	160,000	2	755,000	1,400,000	2
	Unaccess.	1,656	4,320	13	10,000	32,000	13	17,535	54,300	13	1,928,000	4,000,000	13
Second Floor	Accessible	599	10,400	345	7,000	44,000	348	3,063	74,600	345	62,000	1,000,000	290
	Floor	361	3,490	654	7,000	48,000	653	1,471	21,500	655	123,000	1,800,000	512
	Unaccess.	978	6,840	24	16,000	45,000	24	4,328	38,300	24	171,000	600,000	20
Metals Fabrication Plant (6A)	Accessible	1,251	34,100	1,605	NA	NA	NA	21,767	808,000	1,615	188,000	2,600,000	1,314
	Floor	705	21,300	779	NA	NA	NA	7,592	296,000	782	141,000	1,500,000	609
	Sump	1,837	14,100	30	NA	NA	NA	80,043	783,000	30	331,000	1,700,000	30
	Unaccess.	395	734	14	NA	NA	NA	2,731	5,880	14	90,000	90,000	1
Plant 7 (7A)	Accessible	719	4,780	65	NA	NA	NA	2,499	16,600	65	NA	NA	NA
	Floor	370	26,300	178	NA	NA	NA	864	29,800	178	NA	NA	NA
Recovery Plant (8A)	Accessible	503	23,000	646	3,000	120,000	837	1,147	42,000	646	66,000	1,400,000	845
	Floor	333	26,000	1,168	2,000	60,000	1,684	551	10,000	1,168	45,000	1,000,000	1,684
	Sump	359	1,000	11	2,000	20,000	34	561	2,200	11	32,000	350,000	34
Plant 8 Maintenance Building (8B)	Accessible	19	19	2	170	200	3	26	26	2	6,000	8,000	3
	Floor	19	19	3	310	1,000	7	38	49	3	4,000	9,000	7
Special Products Plant (9A)	Accessible	2,875	46,300	487	NA	NA	NA	36,338	706,000	486	843,000	1,800,000	421
	Floor	767	41,700	450	NA	NA	NA	8,696	600,000	440	231,000	8,570,000	438
	Sump	5,886	28,300	37	NA	NA	NA	86,089	452,000	37	706,000	2,000,000	36
	Unaccess.	3,699	6,524	3	NA	NA	NA	19,174	45,100	3	NA	NA	NA
Boiler Plant (10A)	Accessible	22	50	46	NA	NA	NA	32	220	46	NA	NA	NA
	Floor	30	76	120	NA	NA	NA	28	158	120	NA	NA	NA
Boiler Plant Maintenance (10B)	Accessible	30	392	45	NA	NA	NA	124	2,350	45	NA	NA	NA
	Floor	24	234	29	NA	NA	NA	42	620	29	NA	NA	NA
	Sump	24	24	1	NA	NA	NA	19	19	1	NA	NA	NA
Service Building (11)													
First Floor	Accessible	27	99	86	160	1,000	73	29	236	87	1,000	7,000	99
	Floor	30	235	112	240	2,000	60	33	404	114	1,000	100,000	222
	Unaccess.	40	52	7	420	1,000	5	30	36	7	2,000	6,000	5

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TABLE A.4-1. OPERABLE UNIT 3 STRUCTURES/EQUIPMENT RADIOLOGICAL SURVEYS (Cont'd)

Component	Category	Alpha Removable (DPM/100sq. cm)			Alpha Total (DPM/100sq. cm)			Beta-Gamma Removable (DPM/100sq. cm)			Beta-Gamma Total (DPM/100sq. cm)		
		Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size
Service Building - Second Floor	Accessible	23	63	197	160	1,000	157	23	110	196	1,000	11,000	455
	Floor	23	51	195	180	1,000	144	21	119	195	1,000	20,000	439
	Sump	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	100	1
	Unaccess.	19	19	5	NA	NA	NA	15	15	5	440	3,000	68
Main Maintenance Building (12A)													
First Floor	Accessible	106	5,510	303	1,000	20,000	473	199	18,000	310	10,000	319,000	526
	Floor	59	249	449	340	4,000	978	73	15,400	454	3,000	99,000	1,046
Second Floor	Accessible	49	63	9	210	1,000	21	108	438	9	1,000	6,000	70
	Floor	48	48	10	200	200	8	41	41	10	1,000	7,000	96
Pilot Plant Wet Side (13A)	Accessible	930	3,630	9	NA	NA	NA	767	2,770	9	NA	NA	NA
	Floor	582	1,250	11	NA	NA	NA	685	2,680	11	NA	NA	NA
Pilot Plant Maintenance Building (13B)	Floor	31	58	8	NA	NA	NA	58	118	8	NA	NA	NA
Sump Pump House (13C)	Accessible	1,079	4,640	6	242,000	1,000,000	5	2,575	11,200	6	110,000	250,000	5
	Floor	363	941	19	228,000	1,000,000	6	629	3,360	19	308,000	500,000	6
	Unaccess.	181	257	5	2,000	5,000	5	280	396	5	47,000	100,000	3
Pilot Plant Thorium Tank Farm (13D)	Accessible	32	32	1	NA	NA	NA	20	20	1	NA	NA	NA
	Floor	268	629	13	NA	NA	NA	442	1,660	13	NA	NA	NA
Administration Building (14A)													
First Floor	Accessible	21	49	114	140	3,000	111	21	52	116	380	18,000	243
	Floor	21	58	97	100	200	92	21	52	98	360	7,000	322
Second Floor	Accessible	23	58	18	260	1,000	18	37	162	18	1,000	25,000	80
	Floor	19	19	4	170	300	3	18	30	4	370	3,000	80
Laboratory (15)	Accessible	124	30,400	1,552	2,000	80,000	281	178	23,700	1,556	13,000	1,000,000	1,059
	Floor	60	1,438	553	1,000	5,000	31	71	3,990	559	10,000	400,000	404
	Unaccess.	70	229	59	NA	NA	NA	100	773	59	NA	NA	NA
General Sump (18B)	Accessible	446	1,110	13	NA	NA	NA	620	1,780	13	NA	NA	NA
	Floor	173	602	13	NA	NA	NA	396	1,620	13	NA	NA	NA
	Unaccess.	333	543	4	NA	NA	NA	656	1,270	4	NA	NA	NA
Biodenitrification Towers (18D)	Accessible	52	52	13	NA	NA	NA	43	43	13	NA	NA	NA
	Floor	52	76	57	NA	NA	NA	46	76	57	NA	NA	NA
Main Metal Tank Farm (19A)	Accessible	20	20	1	NA	NA	NA	15	15	1	NA	NA	NA
	Floor	20	20	9	NA	NA	NA	15	15	9	NA	NA	NA
Water Plant (20B)	Accessible	12	32	38	NA	NA	NA	19	30	38	NA	NA	NA
	Floor	13	24	35	NA	NA	NA	19	30	35	NA	NA	NA
	Unaccess.	15	15	2	NA	NA	NA	18	18	2	NA	NA	NA
M.H. #175/Eff. Line/Sampling Bldg. (25B)	Accessible	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	1,000	1
	Floor	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	1,000	1
U.V. Disinfection Building (25D)	Accessible	173	173	1	NA	NA	NA	179	179	1	2,000	9,000	7
	Floor	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	1,000	1
Digester & Control Building (25E)	Accessible	22	40	14	NA	NA	NA	48	190	14	3,000	8,000	14
	Floor	22	57	11	NA	NA	NA	25	127	11	4,000	25,000	11
Sludge Drying Beds (25F)	Floor	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,000	26,000	6
Security Building (28A)	Accessible	40	40	5	100	100	3	43	43	5	1,000	2,000	14
	Floor	39	40	42	170	1,000	43	42	47	42	1,000	8,000	57

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TABLE A.4-1. OPERABLE UNIT 3 STRUCTURES/EQUIPMENT RADIOLOGICAL SURVEYS (Cont'd)

Component	Category	Alpha Removable (DPM/100sq. cm)			Alpha Total (DPM/100sq. cm)			Beta-Gamma Removable (DPM/100sq. cm)			Beta-Gamma Total (DPM/100sq. cm)		
		Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size
Human Resources Building (28B)	Accessible	28	40	28	160	1,000	24	26	43	28	270	1,000	39
	Floor	24	40	17	150	1,000	16	19	43	17	400	2,000	55
Chemical Warehouse (30A)	Accessible	40	126	38	NA	NA	NA	73	231	38	NA	NA	NA
	Floor	48	279	71	NA	NA	NA	67	712	71	NA	NA	NA
Drum Storage Warehouse (30B)	Accessible	94	172	8	NA	NA	NA	191	500	8	NA	NA	NA
	Floor	67	67	2	NA	NA	NA	84	95	2	NA	NA	NA
Engine House/Garage (31A)	Accessible	52	61	37	NA	NA	NA	80	214	37	12,000	150,000	37
	Floor	52	52	53	NA	NA	NA	43	120	53	10,000	100,000	53
	Sump	70	70	1	NA	NA	NA	135	135	1	25,000	25,000	1
Pilot Plant Annex (37)	Accessible	51	314	25	NA	NA	NA	89	369	25	NA	NA	NA
	Floor	44	296	35	NA	NA	NA	96	654	35	NA	NA	NA
Incinerator Building (39A)	Accessible	76	121	3	9,000	25,000	3	137	265	3	139,000	800,000	6
	Floors	53	53	5	1,000	2,000	26	71	73	5	18,000	80,000	29
Sewage Treatment Plant Incinerator (39D)	Accessible	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000,000	1,000,000	1
	Floor	NA	NA	NA	NA	NA	NA	NA	NA	NA	179,000	800,000	14
	Unaccess.	NA	NA	NA	NA	NA	NA	NA	NA	NA	150,000	150,000	1
Rust Engineering Building (45A)	Accessible	26	79	100	1,000	1,000	2	23	135	100	1,000	2,000	67
	Floor	28	244	96	NA	NA	NA	36	886	96	12,000	250,000	74
Heavy Equipment Building (46)	Accessible	60	62	88	NA	NA	NA	48	50	88	6,000	70,000	88
	Floor	60	62	201	NA	NA	NA	47	50	201	8,000	100,000	201
Health and Safety Building (53A)													
Basement	Accessible	NA	NA	NA	200	200	88	NA	NA	NA	1,000	1,000	88
	Floor	NA	NA	NA	200	200	160	NA	NA	NA	1,000	1,000	160
First Floor	Accessible	18	18	2	200	200	86	18	20	2	1,000	1,000	89
	Floor	22	66	11	200	200	177	47	289	9	1,000	2,000	203
	Unaccess.	NA	NA	NA	200	200	3	NA	NA	NA	1,000	1,000	3
Second Floor	Accessible	128	523	6	1,000	2,000	6	180	751	6	460	4,000	80
	Floor	NA	NA	NA	NA	NA	NA	NA	NA	NA	250	2,000	35
In-Vivo Building (53B)	Accessible	19	19	43	NA	NA	NA	17	17	43	1,000	1,000	43
Six to Four Reduction Facility #1 (54A)	Accessible	198	929	25	NA	NA	NA	572	3,450	25	NA	NA	NA
	Floor	104	741	35	NA	NA	NA	205	1,370	35	NA	NA	NA
Slag Recycling Building (55A)	Accessible	168	662	36	NA	NA	NA	1,599	10,700	36	82,000	500,000	36
	Floor	122	334	32	NA	NA	NA	740	2,230	32	60,000	700,000	32
Slag Recycling Pit/Elevator (55B)	Accessible	179	955	40	NA	NA	NA	1,624	5,100	40	6,000	950,000	32
	Floor	92	412	26	NA	NA	NA	1,620	26,900	26	45,000	115,000	24
CP Storage Warehouse (56A)	Floor	40	40	14	NA	NA	NA	43	43	14	NA	NA	NA
Drum Recondition Building (66)	Accessible	152	152	1	NA	NA	NA	547	547	1	NA	NA	NA
	Floor	52	63	8	NA	NA	NA	114	224	8	NA	NA	NA
Pilot Plant Warehouse (68)	Floor	203	1,100	46	NA	NA	NA	281	922	46	NA	NA	NA
General In-Process Warehouse (71)	Accessible	91	180	7	NA	NA	NA	132	554	7	NA	NA	NA
	Floor	48	169	22	NA	NA	NA	56	206	22	NA	NA	NA
Plant 2 East Pad (74A)	Floor	NA	NA	NA	370	4,500	45	NA	NA	NA	7,200	30,800	51
Plant 2 West Pad (74B)	Accessible	NA	NA	NA	5,000	25,000	7	NA	NA	NA	46,000	146,000	6
	Floor	NA	NA	NA	1,000	20,000	111	NA	NA	NA	18,000	196,000	110
Plant 8 East Pad (74C)	Floor	53	3,220	84	NA	NA	NA	74	4,180	84	NA	NA	NA

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TABLE A.4-1. OPERABLE UNIT 3 STRUCTURES/EQUIPMENT RADIOLOGICAL SURVEYS (Cont'd)

Component	Category	Alpha Removable (DPM/100sq. cm)			Alpha Total (DPM/100sq. cm)			Beta-Gamma Removable (DPM/100sq. cm)			Beta-Gamma Total (DPM/100sq. cm)		
		Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size	Average Value	Maximum Value	Sample Size
Plant 8 West Pad (74D)	Floor	22	262	90	NA	NA	NA	34	350	90	NA	NA	NA
Plant 4 Pad (74E)	Accessible	114	429	20	2,000	10,000	22	237	1,500	20	19,000	310,000	32
	Floor	63	159	98	1,000	15,000	129	67	361	99	14,000	700,000	186
	Unaccess.	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,000	2,000	1
Plant 5 East Pad (74G)	Accessible	258	2,500	200	2,000	32,000	249	455	6,400	199	20,000	370,000	247
	Floor	230	1,400	314	490	30,000	910	325	1,400	314	12,000	450,000	1,003
Plant 6 Pads (74J)	Floor	80	1,830	209	NA	NA	NA	224	4,276	228	60,000	1,000,000	216
Plant 9 Pad (74K)	Floor	78	897	276	3,000	6,000	10	165	2,260	298	154,000	750,000	298
Decontamination Pad (74P)	Floor	130	1,380	31	NA	NA	NA	264	2,340	31	15,000	60,000	31
Plant 8 North Pad (74R)	Floor	28	134	26	NA	NA	NA	36	171	26	NA	NA	NA
Finished Products Warehouse (77)	Accessible	191	762	6	NA	NA	NA	454	2,180	6	NA	NA	NA
	Floor	60	60	29	NA	NA	NA	60	82	29	NA	NA	NA
Plant 6 Warehouse (79)	Accessible	59	59	5	NA	NA	NA	60	60	5	1,000	1,000	5
	Floor	61	105	29	NA	NA	NA	70	247	29	8,000	65,000	29
Plant 9 Warehouse (81)	Accessible	59	59	4	NA	NA	NA	67	78	4	1,000	1,000	3
	Floor	59	59	26	NA	NA	NA	62	71	26	3,000	10,000	26
Receiving/Incoming Material Insp (82)	Accessible	19	19	28	NA	NA	NA	16	19	28	NA	NA	NA
	Floor	19	19	47	NA	NA	NA	15	27	47	NA	NA	NA
Parking Lot (89)	Accessible	0	0	4	100	100	4	0	0	14	160	400	14
	Floor	7	19	7	100	200	21	5	18	63	170	2,000	305
Process Trailers (G-009)													
Trailers South of Plant 7 (G-009)	Accessible	20	20	16	NA	NA	NA	17	32	16	NA	NA	NA
	Floor	20	20	14	NA	NA	NA	18	29	14	NA	NA	NA
Rust Construction Trailers (G-009)	Accessible	19	20	31	NA	NA	NA	15	16	31	1,000	1,000	31
	Floor	16	20	7	NA	NA	NA	12	16	7	1,000	1,000	7
Non-process Trailers (G-010)													
6 Plex East (G-010)	Accessible	20	28	5	208	1,000	56	20	28	5	1,000	10,000	56
	Floor	NA	NA	NA	200	200	90	NA	NA	NA	1,000	1,000	90
7 Plex North (G-010)	Accessible	19	19	146	NA	NA	NA	15	15	146	1,000	1,000	146
	Floor	19	19	7	NA	NA	NA	15	15	7	1,000	1,000	7
	Unaccess.	19	19	7	NA	NA	NA	15	15	7	1,000	1,000	7
10 Plex (G-010)	Accessible	20	28	13	250	2,000	14	20	45	13	430	3,000	12
	Floor	19	19	14	130	300	14	17	22	14	180	1,000	83
Trailers in Grid #7 (G-010)	Accessible	NA	NA	NA	200	200	210	NA	NA	NA	100	100	209
	Floor	NA	NA	NA	200	200	476	NA	NA	NA	100	100	475
Copper Metal Scrap Pile (P-017)	Accessible	NA	NA	NA	NA	NA	NA	NA	NA	NA	34,000	100,000	6

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TABLE A.4.2

RADIOLOGICAL SURVEYS OF ABANDON-IN-PLACE (AIP) EQUIPMENT

Radiological surveys of abandon-in-place (AIP) equipment were performed during July to October 1988 by the Remedial Investigation/Feasibility Study (RI/FS) field personnel in accordance with the Quality Assurance Project Plan (QAPP).

The equipment has been listed by component and by floors within the components. Survey values are separated into removable and fixed contamination for alpha and combined beta-gamma. The definitions of removable and fixed

- Removable: Loose contamination that readily transfers to a smear with moderate pressure, and
- Fixed: Contamination that does not readily transfer to a smear.

Footnote a denotes field personnel were unable to obtain a reading.
Footnote b denotes readings were not available.

TABLE A.4.2
RADIOLOGICAL SURVEYS OF ABANDON-IN-PLACE (AIP) EQUIPMENT

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Component And Component Designation	Equipment Location	Highest Alpha Fixed (DPM)	Highest Alpha Removable (DPM)	Highest Beta and Gamma Fixed (DPM)	Highest Beta and Gamma Removable (DPM)
Preparation Plant 1 A	1st Floor				
	Bucket Elevator	4,136	170	3,032	332
	Filter	6,692	800	22,945	1,923
	Magnetic Separator & Screw Feeder	9,081	410	17,859	842
	Overflow Tank	2,615	472	55,263	592
	Sample Box	7,092	503	45,878	947
	Sampler	914	30	5,789	89
	Water Tank	8,382	280	7,226	579
	2nd Floor				
	Tank	3,436	410	9,474	505
	Conveyor Feed Hopper	6,084	12,761	5,263	67,163
	Hopper	7,692	160	2,695	668
	Hopper	18,896	540	76,803	1,326
	Screw Feeder	15,305	1,120	13,526	2,453
	Blender	9,780	330	14,561	1,081
	Weigh Hopper	19,021	17,524	152	92,232
	3rd Floor				
	Carrier Unit	9,929	410	10,457	951
	Grizzly Feeder	8,461	180	69,226	311
	Screw Conveyor	41,945	350	44,437	468
	4th Floor				
	Dust collector	6,361	1,012	a	692
	Dust collector	5,768	839	3,194	1,783
	Metal wash	9,770	560	57,548	79,242
	Metal wash	21,429	300	42,105	575,511
Ore Refinery Plant 2 A	1st Floor				
	Condensor (Outside North)	49,545	496	174,851	431
	NAR Tower	51,141	1,347	24,255	728
	NAR Tower	1,213	43	7,549	164
	NAR Tower	692	12	2,171	22
	Pump	1,481	4	39,913	87
	Pump	1,385	16	4,111	51
	2nd Floor				
	Cooler-Mixer/Settler (Extraction)	15,594	140	45,960	220
	Pump (Harshaw Area)	1,154	16	3,429	79
NAR Towers 3 D	2nd Floor				
	C69-4-14 (NAR tower)	2,783	68	6,667	31
	C70-4-79 (Raffinate Area)	1,986	17	15,714	23
	NAR Tower	6,429	33	5,000	223
	2nd & 3rd Floors				
	NAR Tower	b	33	8,333	223
	Outside				
	NAR Tower	1,043	19	2,776	74
Harshaw System 3 F	1st Floor				
	NAR Tower	1,230	36	894	40
	NAR Tower	598	36	40,451	26
	NAR Tower	<9	78	3,600	165
	Pump	1,528	16	14,722	100
	3rd Floor				
	NAR Tower	923	19	4,549	85
	Outside				
	NAR Tower	1,077	14	246	102
	NAR Tower	1,889	24	5,524	33
	Pump	2,713	16	15,650	40
	Pump	948	8	10,928	124
	Pump Assembly	3,124	19	19,695	118
	Pump-Motor	2,833	7	3,307	26
	NAR	4,969	31	11,747	475
Combined Raffinate Tanks 3 J	1st & 2nd Floors				
	C70-5-33 (Raffinate Area)	17,386	79	76,083	104
Green Salt Plant 4 A	1st Floor				
	Scale	12,183	4,110	25,227	21,632
	Scale	26,154	1,810	28,039	9,737
	Weigh Bin	75,814	2,403	424,444	3,912

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TABLE A.4.2
RADIOLOGICAL SURVEYS OF ABANDON-IN-PLACE (AIP) EQUIPMENT

Component And Component Designation	Equipment Location	Highest Alpha Fixed (DPM)	Highest Alpha Removable (DPM)	Highest Beta and Gamma Fixed (DPM)	Highest Beta and Gamma Removable (DPM)
Green Salt Plant (Cont.)	Weigh Bins	30,079	1,143	100,000	1,766
	Weigh Bins	67,576	2,816	764,384	7,838
	Weigh Bin	114,315	1,553	326,596	1,625
	2nd Floor				
	Moving Bed Reactor	31,879	372	49,455	545
	Moving Bed Reactor	28,417	306	12,580	479
	Moving Bed Reactor	14,286	343	88,285	412
	Talcum Reactor	61,384	538	13,100	712
	Talcum Reactor	50,000	689	272,727	1,237
	Talcum Reactor	50,000	445	50,380	1,196
	Talcum Reactor	50,000	498	57,186	1,128
	Talcum Reactor	26,900	190	37,310	1,100
	Talcum reactor	60,880	766	13,808	819
	Talcum reactor	76,160	1,175	87,104	1,299
	Talcum reactor	39,266	148	42,424	281
	Talcum reactor	37,000	244	29,744	220
	3rd Floor				
	Scale	20,000	790	10,130	2,563
	4th Floor				
	Adams Filter	49,626	467	77,516	1,152
	Control Panel	4,465	750	275,999	1,779
	Hydrogen Burner	5,747	3,536	a	4,284
	Hydrogen Burner	56,743	3,278	a	4,093
Metals Fabrication Plant 6 A	Basement				
	100 HP Motor & Stand	1,094	69	21,151	4,374
	Duct System	223	73	417	156
	Duct System	3,840	91	4,698	141
	Electric Cages	932	104	946	4,140
	Electric Cages	1,434	55	1,259	1,920
	Gear Box	21,159	496	567,526	1,096
	Gears From Motor	6,150	961	173,506	4,340
	Generator	868	83	6,680	171
	Electric Generator/Stand	2,353	77	6,809	156
	Motor & Shaft	161,891	7,955	480,847	10,845
	Motor & Shaft	27,776	1,619	693,744	3,835
	Oil Sump	42,478	4,398	637,759	22,535
	Pressure Regulator	555	b	<bkg	b
	Pump	6,433	1,020	76,885	1,606
	Pump & Cabinet	6,362	2,222	417,360	6,382
	Pump/Motor Assembly	10,400	1,659	131,040	2,124
	Sump Pump	358	659	110,203	1,550
	Sump Pump	15,591	1,335	769,036	1,814
	Sump Tank	4,277	6,119	567,868	7,522
	Vent Blower	4,971	298	16,927	373
	1st Floor Electrical Equipment Room				
	Electric Generator & Stand	613	128	2,907	1,830
	1st Floor				
	ACME Gridleys	15,474	4,455	984,473	18,844
	Cabinet	18,214	673	42,951	1,294
	Chip Conveyor	12,153	1,288	60000+	17,328
	Rolling Mill Control Room	9,498	1,437	34,858	3,809
	Rolling Mill Cooling Bed	39,574	1,497	45,772	2,078
	Furnace & Instrument Panel	8,252	575	58,612	1,378
	Rolling Mill	7,892	450	67,197	516
	Rolling Mill Cabinet	6,288	1,269	a	2,297
	Rolling Mill Control Panel	18,054	825	91,168	4,313
	Rolling Mill Control Room	1,600	351	a	944
	Rolling Mill Control Room	7,647	159	44,011	613
	Rolling Mill Control Room	3,391	1,066	78,641	2,913
	Rolling Mill Electric Equipment Room	2,949	228	6,274	958
	Rolling Mill Generator	1,608	139	5,263	1,416
	Rolling Mill Generator	1,509	188	7,450	490
	Rolling Mill Runout Table	21,261	830	255,335	882
	Rolling Mill Shear Machine	13,662	1,483	145,549	2,381
	Rolling Mill Storage Boxes	16,695	733	121,922	17,963
	Rolling Mill Storage Boxes	14,598	678	15,756	2,310
	Rolling Mill Storage Cabinet	9,488	427	19,741	4,445
	Rolling Mill Storage Cabinet	6,322	2,631	28,034	4,680
	Rolling Mill Storage Cabinet	9,595	2,683	117,281	6,624
	Rolling Mill-1000HP	2,634	887	24,777	1,455
	Rolling Mill-100KW Generator	1,825	162	12,628	396

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TABLE A.4.2
RADIOLOGICAL SURVEYS OF ABANDON-IN-PLACE (AIP) EQUIPMENT

Component And Component Designation		Equipment Location	Highest Alpha Fixed (DPM)	Highest Alpha Removable (DPM)	Highest Beta and Gamma Fixed (DPM)	Highest Beta and Gamma Removable (DPM)
Metals Fabrication Plant (cont.)		Rolling Mill-Adjacent to Quench Tank	20,408	7,527	403,556	65,262
		Rolling Mill-DC Generator & Stand	932	b	1,810	b
		Rolling Mill-DC Generator & Stand	2,010	389	5,322	965
		Rolling Mill-DC Generator & Stand	1,227	475	14,035	3,718
		Rolling Mill-DC Generators	1,010	112	2,886	4,413
		Rolling Mill-Electrical Alley	744	139	110	630
		Rolling Mill-Generator Rack	628	135	1,246	461
		Rolling Mill-Motor & Generator	2,431	206	578,569	639
		Rolling Mill-Motor & Sump	1,651	67	11,738	201
		Rolling Mill-Motors & Generators	1,458	73	8,772	274
		Scale	1,484	767	44,856	1,498
		Transfer Conveyor	13,143	981	723,358	1,738
		Vacuum Cleaner	5,459	1,212	39,607	3,486
Plant 7	7 A	6th Floor				
		Dissociator Unit	7,145	803	72,678	1,124
Pilot Plant Annex	37	1st Floor				
		Briquette maker	61,488	280	131,621	23,147

a - Field personnel were unable to obtain a reading.
b - Reading not available.

NOTE: This table can be linked to Tables 1.0 and 2.0 through the equipment lists.

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TABLE A.4.3

OPERABLE UNIT 3 AIR QUALITY DATA

Table A.4.3 includes November, 1991 air quality data for several buildings throughout the site. A number of readings were taken from each location using the General Area Vacuum Sampling Unit. The number of samplings done at a given location varied from 1 to 27. The minimum, maximum, and average readings were calculated for each location and are in the table. Inhaled materials can be classified according to how rapidly they are removed from the respiratory passages. Three clearance classes are designated "D" (removal accomplished in days), "W" (weeks), "Y" (years). Each class has a set of parameter values for the dynamics of removal. Airborne concentration units are in microcurie per milliliter of total activity and can be compared to the Derived Air Concentration (DAC) standard for the Y class of natural Uranium: 2.00E-11 µCi/mL.

When the average reading for a location exceeds 2% of the DAC (Action Level) for a given time, the site Health and Safety Department will investigate to find the cause of the elevated activity. Respirator controls are typically imposed at 25% of the DAC, or 5.00E-12 µCi/mL (based on a time weighted average).

TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
Preparation Plant	1 A	Location:	1A-585-7C-2B	Center Bay Redrumming
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	9.56E-15	7.33E-15
		Maximum Reading	7.35E-13	4.59E-13
		Average Reading	2.51E-13	2.03E-13
		Location:	1A-585-2E-3C	Lab Area
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.25E-15
		Maximum Reading	4.47E-13	3.31E-13
		Average Reading	1.08E-13	1.02E-13
		Location:	1A-585-3C-4A	Sampling Station
		Number of Samples:		16
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.36E-15	2.87E-15
		Maximum Reading	1.47E-13	1.88E-13
		Average Reading	7.54E-14	7.73E-14
Plant 1 Storage Building	1 B	Location:	Plant 1 Pad	I/S Storage Tent
		Number of Samples:		1
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	7.10E-13	8.80E-13
		Maximum Reading	7.10E-13	8.80E-13
		Average Reading	7.10E-13	8.80E-13
Ore Refinery Plant	2 A	Location:	2A-580-4C-3C	Dig. S. of Tank DI-10
		Number of Samples:		14
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.36E-15
		Maximum Reading	1.55E-13	2.95E-13
		Average Reading	8.65E-14	1.45E-13
		Location:	2A-580-12B-4D	Ext. E. of Cont. Pan
		Number of Samples:		14
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.36E-15	1.87E-15
		Maximum Reading	2.63E-13	1.94E-13
		Average Reading	9.91E-14	1.09E-13
		Location:	2A-580-14B-2C	Denitration North Side
		Number of Samples:		10
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.79E-15
		Maximum Reading	1.53E-13	1.36E-13
		Average Reading	8.53E-14	8.62E-14

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TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
Ore Refinery (Cont.)	2 A	Location:	2A-580-4B-3C	
		Number of Samples:		14
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	3.38E-15	2.49E-15
		Maximum Reading	5.95E-13	3.06E-13
		Average Reading	1.68E-13	1.42E-13
Metal Dissolver Building	2 D	Location:	2D-580-3A-1B	Metal Dissolver Bldg.
		Number of Samples:		12
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	6.36E-14	4.16E-14
		Maximum Reading	8.39E-13	4.87E-13
		Average Reading	1.65E-13	1.22E-13
Maintenance Building	3 A	Location:	3A-580	Maintenance Shop
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.36E-15
		Maximum Reading	2.52E-13	2.07E-13
		Average Reading	8.39E-14	9.11E-14
Green Salt Plant	4 A	Location:	4A-580-7E-4C	Packout Station #1
		Number of Samples:		22
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.01E-15
		Maximum Reading	1.81E-13	2.15E-13
		Average Reading	8.24E-14	4.08E-14
		Location:	4A-580-1C-3C	G4-15 Dust Collector
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.37E-15	8.97E-16
		Maximum Reading	3.61E-13	2.95E-13
		Average Reading	1.30E-13	1.13E-13
		Location:	4A-580-8B-4A	South at Scale
		Number of Samples:		13
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	4.12E-14	5.17E-14
		Maximum Reading	3.80E-13	3.32E-13
		Average Reading	1.23E-13	1.17E-13
Metals Production Plant	5 A	Location:	5-580-2D-1	Flat Scale
		Number of Samples:		13
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	6.32E-14	4.74E-14
		Maximum Reading	1.74E-13	2.15E-13
		Average Reading	9.51E-14	1.15E-13

TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

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Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
Metals Production (Cont.)	5 A	Location:	5-592-26E-1	South End of Plant 2nd Fl.
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.71E-15	1.06E-15
		Maximum Reading	1.35E-13	2.79E-13
		Average Reading	9.50E-14	1.35E-13
		Location:	5-592-4E-1	N. of 261 DC Control Pane
		Number of Samples:		14
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.31E-14	1.00E-14
		Maximum Reading	4.51E-13	4.01E-13
		Average Reading	1.81E-13	1.90E-13
		Location:	5-580-7E-4	Lower Remelts
		Number of Samples:		27
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.32E-15
		Maximum Reading	4.49E-13	6.94E-13
		Average Reading	9.29E-14	9.26E-14
Metals Fabrication Plant	6 A	Location:	*6-580-4C3-2	N. End of Inspection Office
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.25E-15
		Maximum Reading	2.92E-13	3.23E-13
		Average Reading	1.03E-13	1.07E-13
		Location:	6-580-3C-4	N. of Derby Turnover Eq.
		Number of Samples:		13
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	4.05E-14	3.34E-14
		Maximum Reading	1.48E-13	1.74E-13
		Average Reading	9.99E-14	9.06E-14
		Location:	6-580-29H-1	Chip Briq. Weighing Area
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	3.83E-15	1.94E-15
		Maximum Reading	8.19E-13	4.71E-13
		Average Reading	1.95E-13	1.58E-13
		Location:	6-580-15C-4	South Clarifier Area
		Number of Samples:		13
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	3.42E-14	5.37E-14
		Maximum Reading	1.61E-13	1.62E-13
		Average Reading	1.05E-13	1.22E-13

TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

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Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
Recovery Plant	8 A	Location:	8-580-4C-2B	
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	6.53E-15	5.00E-15
		Maximum Reading	8.35E-13	5.51E-13
		Average Reading	2.35E-13	1.85E-13
		Location:	8-600-8C-1A	East Oliver Filter
		Number of Samples:		8
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	5.63E-15	3.42E-15
		Maximum Reading	8.48E-13	4.30E-13
		Average Reading	3.33E-13	2.13E-13
		Location:	8-580-4D-2B	Control Room
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	2.71E-15	2.21E-15
		Maximum Reading	6.52E-13	6.35E-13
		Average Reading	2.36E-13	2.17E-13
		Location:	8-600-10C-4D	Drum Dumper
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	7.43E-15	5.00E-15
		Maximum Reading	4.95E-13	3.16E-13
		Average Reading	2.58E-13	1.72E-13
		Location:	8-580-1B-2B	EIMCO Drumming Station
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	4.28E-15	3.57E-15
		Maximum Reading	3.28E-13	2.63E-13
		Average Reading	1.62E-13	1.32E-13
		Location:	8-580-8D-4B	East Oliver Filter PA
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	2.13E-14	1.59E-14
		Maximum Reading	3.68E-12	2.25E-12
		Average Reading	6.45E-13	4.13E-13
		Location:	8-600-2C-1A	EIMCO Filters
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	2.37E-15	2.49E-15
		Maximum Reading	2.72E-13	2.22E-13
		Average Reading	1.35E-13	1.35E-13

TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

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Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
Special Products Plant	9 A	Location:	9-583-10D-4	South of Door on SE Side
		Number of Samples:		8
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.59E-15	1.29E-15
		Maximum Reading	2.08E-13	2.39E-15
		Average Reading	1.28E-13	1.20E-13
		Location:	9-583-4G-1	Bottom Remelt
		Number of Samples:		27
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.48E-15	2.52E-15
		Maximum Reading	7.14E-13	7.21E-13
		Average Reading	1.32E-13	1.53E-13
Service Building	11	Location:	Laundry	West Side
		Number of Samples:	11	23
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	6.97E-15	2.30E-14
		Maximum Reading	9.56E-14	1.18E-13
		Average Reading	2.76E-14	9.31E-14
Laboratory	15	Location:	Laboratory	
		Number of Samples:	9	16
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	7.15E-15	3.57E-14
		Maximum Reading	1.30E-13	1.30E-13
		Average Reading	5.50E-14	6.39E-14
Pilot Plant Annex	37	Location:	37-579-7A-1B	P-2 Furnace
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	1.52E-15
		Maximum Reading	6.29E-13	4.47E-13
		Average Reading	1.31E-13	1.23E-13
		Location:	*37-579-2A-1B	Plasma Sprayer
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.32E-15	1.36E-15
		Maximum Reading	3.99E-13	4.76E-13
		Average Reading	1.17E-13	1.06E-13
Incinerator Building	39 A	Location:	39A-588-6D-4B	Near Operator/Inc. Bldg.
		Number of Samples:		4
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.66E-13	1.93E-13
		Maximum Reading	2.34E-13	4.47E-13
		Average Reading	2.08E-13	2.95E-13

TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
Six to Four Reduction Facility #1	54 A	Location:	*54-579-4D-2C	West Autoclave Area
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	1.14E-15	9.02E-16
		Maximum Reading	1.10E-13	1.51E-13
		Average Reading	7.37E-14	8.11E-14
		Location:	54-579-11H-1A	Reactor Area
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	5.85E-15	3.53E-15
		Maximum Reading	1.50E-12	1.00E-12
		Average Reading	3.40E-13	2.33E-13
Drum Recondition Building	66	Location:	66-585-5B-2B	Bldg 66 South End
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	7.20E-15	5.66E-15
		Maximum Reading	7.86E-13	8.15E-13
		Average Reading	3.37E-13	3.52E-13
		Location:	66-585-1B-3B	Bldg. 66 at Drum Crusher
		Number of Samples:		15
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	6.31E-15	4.50E-15
		Maximum Reading	1.10E-12	2.13E-12
		Average Reading	3.12E-13	4.43E-13
Decontamination Building	69	Location:	69-589-2B-4	Decontamination
		Number of Samples:		12
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	4.56E-14	2.90E-14
		Maximum Reading	9.82E-13	5.89E-13
		Average Reading	2.87E-13	2.16E-13
		Location:	69-589-5B-2	Decontamination
		Number of Samples:		12
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	7.05E-14	8.58E-14
		Maximum Reading	1.61E-12	1.05E-12
		Average Reading	4.92E-13	3.82E-13
General In-Process Warehouse	71	Location:	71-585-2C-1A	N. End Package Prep.
		Number of Samples:	19	22
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	7.43E-15	4.73E-15
		Maximum Reading	7.30E-13	7.20E-13
		Average Reading	2.42E-13	1.95E-13

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TABLE A.4.3
OPERABLE UNIT 3 AIR QUALITY DATA

Component	Component Designation	Air Quality Data (Total activity in uCi/ml)		
General In-Process (Cont.)	71	Location:	71-585-10A-2B	SW Scale Area
		Number of Samples:	16	21
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading	5.86E-15	7.02E-15
		Maximum Reading	1.10E-12	9.60E-13
		Average Reading	4.28E-13	3.23E-13
Process Trailers	G-009	Location:	Respirator Trailer T-42	
		Number of Samples:	0	1
			Alpha (uCi/ml)	Beta (uCi/ml)
		Minimum Reading		8.90E-15
		Maximum Reading		8.90E-15
		Average Reading		8.90E-15

TABLE A.4.4

MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

This table has been separated into two tables. Both tables are an itemization of materials distributed from the stores section of the main maintenance building (12A) during the period 1980-1990. Table A.4.4a itemizes materials by components with quantities of material shipped over the 10 year period. Table 4.4.4b is a listing of the same information but sorted by material. This allows for cross reference by component or by material.

Within the database, return shipments from the component to the Main Maintenance Building are recorded as negative values. These values have been subtracted from the qualities listed in the table.

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Component	Component Designation		Material	Quantities	Units of Measure
Preparation Plant	1	A	1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			ACIDSILL LIQUID	1	50# PAIL
			ACIDSILL POWDER	1	100# DRUM
			ADHESIVE SEALANT	63	TUBE
			ALL PURPOSE CLEANER	3	55 GAL DRUM
			ASBESTOS BOARD 4X8	2	SHEET
			CHEVRON LUBRICANT	1	120# DRUM
			CLEAR INT. DRUM COATING	1	55 GL DRUM
			CONCRETE FLOOR SEALER	4	55 GAL DRUM
			DENATURED ALCOHOL	2	GAL
			DTE OIL	2	55 GAL DRUM
			FLOOR DRI	133	40# BAG
			FLOOR FINISH	1	55 GAL DRUM
			FYRQUEL #550 FLUID	1	55 GAL DRUM
			GARGOYLE OIL	1	400# DRUM
			GEAR LUBRICANT	1	14-3/4oz CAN
			GLAZING COMPOUND	5	GAL
			HYDRAULIC FLUID	17	GAL
			KEROSENE DILUENT	0	LB
			LACQUIC ACTIVATOR	1	6oz CAN EA
			LACTITE SEALANT	2	8oz BT
			MOBILE OIL	38	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	5	1# CAN
			NITRIC ACID	202	7# BTL
			PAINT	61	GAL
			PAINT REMOVER	6	QUART
			PAINT THINNER	15	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, DRUM BLACK	5	55 GL DRUM
			PAINT, DRUM RED	3	55 GL DRUM
			PAINT, ENAMEL	7	GAL
			PAINT, LATEX	3	GAL
			PAINT, METAL PRIMER	2	GAL
			PAINT, OIL BASE	4	GAL
			PAINT, PRIMER	14	GAL
			PAINT, PVC PRIMER	1	1 PINT CAN
			PAINT, RED EPOXY	1	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	16	GAL
			PAINT, SPRAY	3543	13oz CAN E
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PORTER THINNER,T-5,XYLOL	43	GAL
			PVC SOLVENT CEMENT	2	1 PT CAN
			RED ROLLMARK INK	6	EA
			RUSTOLEUM SURFA ETCH	3	GAL
			STRIPPING DETERGENT SOAP	0	55 GAL DRUM
			THREAD CUTTING OIL	1	5 GAL CAN
			TUF-N-HARD PAINT	8	GAL
			TURBO OIL	2	55 GAL DRUM
			VISOLITE COMPOUND	8	5# CAN
			WASP STOPPER INSECTISIDE	1	12 CAN/CTN
			WD-40 LUBRICANT	81	GAL
			WIRE ROPE LUBRICANT	25	35# PAIL
			XYLOL OR XYLENE THINNER	2	55 DL DRUM
			(CEMENT)SOLVENT CPVC	1	1 PINT CAN
Plant 1 Storage Building	1	B	ADHESIVE SEALANT	10	TUBE
			CHEVRON LUBRICANT	1	120# DRUM
			DENATURED ALCOHOL	1	GAL
			DIESEL FUEL OIL	2326	GAL
			MOBILE OIL	3	55 GAL DRUM
			NITRIC ACID	12	7# BTL

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Component	Component Designation		Material	Quantities	Units of Measure
Ore Refinery Plant	2	A	1,1,1 TRICHLOROETHANE	6	55 GAL DRUM
			ACIDSILL LIQUID	8	50# PAIL
			ACIDSILL POWDER	6	100# DRUM
			ADHESIVE SEALANT	157	TUBE
			ALUMINUM SULFATE	3500	LB
			ANHYDROUS AMMONIA	12	100# CYL
			ANHYDROUS AMMONIA	211875	LB
			ANHYDROUS HYDROFLORC ACID	0	LB
			AQUEOUS HF	0	LB
			ASBESTOS BOARD 4X8	2	SHEET
			BARIUM CARBONATE	20675	LB
			BLACK ROLLMARK INK	13	EA
			CALCINED MAGNESITE	8000	LB
			CARBOLINE PAINT	55	2 GAL KIT
			CARBOMASTIC THINNER	47	GAL
			CHEVRON LUBRICANT	2	120# DRUM
			CONCRETE FLOOR SEALER	1	55 GAL DRUM
			CORLAR #576 THINNER	1	GAL
			CORRUGATED ASBESTOS SHEET	2	42inX12ft
			DENATURED ALCOHOL	1	GAL
			DTE OIL	6	55 GAL DRUM
			EPOXY ENAMEL	0	2GL/KIT
			EPOXY FLOOR RESIN	8	9.2# CAN
			EPOXY FLOOR SURFACER	8	.75# CAN
			FLOOR COATING PAINT	11	KIT
			FLOOR DRI	180	40# BAG
			FLOOR DRY ABSORB-O-SOX	1	BOX
			FLUOROLUBE OIL	1	16# CAN
			FORMULA #205 PAINT	4	SF
			FORMULA #502	1	GAL
			GARGOYLE OIL	4	400# DRUM
			GEAR LUBE	3	55 GAL DRUM
			GEAR LUBRICANT	24	14-3/4oz CAN
			GLAZING COMPOUND	12	GAL
			HYDRATED ALUMINA	132650	LB
			HYDRAULIC FLUID	4	GAL
			HYDROCHLORIC ACID/6# BTL	2	6 EA/CASE
			INDUSTRIAL GREASE	1	20 GAL DRUM
			KEROSENE DILUENT	228367	LB
			LACTITE SEALANT	2	8oz BT
			LINSEED OIL	1	GAL
			MINERAL SPIRITS	2	55 GL DRUM
			MOBILE OIL	3	55 GAL DRUM
			MOBILGEAR LUBRICANT	1	400# DRUM
			NEVER-SEEZ LUBRICANT	33	1# CAN
			NITRIC ACID	20109395	LB
			PAINT	36	GAL
			PAINT	4	2 GAL KIT
			PAINT THINNER	112	GAL
			PAINT & CONVERTER, EPOXY	22	2 GL=1 KIT
			PAINT, ALUMINUM	28	GAL
			PAINT, CARBOMASTIC	60	2 GAL KIT
			PAINT, ENAMEL	13	GAL
			PAINT, LATEX	24	GAL
			PAINT, PRIMER	27	GAL
			PAINT, RED EPOXY	1	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	3	GAL
			PAINT, SPRAY	1391	13oz CAN E
			PAINT, TRAFFIC	2	GAL
			PAINT, WHITE EPOXY (OSHA)	36	KIT
			PAINT, YELLOW GLOSS	20	2 GAL KIT
			PENETRATING OIL	5	3oz CAN
			PERMATEX	3	11oz TUBE
			PORTER THINNER,T-5,XYLOL	19	GAL

TABLE A.4.4a

MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Component	Component Designation		Material	Quantities	Units of Measure
Ore Refinery Plant (Cont.)	2	A	POTASSIUM HYDROXIDE	-9675	LB
			RED ROLLMARK INK	4	EA
			RID-LIME	60	30 GAL DRUM
			RM-S SOLVENT	4	1 QT
			RUSTOLEUM SURFA ETCH	22	GAL
			SEALANT(JOINT)	1	15' ROLL
			SHELLAC	1	QUART
			SULFURIC ACID	32367	LB
			THREAD CUTTING OIL	4	5 GAL CAN
			TRIBUTYL PHOSPHATE	92802	LB
			TUF-N-HARD PAINT	1	GAL
			VISOLITE COMPOUND	15	300# DRUM
			WASP STOPPER INSECTISIDE	2	12 CAN/CTN
			WD-40 LUBRICANT	223	GAL
			WHITE ROLLMARK INK	8	EA
			WIRE ROPE LUBRICANT	93	35# PAIL
			(CEMENT)SOLVENT CPVC	1	1 PINT CAN
Maintenance Building	3	A	ADHESIVE SEALANT	25	TUBE
			ALL PURPOSE CLEANER	1	55 GAL DRUM
			CUTTING FLUID	6	16oz CAN
			MINERAL SPIRITS	-1	55 GL DRUM
			PAINT	2	GAL
			PAINT THINNER	4	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, ENAMEL	6	GAL
			PAINT, EPOXY PRIMER	1	2GAL/KIT
			PAINT, PRIMER	10	GAL
			PAINT, PVC PRIMER	1	1 PINT CAN
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PENETRATING OIL	2	3oz CAN
			PORTER THINNER,T-5,XYLOL	2	GAL
			PVC SOLVENT CEMENT	1	1 PT CAN
			WD-40 LUBRICANT	1	GAL
NAR Control House	3	C	RUSTOLEUM SURFA ETCH	1	GAL
NAR Towers	3	D	1,1,1 TRICHLOROETHANE	2	55 GAL DRUM
			ACIDSILL LIQUID	6	50# PAIL
			ACIDSILL POWDER	4	100# DRUM
			ADHESIVE SEALANT	6	TUBE
			CARBOLINE PAINT	25	2 GAL KIT
			CARBOMASTIC THINNER	5	GAL
			DTE OIL	19	55 GAL DRUM
			FLOOR DRI	11	40# BAG
			FORMULA #502	2	GAL
			GLAZING COMPOUND	1	GAL
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			INDUSTRIAL OIL	1	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	18	1# CAN
			PAINT	5	2 GAL KIT
			PAINT	9	GAL
			PAINT REMOVER	1	QUART
			PAINT THINNER	21	GAL
			PAINT & CONVERTER, EPOXY	9	2 GL=1 KIT
			PAINT, CARBOMASTIC	13	2 GAL KIT
			PAINT, ENAMEL	1	GAL
			PAINT, EPOXY PRIMER	1	2GAL/KIT
			PAINT, LATEX	9	GAL
			PAINT, PRIMER	6	GAL
			PAINT, RED EPOXY	1	2 GL=1 KIT
			PAINT, SPRAY	24	13oz CAN E
			PAINT, YELLOW GLOSS	5	2 GAL KIT
			PORTER THINNER,T-5,XYLOL	3	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
NAR Towers (Cont.)	3	D	WASP STOPPER INSECTISIDE	3	12 CAN/CTN
			WD-40 LUBRICANT	12	GAL
			WIRE ROPE LUBRICANT	6	35# PAIL
Hot Raffinate Building	3	E	ACIDSILL LIQUID	15	50# PAIL
			ACIDSILL POWDER	12	100# DRUM
			ADHESIVE SEALANT	16	TUBE
			BARIUM CARBONATE	2750	LB
			FLOOR DRI	2	40# BAG
			HYDRATED ALUMINA	7000	LB
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			PAINT	1	2 GAL KIT
			PAINT	2	GAL
			PAINT THINNER	5	GAL
			PAINT & CONVERTER, EPOXY	4	2 GL=1 KIT
			PAINT, PRIMER	2	GAL
			PAINT, SPRAY	12	13oz CAN E
			PAINT, YELLOW GLOSS	3	2 GAL KIT
			PORTER THINNER,T-5,XYLOL	2	GAL
			SEALANT(JOINT)	2	15' ROLL
			SILICONE OIL	5	GAL
			WASP STOPPER INSECTISIDE	12	12 CAN/CTN
			WD-40 LUBRICANT	14	GAL
Refrigeration Building	3	G	NEVER-SEEZ LUBRICANT	12	1# CAN
Refinery Sump	3	H	ACIDSILL LIQUID	1	50# PAIL
			ACIDSILL POWDER	1	100# DRUM
			ANHYDROUS AMMONIA	2	100# CYL
			CALCINED MAGNESITE	2485900	LB
			CARBOLINE PAINT	4	2 GAL KIT
			CARBOMASTIC THINNER	2	GAL
			CORRUGATED ASBESTOS SHEET	2	42inX12ft
			DTE OIL	1	55 GAL DRUM
			FLOOR DRI	2	40# BAG
			HIGH VACUUM LUBRICANT	1	8# CAN
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			NEVER-SEEZ LUBRICANT	12	1# CAN
			NITRIC ACID	137000	LB
			PAINT THINNER	3	GAL
			PAINT & CONVERTER, EPOXY	2	2 GL=1 KIT
			PAINT, CARBOMASTIC	4	2 GAL KIT
			PAINT, PRIMER	5	GAL
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PORTER THINNER,T-5,XYLOL	1	GAL
			WASP STOPPER INSECTISIDE	12	12 CAN/CTN
			WD-40 LUBRICANT	24	GAL
Green Salt Plant	4	A	1,1,1 TRICHLOROETHANE	10	55 GAL DRUM
			ADHESIVE SEALANT	138	TUBE
			ALL PURPOSE CLEANER	12	55 GAL DRUM
			ANHYDROUS AMMONIA	2905337	LB
			ANHYDROUS HYDROFLORC ACID	6299426	LB
			AQUEOUS HF	-4557746	LB
			ASBESTOS BOARD 4X8	15	SHEET
			BLACK ROLLMARK INK	21	EA
			CALCINED MAGNESITE	0	LB
			CARBOLINE PAINT	6	2 GAL KIT
			CARBOMASTIC THINNER	13	GAL
			CHEVRON LUBRICANT	2	120# DRUM
			CLEAR INT. DRUM COATING	-1	55 GL DRUM
			COIL CLEANER	1	GAL
			CONCRETE FLOOR SEALER	8	55 GAL DRUM
			CORLAR #576 THINNER	1	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Component	Component Designation		Material	Quantities	Units of Measure
Green Salt Plant (Cont.)	4	A	CORRUGATED ASBESTOS SHEET	2	42inX12ft
			DENATURED ALCOHOL	1	GAL
			DIGESTER	9	QUART
			DTE OIL	1	55 GAL DRUM
			FLOOR DRI	15	40# BAG
			FLOOR FINISH	5	55 GAL DRUM
			FORMULA #205 PAINT	1	SF
			GARGOYLE OIL	1	400# DRUM
			GEAR LUBRICANT	67	14-3/4oz CAN
			GLAZING COMPOUND	8	GAL
			GRAPHITE LUBRICANT	1	1# BOX
			GREEN ROLLMARK INK	4	EA
			HFK POWDER	2	20# CAN
			HIGH VACUUM LUBRICANT	1	8# CAN
			INSECTICIDE	12	EA
			L-O SALVAREX GREASE	1	120# DRUM
			MINERAL SPIRITS	0	55 GL DRUM
			MOBILE OIL	3	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	109	1# CAN
			NITRIC ACID	3002	LB
			PAINT	1	2 GAL KIT
			PAINT	82	GAL
			PAINT REMOVER	4	QUART
			PAINT THINNER	45	GAL
			PAINT & CONVERTER, EPOXY	8	2 GL=1 KIT
			PAINT, CARBOMASTIC	5	2 GAL KIT
			PAINT, DRUM BLACK	-1	55 GL DRUM
			PAINT, ENAMEL	13	GAL
			PAINT, LATEX	17	GAL
			PAINT, PRIMER	148	GAL
			PAINT, PVC PRIMER	2	1 PINT CAN
			PAINT, RED EPOXY	7	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	6	GAL
			PAINT, SPRAY	2148	13oz CAN E
			PAINT, YELLOW GLOSS	8	2 GAL KIT
			PENETRATING OIL	3	3oz CAN
			PERMA 12 LUBRICATOR	20	3in CYL
			PORTER THINNER,T-5,XYLOL	9	GAL
			POTASSIUM HYDROXIDE	908484	LB
			RECLAIMED 1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			RED ROLLMARK INK	12	EA
			RM-S SOLVENT	5	1 QT
			RUSTOLEUM SURFA ETCH	7	GAL
			THREAD CUTTING OIL	1	5 GAL CAN
			TURBO OIL	1	55 GAL DRUM
			VISOLITE COMPOUND	2	300# DRUM
			VISOLITE COMPOUND	18	5# CAN
			WD-40 LUBRICANT	1725	GAL
			WHITE ROLLMARK INK	13	EA
			WIRE ROPE LUBRICANT	61	35# PAIL
			(CEMENT)SOLVENT CPVC	3	1 PINT CAN
Plant 4 Warehouse	4	B	PAINT THINNER	2	GAL
			PAINT & CONVERTER, EPOXY	12	2 GL=1 KIT
			RUSTOLEUM SURFA ETCH	14	GAL
Plant 4 Maintenance Building	4	C	1,1,1 TRICHLOROETHANE	2	55 GAL DRUM
			ADHESIVE SEALANT	32	TUBE
			ASBESTOS BOARD 4X8	3	SHEET
			CHEVRON LUBRICANT	1	120# DRUM
			CORRUGATED ASBESTOS SHEET	2	42inX12ft
			FORMULA #205 PAINT	2	SF
			GARGOYLE OIL	1	400# DRUM
			GLAZING COMPOUND	6	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Plant 4 Maintenance Building (Cont.)	4	C	HFK POWDER	1	20# CAN
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			LACQUIC ACTIVATOR	1	6oz CAN EA
			LACTITE SEALANT	1	8oz BT
			MOBILE OIL	2	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	7	1# CAN
			PAINT	12	GAL
			PAINT	1	2 GAL KIT
			PAINT THINNER	23	GAL
			PAINT & CONVERTER, EPOXY	6	2 GL=1 KIT
			PAINT, ENAMEL	7	GAL
			PAINT, LATEX	1	GAL
			PAINT, PRIMER	20	GAL
			PAINT, RED EPOXY	20	2 GL=1 KIT
			PAINT, SPRAY	7	13oz CAN E
			PAINT, WHITE EPOXY (OSHA)	1	KIT
			PAINT, YELLOW GLOSS	6	2 GAL KIT
			PORTER THINNER,T-5,XYLOL	9	GAL
			RID-LIME	60	30 GAL DRUM
			RUSTOLEUM SURFA ETCH	6	GAL
			WASP STOPPER INSECTISIDE	2	12 CAN/CTN
			WD-40 LUBRICANT	31	GAL
			WHITE ROLLMARK INK	3	EA
			WIRE ROPE LUBRICANT	34	35# PAIL
Metals Production Plant	5	A	1,1,1 TRICHLOROETHANE	34	55 GAL DRUM
			ADHESIVE SEALANT	2299	TUBE
			ALL PURPOSE CLEANER	190	55 GAL DRUM
			ANHYDROUS HYDROFLORC ACID	820	LB
			AQUEOUS HF	-66612	LB
			ASBESTOS BOARD 4X8	22	SHEET
			BLACK ROLLMARK INK	33	EA
			BLASTING GRIT	40	BAG
			CALCINED MAGNESITE	21700	LB
			CARBOLINE PAINT	6	2 GAL KIT
			CARBOMASTIC THINNER	5	GAL
			CHEVRON LUBRICANT	20	120# DRUM
			COIL CLEANER	3	GAL
			CONCRETE FLOOR SEALER	1	55 GAL DRUM
			CUTTING FLUID	8	16oz CAN
			DENATURED ALCOHOL	1	GAL
			DTE OIL	14	55 GAL DRUM
			EPOXY FLOOR RESIN	38	9.2# CAN
			EPOXY FLOOR SURFACER	42	.75# CAN
			ETHYL ACETATE	23	5 GAL CAN
			FLOOR DRI	514	40# BAG
			FLOOR DRY ABSORB-O-SOX	1	BOX
			FLOOR FINISH	8	55 GAL DRUM
			FLUSHING SOLVENT	1	QUART
			FORMULA #205 PAINT	4	SF
			FYRQUEL #150 FLUID	1	55 GAL DRUM
			GARGOYLE OIL	8	400# DRUM
			GARIA CUTTING OIL	-6	55 GAL DRUM
			GEAR LUBRICANT	70	14-3/4oz CAN
			GLAZING COMPOUND	32	GAL
			GREEN ROLLMARK INK	22	EA
			HIGH VACUUM LUBRICANT	38	8# CAN
			HYDRAULIC FLUID	59	55 GAL DRUM
			HYDROCHLORIC ACID/6# BTL	2	6 EA/CASE
			INSECTICIDE	10	EA
			KLINGFAST #370 LUBRICANT	0	420# DRUM
			LACQUIC ACTIVATOR	6	6oz CAN EA
			LACTITE SEALANT	14	8oz BT
			LUBRICATING OIL	11	5 GAL CAN

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Metals Production Plant (Cont.)	5	A	METHYL ALCOHOL	2	6# CAN
			MOBILE OIL	21	55 GAL DRUM
			MOBILGEAR	7	400# DRUM
			NEVER-SEEZ LUBRICANT	101	1# CAN
			NITRIC ACID	0	LB
			NON-DETERGENT MOTOR OIL	53	QUART
			PAINT	69	GAL
			PAINT REMOVER	4	QUART
			PAINT THINNER	42	GAL
			PAINT & CONVERTER, EPOXY	4	2 GL=1 KIT
			PAINT, ALUMINUM	34	GAL
			PAINT, CARBOMASTIC	-2	2 GAL KIT
			PAINT, ENAMEL	124	GAL
			PAINT, LATEX	38	GAL
			PAINT, METAL PRIMER	6	GAL
			PAINT, OIL BASE	2	GAL
			PAINT, PRIMER	124	GAL
			PAINT, PVC PRIMER	3	1 PINT CAN
			PAINT, RED EPOXY	4	2 GL=1 KIT
			PAINT, SPRAY	8686	13oz CAN E
			PAINT, TERRA	202276	LB
			PAINT, TRAFFIC	-8	GAL
			PAINT, YELLOW GLOSS	18	2 GAL KIT
			PENETRATING OIL	89	3oz CAN
			PERCHLORETHYLENE	1	55 GAL DRUM
			PERMA 12 LUBRICATOR	24	3in CYL
			PERMATEX	12	11oz TUBE
			PORTER THINNER,T-5,XYLOL	50	GAL
			RECLAIMED 1,1,1 TRICHLOROETHANE	3	55 GAL DRUM
			RED ROLLMARK INK	14	EA
			RID-LIME	274	30 GAL DRUM
			RM-S SOLVENT	9	1 QT
			RUSTOLEUM SURFA ETCH	29	GAL
			SAUEREISEN CEMENT	289	QUART
			SEALANT(JOINT)	1	15' ROLL
			SHELLAC	1	QUART
			SOLUBLE C OIL	61	55 GAL DRUM
			SURFACTANT,DETERMICROBOND	10	55 GAL DRUM
			THREAD CUTTING OIL	3	5 GAL CAN
			TRISODIUM PHOSPHATE	2	30# CASE
			TUF-N-HARD PAINT	10	GAL
			TURBO OIL	211	55 GAL DRUM
			VACUUM PUMP OIL	10	GAL
			VALVE LUBRICANT	1	8# CAN
			VISOLITE COMPOUND	30	300# DRUM
			VISOLITE COMPOUND	41	5# CAN
			WASP STOPPER INSECTISIDE	40	12 CAN/CTN
			WD-40 LUBRICANT	2124	GAL
			WHITE ROLLMARK INK	60	EA
			WIRE ROPE LUBRICANT	340	35# PAIL
			YTTRIUM OXIDE COATING	50	GAL
			(CEMENT)SOLVENT CPVC	3	1 PINT CAN
Plant 5 Ingot Pickling	5	B	PAINT, ENAMEL	7	GAL
			PAINT, PRIMER	7	GAL
			PORTER THINNER,T-5,XYLOL	2	GAL
Metals Fabrication Warehouse	6	A	1,1,1 TRICHLOROETHANE	33	55 GAL DRUM
			ACETONE TEN CAN	21	10 LITER C
			ACIDSILL LIQUID	14	50# PAIL
			ACIDSILL POWDER	12	100# DRUM
			ADHESIVE SEALANT	57	TUBE
			ALL PURPOSE CLEANER	114	55 GAL DRUM
			AMMONIUM HYDROXIDE	771572	LB

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Metals Fabrication Warehouse (Cont.)	6	A	ANHYDROUS AMMONIA	3647	LB
			ASBESTOS BOARD 4X8	5	SHEET
			BLACK ROLLMARK INK	6	EA
			CALCINED MAGNESITE	24000	LB
			CARBOLINE PAINT	7	2 GAL KIT
			CHEVRON LUBRICANT	5	120# DRUM
			CLEANING COMPOUND	58	500# DRUM
			COIL CLEANER	1	GAL
			CONCRETE FLOOR SEALER	3	55 GAL DRUM
			CORRUGATED ASBESTOS SHEET	5	42inX12ft
			CUTTING FLUID	6	16oz CAN
			DENATURED ALCOHOL	2	GAL
			DTE OIL	28	55 GAL DRUM
			EPOXY FLOOR RESIN	8	9.2# CAN
			EPOXY FLOOR SURFACER	6	.75# CAN
			FLOOR COATING PAINT	6	KIT
			FLOOR DRI	81	40# BAG
			FLOOR DRY ABSORB-O-SOX	2	BOX
			FORMULA #205 PAINT	4	SF
			FORMULA #502	2	GAL
			FYRQUEL #150 FLUID	13	55 GAL DRUM
			FYRQUEL #550 FLUID	33	55 GAL DRUM
			GARIA CUTTING OIL	1	55 GAL DRUM
			GEAR LUBE	1	55 GAL DRUM
			GEAR LUBRICANT	18	14-3/4oz CAN
			GLAZING COMPOUND	8	GAL
			GREEN ROLLMARK INK	8	EA
			HEAT TREAT SALT	473600	LB
			HIGH VACUUM LUBRICANT	25	8# CAN
			HYDRATED ALUMINA	5100	LB
			HYDRAULIC FLUID	9	55 GAL DRUM
			HYDROCHLORIC ACID/6# BTL	2	6 EA/CASE
			INSECTICIDE	23	EA
			LACQUIC ACTIVATOR	1	6oz CAN EA
			LACTITE SEALANT	1	8oz BT
			LINSEED OIL	1	GAL
			LUBRIPLATE GREASE	1	120# DRUM
			MINERAL SPIRITS	1	55 GL DRUM
			MOBILE OIL	99	55 GAL DRUM
			MOBILGEAR	5	400# DRUM
			NEVER-SEEZ LUBRICANT	61	1# CAN
			NITRIC ACID	4340315	LB
			PAINT	44	GAL
			PAINT REMOVER	7	QUART
			PAINT THINNER	55	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, CARBOMASTIC	4	2 GAL KIT
			PAINT, CHROME	2	GAL
			PAINT, ENAMEL	83	GAL
			PAINT, LATEX	76	GAL
			PAINT, METAL PRIMER	3	GAL
			PAINT, PRIMER	43	GAL
			PAINT, PVC PRIMER	6	1 PINT CAN
			PAINT, RED EPOXY	1	2 GL=1 KIT
			PAINT, SPRAY	4220	13oz CAN E
			PAINT, TRAFFIC	11	GAL
			PAINT, WHITE EPOXY (OSHA)	2	KIT
			PAINT, YELLOW GLOSS	10	2 GAL KIT
			PENETRATING OIL	25	3oz CAN
			PERMATEX	33	11oz CAN
			POLY-FLOC BETZ 1110	86	50# BAG
			PORTER THINNER,T-5,XYLOL	23	GAL
			POTASSIUM HYDROXIDE	687	LB
			QUENCHING OIL	8	55 GAL DRUM

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Metals Fabrication Warehouse (Cont.)	6	A	RECLAIMED 1,1,1 TRICHLOROETHANE	4	55 GAL DRUM
			RED ROLLMARK INK	4	EA
			REFRIGERATION OIL	2	GAL
			RM-S SOLVENT	2	1 QT
			RUSTOLEUM SURFA ETCH	32	GAL
			SOLUBLE C OIL	539	55 GAL DRUM
			SUN-WAY LUBRICANT	1	420# DRUM
			TRANSIT SIDING 4X8	3	SHEET
			TURBO OIL	46	55 GAL DRUM
			VACUUM PUMP OIL	1	GAL
			VALVE LUBRICANT	16	8# CAN
			WASP STOPPER INSECTISIDE	27	12 CAN/CTN
			WD-40 LUBRICANT	314	GAL
			WHITE ROLLMARK INK	19	EA
			WIRE ROPE LUBRICANT	38	35# PAIL
			(CEMENT)SOLVENT CPVC	6	1 PINT CAN
Plant 6 Salt Oil Heat Treat Building	6	F	ACIDSILL LIQUID	1	50# PAIL
			ADHESIVE SEALANT	26	TUBE
			ETHYL ALCOHOL	3	GAL
			NEVER-SEEZ LUBRICANT	1	1# CAN
			PAINT THINNER	2	GAL
			PERMATEX	1	11oz TUBE
			PORTER THINNER,T-5,XYLOL	2	GAL
			QUENCHING OIL	93	55 GAL DRUM
			TRANSIT SIDING 4X8	1	SHEET
			VALVE LUBRICANT	1	8# CAN
Recovery Plant	8	A	1,1,1 TRICHLOROETHANE	21	55 GAL DRUM
			ACIDSILL LIQUID	5	50# PAIL
			ACIDSILL POWDER	7	100# DRUM
			ADHESIVE SEALANT	393	TUBE
			ALL PURPOSE CLEANER	20	55 GAL DRUM
			ANHYDROUS AMMONIA	0	LB
			AQUEOUS HF	316473	LB
			ASBESTOS BOARD 4X8	11	SHEET
			BLACK ROLLMARK INK	33	EA
			CALCINED MAGNESITE	9400	LB
			CARBOLINE PAINT	7	2 GAL KIT
			CARBOMASTIC THINNER	10	GAL
			CHEVRON LUBRICANT	4	120# DRUM
			CLEANING COMPOUND	1	500# DRUM
			COIL CLEANER	1	GAL
			CONCRETE FLOOR SEALER	9	55 GAL DRUM
			CORRUGATED ASBESTOS SHEET	4	42inX12ft
			DTE OIL	6	55 GAL DRUM
			FLOOR DRI	43	40# BAG
			FLOOR FINISH	6	55 GAL DRUM
			FORMULA #502	1	GAL
			GARGOYLE OIL	3	400# DRUM
			GEAR LUBE	1	55 GAL DRUM
			GEAR LUBRICANT	12	14-3/4oz CAN
			GLAZING COMPOUND	14	GAL
			GREEN ROLLMARK INK	26	EA
			HI DETERGENT OIL	1	55 GAL DRUM
			HIGH VACUUM LUBRICANT	3	8# CAN
			HYDROCHLORIC ACID/6# BTL	16	6 EA/CASE
			INDUSTRIAL OIL	1	55 GAL DRUM
			MOBILE OIL	4	55 GAL DRUM
			MOBILE VELOCITE	1	16 GAL DAN
			NEVER-SEEZ LUBRICANT	55	1# CAN
			PAINT	120	GAL
			PAINT	4	2 GAL KIT
			PAINT REMOVER	7	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Recovery Plant (Cont.)	8	A	PAINT THINNER	103	GAL
			PAINT & CONVERTER, EPOXY	21	2 GL=1 KIT
			PAINT, ALUMINUM	2	GAL
			PAINT, CARBOMASTIC	3	2 GAL KIT
			PAINT, CHROME	2	GAL
			PAINT, ENAMEL	15	GAL
			PAINT, EPOXY	50	KIT
			PAINT, LATEX	8	GAL
			PAINT, METAL PRIMER	1	GAL
			PAINT, OIL BASE	1	GAL
			PAINT, PRIMER	48	GAL
			PAINT, PVC PRIMER	2	1 PINT CAN
			PAINT, RED EPOXY	7	2 GL=1 KIT
			PAINT, SPRAY	4632	13oz CAN E
			PAINT, WHITE EPOXY (OSHA)	5	KIT
			PAINT, YELLOW GLOSS	19	2 GAL KIT
			PENETRATING OIL	18	3oz CAN
			PORTER THINNER,T-5,XYLOL	17	GAL
			POTASSIUM HYDROXIDE	88749	LB
			PVC SOLVENT CEMENT	1	1 PT CAN
			RECLAIMED 1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			RED ROLLMARK INK	20	EA
			RUSTOLEUM SURFA ETCH	35	GAL
			STRIPPING DETERGENT SOAP	4	55 GAL DRUM
			TRANSIT SIDING 4X8	1	SHEET
			TRISODIUM PHOSPHATE	1	30# CASE
			TUF-N-HARD PAINT	2	GAL
			VISOLITE COMPOUND	12	5# CAN
			WASP STOPPER INSECTISIDE	60	12 CAN/CTN
			WD-40 LUBRICANT	906	GAL
			WHITE ROLLMARK INK	30	EA
			WIRE ROPE LUBRICANT	160	35# PAIL
			(CEMENT)SOLVENT CPVC	1	1 PINT CAN
Plant 8 Maintenance Building	8	B	ACIDSILL LIQUID	2	50# PAIL
			ACIDSILL POWDER	2	100# DRUM
			ADHESIVE SEALANT	28	TUBE
			AQUEOUS HF	0	LB
			COIL CLEANER	1	GAL
			CUTTING FLUID	1	16oz CAN
			GLAZING COMPOUND	2	GAL
			NEVER-SEEZ LUBRICANT	1	1# CAN
			PAINT THINNER	2	GAL
			PAINT & CONVERTER, EPOXY	4	2 GL=1 KIT
			PAINT, ENAMEL	2	GAL
			PAINT, LATEX	4	GAL
			PAINT, RED EPOXY	1	2 GL=1 KIT
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PENETRATING OIL	1	3oz CAN
			RUSTOLEUM SURFA ETCH	1	GAL
			SEALANT(JOINT)	1	15' ROLL
			WD-40 LUBRICANT	16	GAL
			WIRE ROPE LUBRICANT	4	35# PAIL
Plant 8 Old Drum Washer	8	F	ADHESIVE SEALANT	4	TUBE
			PAINT, SPRAY	83	13oz CAN E
Special Products Plant	9	A	1,1,1 TRICHLOROETHANE	15	55 GAL DRUM
			ACIDSILL LIQUID	4	50# PAIL
			ACIDSILL POWDER	2	100# DRUM
			ADHESIVE SEALANT	148	TUBE
			ALL PURPOSE CLEANER	140	55 GAL DRUM
			AMMONIUM HYDROXIDE	67362	LB
			ANHYDROUS HYDROFLORC ACID	5040	LB

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Special Products Plant (Cont.)	9	A	AQUEOUS HF	599579	LB
			ASBESTOS BOARD 4X8	1	SHEET
			BARIUM CARBONATE	0	LB
			BLACK ROLLMARK INK	18	EA
			CALCINED MAGNESITE	282000	LB
			CHEVRON LUBRICANT	1	120# DRUM
			CONCRETE FLOOR SEALER	15	55 GAL DRUM
			CORRUGATED ASBESTOS SHEET	2	42inX12ft
			DENATURED ALCOHOL	1	GAL
			EPOXY FLOOR RESIN	4	9.2# CAN
			EPOXY FLOOR SURFACER	4	.75# CAN
			FLOOR DRI	71	40# BAG
			FORMULA #502	1	GAL
			GARIA CUTTING OIL	568	55 GAL DRUM
			GEAR LUBRICANT	8	14-3/4oz CAN
			GLAZING COMPOUND	1	GAL
			GREEN ROLLMARK INK	6	EA
			HIGH VACUUM LUBRICANT	6	8# CAN
			HYDRATED ALUMINA	3600	LB
			HYDRAULIC FLUID	12	55 GAL DRUM
			HYDROCHLORIC ACID/6# BTL	3	6 EA/CASE
			INSECTICIDE	1	EA
			LACQUIC ACTIVATOR	2	6oz CAN EA
			LACTITE SEALANT	4	8oz BT
			MOBILE OIL	54	55 GAL DRUM
			MOBILUBE	1	120# DRUM
			NEVER-SEEZ LUBRICANT	20	1# CAN
			NITRIC ACID	1919495	LB
			PAINT	53	GAL
			PAINT REMOVER	2	GAL
			PAINT THINNER	20	GAL
			PAINT & CONVERTER, EPOXY	4	2 GL=1 KIT
			PAINT, ALUMINUM	4	GAL
			PAINT, ENAMEL	23	GAL
			PAINT, LATEX	87	GAL
			PAINT, PRIMER	41	GAL
			PAINT, RED EPOXY	3	2 GL=1 KIT
			PAINT, SPRAY	2282	13oz CAN E
			PAINT, TERRA	13900	LB
			PAINT, WHITE EPOXY (OSHA)	2	KIT
			PAINT, YELLOW GLOSS	4	2 GAL KIT
			PENETRATING OIL	3	3oz CAN
			PERMATEX	2	11oz TUBE
			PORTER THINNER,T-5,XYLOL	14	GAL
			POTASSIUM CARBONATE	168900	LB
			POTASSIUM HYDROXIDE	8937	LB
			RED ROLLMARK INK	18	EA
			RM-S SOLVENT	2	1 QT
			RUSTOLEUM SURFA ETCH	2	GAL
			SOLUBLE C OIL	84	55 GAL DRUM
			SUN-WAY LUBRICANT	1	420# DRUM
			TRISODIUM PHOSPHATE	1	30# CASE
			TURBO OIL	53	55 GAL DRUM
			VISOLITE COMPOUND	12	5# CAN
			VISOLITE COMPOUND	10	300# DRUM
			WASP STOPPER INSECTISIDE	5	12 CAN/CTN
			WD-40 LUBRICANT	279	GAL
			WHITE ROLLMARK INK	30	EA
			WIRE ROPE LUBRICANT	10	35# PAIL
Plant 9 Sump Treatment Facility	9	B	AMMONIUM HYDROXIDE	12248	LB

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Boiler Plant	10	A	1,1,1 TRICHLOROETHANE	38	55 GAL DRUM
			ADHESIVE SEALANT	60	TUBE
			BETZ COOLING/WATER TRMT	1	500# DRUM
			BETZ COOLING/WATER TRMT	2	625# DRUM
			BETZ NEUTRALFILM	45	55 GAL DRUM
			BETZ NEUTRAMEEN	58	55 GAL DRUM
			BLACK ROLLMARK INK	2	EA
			CARBOLINE PAINT	2	2 GAL KIT
			CARBOMASTIC THINNER	3	GAL
			CHEVRON LUBRICANT	8	120# DRUM
			CORRUGATED ASBESTOS SHEET	2	42inX12ft
			DIESEL FUEL OIL	14617	GAL
			DISODIUM PHOSPHATE	12500	LB
			DTE OIL	24	55 GAL DRUM
			FERROSPERSE	112	55 GAL DRUM
			FLOOR DRI	12	40# BAG
			FLOOR DRY ABSORB-O-SOX	1	BOX
			FLOOR FINISH	2	55 GAL DRUM
			GARGOYLE OIL	1	400# DRUM
			GEAR LUBRICANT	36	14-3/4oz CAN
			GLAZING COMPOUND	8	GAL
			GRAPHITE LUBRICANT	4	1# BOX
			HIGH VACUUM LUBRICANT	1	8# CAN
			INSECTICIDE	9	EA
			LACTITE SEALANT	1	8oz BT
			LINSEED OIL	1	GAL
			L-O SALVAREX GREASE	1	120# DRUM
			MOBILE OIL	39	55 GAL DRUM
			MOBILGEAR LUBRICANT	1	400# DRUM
			NEVER-SEEZ LUBRICANT	138	1# CAN
			NON-DETERGENT MOTOR OIL	2	QUART
			PAINT	75	GAL
			PAINT THINNER	14	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, CARBOMASTIC	4	2 GAL KIT
			PAINT, CHROME	1	GAL
			PAINT, ENAMEL	9	GAL
			PAINT, METAL PRIMER	1	GAL
			PAINT, PRIMER	35	GAL
			PAINT, PVC PRIMER	5	1 PINT CAN
			PAINT, RED EPOXY	2	2 GL=1 KIT
			PAINT, SPRAY	32	13oz CAN E
			PENETRATING OIL	4	3oz CAN
			PERMACOL	21	400# DRUM
			PERMATEX	3	11oz TUBE
			POLYMER GREASE	80	TUBE
			PORTER THINNER,T-5,XYLOL	19	GAL
			RECLAIMED 1,1,1 TRICHLOROETHANE	4	55 GAL DRUM
			RED ROLLMARK INK	2	EA
			RID-LIME	91	30 GAL DRUM
			RUSTOLEUM SURFA ETCH	1	GAL
			SILICONE OIL	5	GAL
			STRIPPING DETERGENT SOAP	1	55 GAL DRUM
			SURFACTANT,DETERMICROBOND	16	55 GAL DRUM
			THREAD CUTTING OIL	1	5 GAL CAN
			TRANSIT SIDING 4X8	0	SHEET
			VACUUM PUMP OIL	14	1 QT BTL
			WASP STOPPER INSECTISIDE	38	12 CAN/CTN
			WD-40 LUBRICANT	231	GAL
			WHITE ROLLMARK INK	1	EA
			WIRE ROPE LUBRICANT	73	35# PAIL
			(CEMENT)SOLVENT CPVC	10	1 PINT CAN

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Boiler Plant Maintenance Building	10	B	ADHESIVE SEALANT	24	TUBE
			GLAZING COMPOUND	1	GAL
			PAINT	11	GAL
			PAINT THINNER	4	GAL
			PAINT, ENAMEL	5	GAL
			PAINT, PRIMER	11	GAL
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			WD-40 LUBRICANT	4	GAL
Service Building	11		1,1,1 TRICHLOROETHANE	2	55 GAL DRUM
			ADHESIVE SEALANT	15	TUBE
			ALL PURPOSE CLEANER	3	55 GAL DRUM
			BLACK ROLLMARK INK	1	EA
			BLASTING GRIT	4	BAG
			CORRUGATED ASBESTOS SHEET	2	42inX12ft
			DIGESTER	2	QUART
			FLOOR DRI	7	40# BAG
			FLOOR FINISH	51	55 GAL DRUM
			GLAZING COMPOUND	5	GAL
			HIGH TEMPERATURE OIL	1	5 GAL PAIL
			HYDRAULIC FLUID	4	GAL
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			INSECTICIDE	153	EA
			LACTITE SEALANT	1	8oz BT
			MINERAL SPIRITS	1	55 GL DRUM
			MOTOR OIL	3	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	1	1# CAN
			NITRIC ACID	-18	7# BTL
			PAINT	12	GAL
			PAINT REMOVER	2	GAL
			PAINT THINNER	15	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, ENAMEL	5	GAL
			PAINT, EPOXY PRIMER	12	2GAL/KIT
			PAINT, METAL PRIMER	3	GAL
			PAINT, OIL BASE	2	GAL
			PAINT, PRIMER	8	GAL
			PAINT, PVC PRIMER	1	1 PINT CAN
			PAINT, RED EPOXY	5	2 GL=1 KIT
			PAINT, SPRAY	336	13oz CAN E
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PERCHLORETHYLENE	218	55 GAL DRUM
			PORTER THINNER,T-5,XYLOL	4	GAL
			POT CLEANING SOAP	24	45# CASE
			POWDERED BLEACH	40	55# PAIL
			RAT BAIT	2	5 GAL/PAIL
			RED ROLLMARK INK	1	EA
			RUSTOLEUM SURFA ETCH	24	GAL
			SHELLAC	1	QUART
			STRIPPING DETERGENT SOAP	55	55 GAL DRUM
			SUPER DE SOIL	742	100# BAG
			TRISODIUM PHOSPHATE	1	30# CASE
			WASP STOPPER INSECTISIDE	48	12 CAN/CTN
			WD-40 LUBRICANT	35	GAL
			WHITE ROLLMARK INK	1	EA
			(CEMENT)SOLVENT CPVC	1	1 PINT CAN
Main Maintenance Building	12	A	1,1,1 TRICHLOROETHANE	46	55 GAL DRUM
			ADHESIVE SEALANT	677	TUBE
			BLACK ROLLMARK INK	2	EA
			BLASTING GRIT	2	BAG
			CARBOLINE PAINT	8	2 GAL KIT
			CARBOMASTIC THINNER	5	GAL
			CHEVRON LUBRICANT	1	120# DRUM

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Main Maintenance Building (Cont.)	12	A	COIL CLEANER	2	GAL
			CORRUGATED ASBESTOS SHEET	5	42inX12ft
			CUTTING FLUID	16	16oz CAN
			DENATURED ALCOHOL	16	GAL
			DIESEL FUEL OIL	28876	GAL
			DIGESTER	2	QUART
			DTE OIL	2	55 GAL DRUM
			EPOXY FLOOR RESIN	125	9.2# CAN
			EPOXY FLOOR SURFACER	125	.75# CAN
			ETHYL ALCOHOL	3	GAL
			FLOOR DRI	135	40# BAG
			FLOOR DRY ABSORB-O-SOX	8	BOX
			FLUOROLUBE OIL	2	16# CAN
			FORMULA #205 PAINT	12	SF
			GARIA CUTTING OIL	2	55 GAL DRUM
			GASOHOL	18976	GAL
			GEAR LUBRICANT	6	14-3/4oz CAN
			GLAZING COMPOUND	48	GAL
			GREASE 14oz CARTRIDGE	7	EA
			HFK POWDER	1	20# CAN
			HYDRAULIC FLUID	2	GAL
			HYDROCHLORIC ACID/6# BTL	2	6 EA/CASE
			INSECTICIDE	6	EA
			KEROSENE	0	GAL
			KLINGFAST #370 LUBRICANT	1	420# DRUM
			LACTITE SEALANT	3	8oz BT
			LINSEED OIL	1	GAL
			MINERAL SPIRITS	10	55 GL DRUM
			MOBILE OIL	5	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	105	1# CAN
			NITRIC ACID	18	7# BTL
			NON-DETERGENT MOTOR OIL	2	QUART
			PAINT	454	GAL
			PAINT	10	2 GAL KIT
			PAINT REMOVER	19	GAL
			PAINT THINNER	154	GAL
			PAINT & CONVERTER, EPOXY	80	2 GL=1 KIT
			PAINT, ALUMINUM	4	GAL
			PAINT, CARBOMASTIC	10	2 GAL KIT
			PAINT, CHROME	8	GAL
			PAINT, ENAMEL	339	GAL
			PAINT, EPOXY	17	KIT
			PAINT, EPOXY PRIMER	6	2GAL/KIT
			PAINT, LATEX	101	GAL
			PAINT, METAL PRIMER	28	GAL
			PAINT, OIL BASE	21	GAL
			PAINT, PRIMER	204	GAL
			PAINT, PVC PRIMER	16	1 PINT CAN
			PAINT, RED EPOXY	33	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	14	GAL
			PAINT, RUSTOLEUM	2	GAL
			PAINT, SPRAY	213	13oz CAN E
			PAINT, TRAFFIC	128	GAL
			PAINT, WHITE EPOXY (OSHA)	14	KIT
			PAINT, YELLOW GLOSS	27	2 GAL KIT
			PENETRATING OIL	99	3oz CAN
			PERMATEX	25	11oz CAN
			PERMATEX	32	11oz TUBE
			PORTER THINNER,T-5,XYLOL	120	GAL
			PVC SOLVENT CEMENT	8	1 PT CAN
			REFRIGERATION OIL	4	GAL
			RID-LIME	-2	30 GAL DRUM
			RM-S SOLVENT	5	1 QT
			RUST PREVENTIVE LUBRICANT	1	CAN

TABLE A.4.4a

MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Main Maintenance Building (Cont.)	12	A	RUSTOLEUM SURFA ETCH	54	GAL
			SEALANT(JOINT)	1	15' ROLL
			SHELLAC	4	QUART
			SOLUBLE C OIL	1	55 GAL DRUM
			STRIPPING DETERGENT SOAP	3	55 GAL DRUM
			SUPER DE SOIL	6	100# BAG
			THREAD CUTTING OIL	8	5 GAL CAN
			TRISODIUM PHOSPHATE	2	30# CASE
			TUF-N-HARD PAINT	24	GAL
			TURBO OIL	0	55 GAL DRUM
			VACUUM PUMP OIL	38	1 QT BTL
			WASP STOPPER INSECTISIDE	97	12 CAN/CTN
			WD-40 LUBRICANT	278	GAL
			WHITE ROLLMARK INK	7	EA
			WIRE ROPE LUBRICANT	13	35# PAIL
			(CEMENT)SOLVENT CPVC	18	1 PINT CAN
Pilot Plant Wet Side	13	A	ACIDSILL LIQUID	1	50# PAIL
			ACIDSILL POWDER	1	100# DRUM
Pilot Plant Maintenance Building	13	B	ADHESIVE SEALANT	24	TUBE
			GLAZING COMPOUND	1	GAL
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			PAINT	2	GAL
			PAINT THINNER	2	GAL
			PAINT & CONVERTER, EPOXY	1	2 GL=1 KIT
			PAINT, ENAMEL	1	GAL
			PAINT, PRIMER	4	GAL
			PAINT, SPRAY	1	13oz CAN E
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			RID-LIME	1	30 GAL DRUM
			TURBO OIL	1	55 GAL DRUM
Pilot Plant Thorium Tank Farm	13	D	ADHESIVE SEALANT	2	TUBE
Administration Building	14	A	ADHESIVE SEALANT	2	TUBE
			ANHYDROUS AMMONIA	7	100# CYL
			BLASTING GRIT	35	BAG
			CALCIUM SLUFATE DRIERITE	4	5# BTL
			METHANOL	4	16 LITER/C
			METHYL ALCOHOL	4	6# CAN
			PAINT	1	GAL
			PAINT, LATEX	19	GAL
			PAINT, SPRAY	10	13oz CAN E
			PENETRATING OIL	40	3oz CAN
			WASP STOPPER INSECTISIDE	24	12 CAN/CTN
			WD-40 LUBRICANT	29	GAL
			(CEMENT)SOLVENT CPVC	1	1 PINT CAN
Laboratory	15		ACETONE TEN CAN	1529	10 LITER C
			ADHESIVE SEALANT	1213	TUBE
			ALL PURPOSE CLEANER	4	55 GAL DRUM
			AMMONIUM CITRATE	217	1# BTL
			AMMONIUM HYDROXIDE/4# BTL	77	6 EA/CASE
			AMMONIUM OXALATE	43	1 kg BTL
			AMMONIUM THIOCYANATE CRYS	12	1# BTL
			ANALYTICAL ACETONE	18713	2# BTL
			ANHYDROUS AMMONIA	2	100# CYL
			BLACK ROLLMARK INK	14	EA
			BLUE COOLANT	1	55 GAL DRUM
			BORIC ACID	20	LB
			CALCIUM SLUFATE DRIERITE	29	5# BTL
			CHLOROFORM	434	4 LITER BT
			CORLAR #586 ACTIVATOR	1	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Laboratory (Cont.)	15		DENATURED ALCOHOL	7	GAL
			ETHYL ACETATE	202	5 GAL CAN
			ETHYL ALCOHOL	1203	GAL
			FLOOR DRI	7	40# BAG
			FLOOR DRY ABSORB-O-SOX	22	BOX
			FORMULA #205 PAINT	1	SF
			GLACIAL ACETIC ACID	11	5# BTL
			GLAZING COMPOUND	7	GAL
			HYDROCHLORIC ACID/6# BTL	436	6 EA/CASE
			HYDROFLUORIC ACID	272	1# BTL
			HYPREZ FLUID	162	4oz BTL
			KEROSENE DILUENT	1183	LB
			MAGNESIUM PERCHLORATE	20	1# BTL
			METHANOL	18	16 LITER/C
			METHYL ALCOHOL	856	6# CAN
			NEVER-SEEZ LUBRICANT	5	1# CAN
			NITRIC ACID	10216	7# BTL
			OXALIC ACID	22	5# BTL
			PAINT	29	GAL
			PAINT REMOVER	1	QUART
			PAINT THINNER	9	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, DRUM BLACK	1	55 GL DRUM
			PAINT, ENAMEL	13	GAL
			PAINT, LATEX	84	GAL
			PAINT, PRIMER	10	GAL
			PAINT, PVC PRIMER	2	1 PINT CAN
			PAINT, SPRAY	350	13oz CAN E
			PAINT, WHITE EPOXY (OSHA)	1	KIT
			PENETRATING OIL	24	3oz CAN
			PERCHLORIC ACID	792	8# BTL
			PERMATEX	1	11oz TUBE
			PHERANTHROLINE MONOHYDRAT	294	1 GRAM BTL
			PHOSPHORIC ACID/4 LITER B	216	4 BTLS/CASE
			POLY-FLOC BETZ 1110	5	50# BAG
			PORTER THINNER,T-5,XYLOL	5	GAL
			POT CLEANING SOAP	54	45# CASE
			POTASSIUM CARBONATE	0	LB
			POTASSIUM HYDROXIDE	22	LB
			POTASSIUM PRYOSULFATE PDR	28	1# BTL
			RAT BAIT	1	5 GAL/PAIL
			RID-LIME	32	30 GAL DRUM
			RM-S SOLVENT	1	1 QT
			SAUEREISEN CEMENT	2	QUART
			SHELLAC	1	QUART
			SODIUM OXALATE	113	1# BTL
			SULFURIC ACID/9# BLT	58	6 EA/CASE
			SURFACTANT,DETERMICROBOND	2	55 GAL DRUM
			TRIBUTYL PHOSPHATE	1	LB
			TURBO OIL	2	55 GAL DRUM
			URANYL NITRATE CRYSTAL	48	LB
			VACUUM PUMP OIL	795	1 QT BTL
			WASP STOPPER INSECTISIDE	50	12 CAN/CTN
			WD-40 LUBRICANT	82	GAL
			WHITE ROLLMARK INK	3	EA
			WIRE ROPE LUBRICANT	1	35# PAIL
			(CEMENT)SOLVENT CPVC	2	1 PINT CAN
Trailer Substation #1	16	F	ACETONE TEN CAN	4	10 LITER C
General Sump	18	B	1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			ADHESIVE SEALANT	33	TUBE
			ALUMINUM SULFATE	1000	LB
			BETZ 1125 POLYMER	2	55 GAL DRUM

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
General Sump (Cont.)	18	B	BLACK ROLLMARK INK	1	EA
			CARBOLINE PAINT	15	2 GAL KIT
			CARBOMASTIC THINNER	6	GAL
			FLOCCULANT	1	55 GAL DRUM
			FLOOR DRI	3	40# BAG
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			METHANOL	140620	GAL
			MOBILE OIL	2	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	12	1# CAN
			PAINT	4	GAL
			PAINT THINNER	9	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, CARBOMASTIC	14	2 GAL KIT
			PAINT, CHROME	2	GAL
			PAINT, PRIMER	4	GAL
			PAINT, SPRAY	6	13oz CAN E
			PAINT, TERRA	5049	LB
			PERMATEX	1	11oz TUBE
			POLY-FLOC BETZ 1110	158	50# BAG
			PORTER THINNER,T-5,XYLOL	3	GAL
			RM-S SOLVENT	1	1 QT
			SULFURIC ACID	712375	LB
			TURBO OIL	3	55 GAL DRUM
			WASP STOPPER INSECTISIDE	2	12 CAN/CTN
			WD-40 LUBRICANT	13	GAL
			WHITE ROLLMARK INK	2	EA
			WIRE ROPE LUBRICANT	1	35# PAIL
BDN Effluent Treatment Facility	18	H	ADHESIVE SEALANT	3	TUBE
			PAINT THINNER	3	GAL
			PAINT, PRIMER	1	GAL
Main Tank Farm	19	A	ANHYDROUS AMMONIA	20621	LB
			INSECTICIDE	2	EA
			NITRIC ACID	70904	LB
Pilot Plant Ammonia Tank Farm	19	B	ANHYDROUS AMMONIA	8	100# CYL
			ANHYDROUS AMMONIA	113118	LB
Old North Tank Farm	19	D	ADHESIVE SEALANT	6	TUBE
			AMMONIUM HYDROXIDE	-862818	LB
			ANHYDROUS AMMONIA	243861	LB
			ANHYDROUS HYDROFLORC ACID	267140	LB
			AQUEOUS HF	-339058	LB
			CARBOLINE PAINT	4	2 GAL KIT
			CARBOMASTIC THINNER	5	GAL
			CUTTING FLUID	6	16oz CAN
			DENATURED ALCOHOL	1	GAL
			FLUOROLUBE OIL	3	16# CAN
			FORMULA #205 PAINT	1	SF
			KEROSENE	840	GAL
			KEROSENE DILUENT	-751	LB
			LACTITE SEALANT	1	8oz BT
			NEVER-SEEZ LUBRICANT	23	1# CAN
			NITRIC ACID	36	7# BTL
			PAINT REMOVER	1	QUART
			PAINT THINNER	16	GAL
			PAINT & CONVERTER, EPOXY	15	2 GL=1 KIT
			PAINT, CARBOMASTIC	9	2 GAL KIT
			PAINT, ENAMEL	2	GAL
			PAINT, LATEX	4	GAL
			PAINT, PRIMER	12	GAL
			PAINT, PVC PRIMER	2	1 PINT CAN
			PAINT, SPRAY	148	13oz CAN E

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Old North Tank Farm (Cont.)	19	D	PAINT, WHITE EPOXY (OSHA)	3	KIT
			PORTER THINNER,T-5,XYLOL	5	GAL
			PVC SOLVENT CEMENT	2	1 PT CAN
			SEALANT(JOINT)	2	15' ROLL
			SHELLAC	1	QUART
			SILICONE OIL	6	GAL
			THREAD CUTTING OIL	1	5 GAL CAN
			TRIBUTYL PHOSPHATE	0	LB
			WASP STOPPER INSECTISIDE	2	12 CAN/CTN
			WD-40 LUBRICANT	98	GAL
			WIRE ROPE LUBRICANT	6	35# PAIL
			(CEMENT)SOLVENT CPVC	2	1 PINT CAN
Water Plant	20	B	1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			ADHESIVE SEALANT	15	TUBE
			ALUMINUM SULFATE	390330	LB
			AMMONIUM HYDROXIDE/4# BTL	2	6 EA/CASE
			ANALYTICAL ACETONE	96	2# BTL
			ANHYDROUS HYDROFLORC ACID	19750	LB
			ASBESTOS BOARD 4X8	2	SHEET
			BETZ 242 INHIBITOR	3	415# DRUM
			BETZ 508 INHIBITOR	2	500 DRUM
			BETZ COOLING/WATER TRMT	36	500# DRUM
			BETZ COOLING/WATER TRMT	100	625# DRUM
			BLACK ROLLMARK INK	2	EA
			BLASTING GRIT	1	BAG
			CALCIUM SLUFATE DRIERITE	2	5# BTL
			CARBOLINE PAINT	13	2 GAL KIT
			CARBOMASTIC THINNER	6	GAL
			CORROSION INHIBITOR	6	625# DRUM
			CUTTING FLUID	3	16oz CAN
			DENATURED ALCOHOL	6	GAL
			DIESEL FUEL OIL	902	GAL
			ETHYL ALCOHOL	75	GAL
			FERROSPERSE	1	55 GAL DRUM
			FLOOR COATING PAINT	12	KIT
			FLOOR DRI	3	40# BAG
			FORMULA #205 PAINT	3	SF
			FORMULA #502	1	GAL
			FUEL OIL	4	55 GAL DRUM
			GEAR LUBRICANT	1	14-3/4oz CAN
			GLACIAL ACETIC ACID	1	5# BTL
			GLAZING COMPOUND	1	GAL
			GREEN ROLLMARK INK	1	EA
			HYDRATED ALUMINA	1800	LB
			HYDROCHLORIC ACID/6# BTL	21	6 EA/CASE
			INSECTICIDE	2	EA
			KEROSENE	4032	GAL
			METHYL ALCOHOL	18	6# CAN
			MOBILE OIL	2	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	17	1# CAN
			NITRIC ACID	28	7# BTL
			PAINT	1	2 GAL KIT
			PAINT	23	GAL
			PAINT REMOVER	1	QUART
			PAINT THINNER	18	GAL
			PAINT & CONVERTER, EPOXY	12	2 GL=1 KIT
			PAINT, CARBOMASTIC	6	2 GAL KIT
			PAINT, ENAMEL	9	GAL
			PAINT, LATEX	11	GAL
			PAINT, PRIMER	23	GAL
			PAINT, PVC PRIMER	1	1 PINT CAN
			PAINT, RED EPOXY	4	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	20	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Water Plant (Cont.)	20	B	PAINT, SPRAY	50	13oz CAN E
			PAINT, WHITE EPOXY (OSHA)	2	KIT
			PERCHLORETHYLENE	2	55 GAL DRUM
			PERMATEX	1	11oz TUBE
			PHOSPHORIC ACID/4 LITER B	2	4 BTLS/CASE
			POLY-FLOC BETZ 1110	4	50# BAG
			PORTER THINNER,T-5,XYLOL	16	GAL
			SODIUM HYPOCHLORITE	110	55 GAL DRUM
			SULFURIC ACID	323697	LB
			SULFURIC ACID/9# BLT	29	6 EA/CASE
			TRANSIT SIDING 4X8	12	SHEET
			VACUUM PUMP OIL	24	1 QT BTL
			WASP STOPPER INSECTISIDE	15	12 CAN/CTN
			WD-40 LUBRICANT	137	GAL
			WIRE ROPE LUBRICANT	12	35# PAIL
			(CEMENT)SOLVENT CPVC	2	1 PINT CAN
Digester & Control Building	25	E	ADHESIVE SEALANT	7	TUBE
			ALUMINUM SULFATE	0	LB
			BETZ COOLING/WATER TRMT	0	500# DRUM
			BETZ COOLING/WATER TRMT	0	625# DRUM
			BETZ NEUTRAMEEN	2	55 GAL DRUM
			CARBOLINE PAINT	3	2 GAL KIT
			CARBOMASTIC THINNER	2	GAL
			DENATURED ALCOHOL	2	GAL
			DISODIUM PHOSPHATE	300	LB
			DTE OIL	1	55 GAL DRUM
			FERROSPERSE	3	55 GAL DRUM
			GRAPHITE LUBRICANT	1	1# BOX
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			INSECTICIDE	12	EA
			LACTITE SEALANT	1	8oz BT
			METHYL ALCOHOL	1	6# CAN
			NEVER-SEEZ LUBRICANT	35	1# CAN
			NITRIC ACID	6	7# BTL
			PAINT	21	GAL
			PAINT REMOVER	1	QUART
			PAINT THINNER	9	GAL
			PAINT & CONVERTER, EPOXY	3	2 GL=1 KIT
			PAINT, CARBOMASTIC	1	2 GAL KIT
			PAINT, LATEX	23	GAL
			PAINT, PRIMER	17	GAL
			PAINT, RED EPOXY	3	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	3	GAL
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PENETRATING OIL	3	3oz CAN
			SODIUM HYPOCHLORITE	3	55 GAL DRUM
			SULFURIC ACID/9# BLT	1	6 EA/CASE
			TRISODIUM PHOSPHATE	1	30# CASE
			WASP STOPPER INSECTISIDE	21	12 CAN/CTN
			WD-40 LUBRICANT	12	GAL
			WIRE ROPE LUBRICANT	12	35# PAIL
Sludge Drying Beds	25	F	LUBRICATING OIL	6	5 GAL CAN
			NEVER-SEEZ LUBRICANT	4	1# CAN
			WD-40 LUBRICANT	1	GAL
			WIRE ROPE LUBRICANT	1	35# PAIL
Tricling Filters	25	H	WIRE ROPE LUBRICANT	6	35# PAIL
Security Building	28	A	ADHESIVE SEALANT	4	TUBE
			CORRUGATED ASBESTOS SHEET	1	42inX12ft
			DENATURED ALCOHOL	1	GAL
			FLOOR DRI	8	40# BAG

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Security Building (Cont.)	28	A	FORMULA #502	1	GAL
			GLAZING COMPOUND	2	GAL
			HYDROCHLORIC ACID	14400	GAL
			INSECTICIDE	5	EA
			PAINT	12	GAL
			PAINT THINNER	7	GAL
			PAINT & CONVERTER, EPOXY	8	2 GL=1 KIT
			PAINT, ENAMEL	12	GAL
			PAINT, LATEX	26	GAL
			PAINT, PRIMER	1	GAL
			PAINT, SPRAY	8	13oz CAN E
			PAINT, WHITE EPOXY (OSHA)	4	KIT
			PORTER THINNER,T-5,XYLOL	2	GAL
			WASP STOPPER INSECTISIDE	13	12 CAN/CTN
			WD-40 LUBRICANT	15	GAL
Human Resources Building	28	B	ADHESIVE SEALANT	22	TUBE
			DENATURED ALCOHOL	1	GAL
			GLAZING COMPOUND	10	GAL
			NEVER-SEEZ LUBRICANT	1	1# CAN
			PAINT	22	GAL
			PAINT REMOVER	3	QUART
			PAINT THINNER	2	GAL
			PAINT, CHROME	1	GAL
			PAINT, ENAMEL	4	GAL
			PAINT, LATEX	65	GAL
			PAINT, PRIMER	2	GAL
			PAINT, SPRAY	1	13oz CAN E
			PORTER THINNER,T-5,XYLOL	11	GAL
			RUSTOLEUM SURFA ETCH	1	GAL
			SHELLAC	1	QUART
			TRANSIT SIDING 4X8	2	SHEET
			WASP STOPPER INSECTISIDE	5	12 CAN/CTN
			WD-40 LUBRICANT	4	GAL
Engine House/Garage	31	A	1,1,1 TRICHLOROETHANE	27	55 GAL DRUM
			ADHESIVE SEALANT	49	TUBE
			ALL PURPOSE CLEANER	11	55 GAL DRUM
			ANTI-FREEZE COOLANT	29	55 GAL DRUM
			BLACK ROLLMARK INK	3	EA
			CHEVRON LUBRICANT	17	120# DRUM
			CUTTING FLUID	2	16oz CAN
			DIESEL FUEL OIL	22970	GAL
			EPOXY ADHESIVE	6	EA
			FLOOR DRI	541	40# BAG
			FUEL OIL	1	55 GAL DRUM
			FYRQUEL #150 FLUID	3	55 GAL DRUM
			GASOHOL	198532	GAL
			GASOLINE	3956	GAL
			GEAR LUBRICANT	49	14-3/4oz CAN
			GLAZING COMPOUND	3	GAL
			HI TEMP GREASE	1	120# DRUM
			HIGH VACUUM LUBRICANT	2	8# CAN
			HYDRAULIC FLUID	42	GAL
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			INSECTICIDE	1	EA
			L-O SALVAREX GREASE	1	120# DRUM
			LUBRITE #130 MOBILE OIL	8	55 GAL DRUM
			METHYL ALCOHOL	2	6# CAN
			MINERAL SPIRITS	1	55 GL DRUM
			MOBILE OIL	3	55 GAL DRUM
			MOBILE VELOCITE	1	16 GAL DAN
			MOBILUBE	14	120# DRUM
			MOTOR OIL	147	55 GAL DRUM

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Component	Component Designation		Material	Quantities	Units of Measure
Engine House/Garage (Cont.)	31	A	MULTI-PURPOSE GREASE	1	120# DRUM
			NEVER-SEEZ LUBRICANT	1	1# CAN
			NON-DETERGENT MOTOR OIL	1	QUART
			PAINT	11	2 GAL KIT
			PAINT	35	GAL
			PAINT THINNER	24	GAL
			PAINT & CONVERTER, EPOXY	2	2 GL=1 KIT
			PAINT, ALUMINUM	3	GAL
			PAINT, CHROME	2	GAL
			PAINT, LATEX	124	GAL
			PAINT, PRIMER	16	GAL
			PAINT, PVC PRIMER	1	1 PINT CAN
			PAINT, RED EPOXY	2	2 GL=1 KIT
			PAINT, SPRAY	111	13oz CAN E
			PAINT, YELLOW GLOSS	10	2 GAL KIT
			PENETRATING OIL	3	3oz CAN
			PERMATEX	1	11oz TUBE
			PORTER THINNER,T-5,XYLOL	6	GAL
			RED ROLLMARK INK	2	EA
			RM-S SOLVENT	1	1 QT
			WASP STOPPER INSECTISIDE	130	12 CAN/CTN
			WD-40 LUBRICANT	92	GAL
			WHITE ROLLMARK INK	2	EA
			WIRE ROPE LUBRICANT	13	35# PAIL
			(CEMENT)SOLVENT CPVC	1	1 PINT CAN
Pilot Plant Annex	37		1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			ADHESIVE SEALANT	17	TUBE
			ANHYDROUS AMMONIA	0	LB
			BLASTING GRIT	822	BAG
			EPOXY FLOOR RESIN	8	9.2# CAN
			EPOXY FLOOR SURFACER	8	.75# CAN
			FLOOR DRI	39	40# BAG
			GREEN ROLLMARK INK	24	EA
			HIGH VACUUM LUBRICANT	3	8# CAN
			HYDRAULIC FLUID	8	55 GAL DRUM
			NEVER-SEEZ LUBRICANT	1	1# CAN
			PAINT	1	2 GAL KIT
			PAINT	8	GAL
			PAINT REMOVER	1	QUART
			PAINT THINNER	3	GAL
			PAINT, ENAMEL	5	GAL
			PAINT, LATEX	5	GAL
			PAINT, PRIMER	3	GAL
			PAINT, SPRAY	139	13oz CAN E
			PAINT, TRAFFIC	3	GAL
			PAINT, YELLOW GLOSS	1	2 GAL KIT
			PENETRATING OIL	2	3oz CAN
			PORTER THINNER,T-5,XYLOL	2	GAL
			REFRIGERATION OIL	1	GAL
			TURBO OIL	2	55 GAL DRUM
			WASP STOPPER INSECTISIDE	14	12 CAN/CTN
			WD-40 LUBRICANT	34	GAL
			WIRE ROPE LUBRICANT	1	35# PAIL
			YTTRIUM OXIDE COATING	1	GAL
Incinerator Building	39	A	ALL PURPOSE CLEANER	1	55 GAL DRUM
			ANHYDROUS HYDROFLORC ACID	-1000	LB
			CALCINED MAGNESITE	20000	LB
			CARBOLINE PAINT	1	2 GAL KIT
			CARBOMASTIC THINNER	1	GAL
			FLOOR DRI	518	40# BAG
			FLOOR FINISH	1	55 GAL DRUM
			FORMULA #205 PAINT	1	SF

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Incinerator Building (Cont.)	39	A	NEVER-SEEZ LUBRICANT	30	1# CAN
			PAINT	1	GAL
			PAINT THINNER	1	GAL
			PAINT, CARBOMASTIC	1	2 GAL KIT
			PAINT, SPRAY	192	13oz CAN E
			SEALANT(JOINT)	4	15' ROLL
Heavy Equipment Building	46		DIESEL FUEL OIL	20034	GAL
			FLOOR DRI	10	40# BAG
			GASOHOL	33283	GAL
			GASOLINE	2518	GAL
			MOTOR OIL	1	55 GAL DRUM
			WD-40 LUBRICANT	12	GAL
Health & Safety Building	53	A	ADHESIVE SEALANT	24	TUBE
			AMMONIUM HYDROXIDE/4# BTL	1	6 EA/CASE
			ANALYTICAL ACETONE	36	2# BTL
			ANHYDROUS AMMONIA	6	100# CYL
			BLACK ROLLMARK INK	1	EA
			CALCIUM SLUFATE DRIERITE	3	5# BTL
			CUTTING FLUID	2	16oz CAN
			DENATURED ALCOHOL	2	GAL
			DIESEL FUEL OIL	10	GAL
			ETHYL ALCOHOL	3	GAL
			FLOOR DRI	45	40# BAG
			FLOOR DRY ABSORB-O-SOX	3	BOX
			FLOOR FINISH	1	55 GAL DRUM
			FLUSHING SOLVENT	1	QUART
			FORMULA #205 PAINT	2	SF
			GASOHOL	7070	GAL
			GASOLINE	347	GAL
			GLACIAL ACETIC ACID	1	5# BTL
			GLAZING COMPOUND	1	GAL
			HIGH VACUUM LUBRICANT	1	8# CAN
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			HYDROFLUORIC ACID	102	1# BTL
			HYPREZ FLUID	11	4oz BTL
			INSECTICIDE	5	EA
			NEVER-SEEZ LUBRICANT	2	1# CAN
			NITRIC ACID	766	7# BTL
			PAINT	46	GAL
			PAINT REMOVER	4	QUART
			PAINT THINNER	1	GAL
			PAINT, ENAMEL	204	GAL
			PAINT, LATEX	41	GAL
			PAINT, PRIMER	21	GAL
			PAINT, RUBBER BASE CEMENT	3	GAL
			PAINT, RUSTOLEUM	3	GAL
			PAINT, SPRAY	138	13oz CAN E
			PENETRATING OIL	5	3oz CAN
			PERMACOL	1	400# DRUM
			PORTER THINNER,T-5,XYLOL	5	GAL
			POTASSIUM HYDROXIDE	2	LB
			RED ROLLMARK INK	12	EA
			RID-LIME	60	30 GAL DRUM
			SHELLAC	2	QUART
			SULFURIC ACID/9# BLT	8	6 EA/CASE
			TRISODIUM PHOSPHATE	1	30# CASE
			WASP STOPPER INSECTISIDE	157	12 CAN/CTN
			WD-40 LUBRICANT	11	GAL

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Six to Four Reduction Facility #1	54	A	1,1,1 TRICHLOROETHANE	6	55 GAL DRUM
			ADHESIVE SEALANT	261	TUBE
			ALL PURPOSE CLEANER	3	55 GAL DRUM
			AMMONIUM OXALATE	5	1 kg BTL
			ANHYDROUS AMMONIA	795859	LB
			AQUEOUS HF	-415103	LB
			BLACK ROLLMARK INK	13	EA
			BLASTING GRIT	110	BAG
			BLUE ROLLMARK INK	1	EA
			CHEVRON LUBRICANT	2	120# DRUM
			CUTTING FLUID	6	16oz CAN
			DENATURED ALCOHOL	2	GAL
			DIESEL FUEL OIL	14343	GAL
			DTE OIL	1	55 GAL DRUM
			FLOOR DRI	99	40# BAG
			FLUOROLUBE OIL	1	16# CAN
			FYRQUEL #150 FLUID	2	55 GAL DRUM
			GARGOYLE OIL	1	400# DRUM
			GASOHOL	514	GAL
			GEAR LUBRICANT	1	14-3/4oz CAN
			GREEN ROLLMARK INK	25	EA
			HIGH VACUUM LUBRICANT	2	8# CAN
			HYDROCHLORIC ACID/6# BTL	1	6 EA/CASE
			INSECTICIDE	19	EA
			LACTITE SEALANT	6	8oz BT
			NEVER-SEEZ LUBRICANT	65	1# CAN
			NITRIC ACID	0	LB
			NON-DETERGENT MOTOR OIL	4	QUART
			OXALIC ACID	1	5# BTL
			PAINT	12	GAL
			PAINT REMOVER	2	GAL
			PAINT THINNER	20	GAL
			PAINT & CONVERTER, EPOXY	15	2 GL=1 KIT
			PAINT, ENAMEL	4	GAL
			PAINT, LATEX	6	GAL
			PAINT, METAL PRIMER	2	GAL
			PAINT, PRIMER	9	GAL
			PAINT, PVC PRIMER	1	1 PINT CAN
			PAINT, SPRAY	570	13oz CAN E
			PAINT, YELLOW GLOSS	10	2 GAL KIT
			PENETRATING OIL	17	3oz CAN
			PORTER THINNER,T-5,XYLOL	10	GAL
			RED ROLLMARK INK	14	EA
			REFRIGERATION OIL	2	GAL
			RM-S SOLVENT	4	1 QT
			RUSTOLEUM SURFA ETCH	40	GAL
			SYNTHETIC GREASE/24oz	3	CARTRIDGE
			TURBO OIL	3	55 GAL DRUM
			VACUUM PUMP OIL	2	1 QT BTL
			VISOLITE COMPOUND	6	300# DRUM
			VISOLITE COMPOUND	21	5# CAN
			WASP STOPPER INSECTISIDE	106	12 CAN/CTN
			WD-40 LUBRICANT	353	GAL
			WHITE ROLLMARK INK	13	EA
			WIRE ROPE LUBRICANT	41	35# PAIL
			(CEMENT)SOLVENT CPVC	2	1 PINT CAN
CP Storage Warehouse	56	A	ADHESIVE SEALANT	3	TUBE
			ASBESTOS BOARD 4X8	4	SHEET
KC-2 Warehouse	63		RUSTOLEUM SURFA ETCH	34	GAL

TABLE A.4.4a

MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Thorium Warehouse	64		ADHESIVE SEALANT	1	TUBE
			ANTI-FREEZE COOLANT	1	55 GAL DRUM
			DIESEL FUEL OIL	231	GAL
			FLOOR DRI	12	40# BAG
			FYRQUEL #150 FLUID	1	55 GAL DRUM
			HIGH VACUUM LUBRICANT	1	8# CAN
			PAINT	13	GAL
			PAINT THINNER	1	GAL
			PAINT, PRIMER	5	GAL
			WASP STOPPER INSECTISIDE	15	12 CAN/CTN
			WD-40 LUBRICANT	1	GAL
Drum Reconditioning Building	66		1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			ACETONE TEN CAN	2	10 LITER C
			ADHESIVE SEALANT	57	TUBE
			ALL PURPOSE CLEANER	1	55 GAL DRUM
			ANALYTICAL ACETONE	18	2# BTL
			ASBESTOS BOARD 4X8	1	SHEET
			CHEVRON LUBRICANT	2	120# DRUM
			CLEAR INT. DRUM COATING	116	55 GL DRUM
			DENATURED ALCOHOL	2	GAL
			FLOOR DRI	100	40# BAG
			GLAZING COMPOUND	1	GAL
			KEROSENE DILUENT	514	LB
			MOBILE OIL	33	55 GAL DRUM
			NITRIC ACID	6	7# BTL
			PAINT	94	GAL
			PAINT REMOVER	23	GAL
			PAINT THINNER	7	GAL
			PAINT, DRUM BLACK	136	55 GL DRUM
			PAINT, DRUM RED	21	55 GL DRUM
			PAINT, ENAMEL	15	GAL
			PAINT, SPRAY	120	13oz CAN E
			PORTER THINNER,T-5,XYLOL	2	GAL
			RUSTOLEUM SURFA ETCH	4	GAL
			VISOLITE COMPOUND	12	5# CAN
			WASP STOPPER INSECTISIDE	2	12 CAN/CTN
			WD-40 LUBRICANT	25	GAL
			WIRE ROPE LUBRICANT	12	35# PAIL
			XYLOL OR XYLENE THINNER	20	55 DL DRUM
Decontamination Building	69		1,1,1 TRICHLOROETHANE	2	55 GAL DRUM
			ACIDSILL LIQUID	12	50# PAIL
			ACIDSILL POWDER	10	100# DRUM
			ADHESIVE SEALANT	18	TUBE
			BLACK ROLLMARK INK	27	EA
			CLEANING COMPOUND	0	500# DRUM
			FLOOR DRI	64	40# BAG
			FLOOR DRY ABSORB-O-SOX	3	BOX
			GEAR LUBRICANT	2	14-3/4oz CAN
			GLAZING COMPOUND	2	GAL
			HYDROCHLORIC ACID	204819	GAL
			HYDROCHLORIC ACID/6# BTL	19	6 EA/CASE
			INSECTICIDE	12	EA
			KEROSENE DILUENT	1018	LB
			NEVER-SEEZ LUBRICANT	1	1# CAN
			NITRIC ACID	36977	LB
			PAINT	1	GAL
			PAINT REMOVER	13	GAL
			PAINT THINNER	48	GAL
			PAINT & CONVERTER, EPOXY	2	2 GL=1 KIT
			PAINT, ENAMEL	1	GAL
			PAINT, LATEX	2	GAL
			PAINT, PRIMER	3	GAL

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Component	Component Designation		Material	Quantities	Units of Measure
Decontamination Building (Cont.)	69		PAINT, RED EPOXY	1	2 GL=1 KIT
			PAINT, SPRAY	1046	13oz CAN E
			PAINT, WHITE EPOXY (OSHA)	12	KIT
			PAINT, YELLOW GLOSS	4	2 GAL KIT
			PORTER THINNER,T-5,XYLOL	1	GAL
			RED ROLLMARK INK	7	EA
			RM-S SOLVENT	12	1 QT
			WASP STOPPER INSECTISIDE	39	12 CAN/CTN
			WD-40 LUBRICANT	79	GAL
			WHITE ROLLMARK INK	43	EA
			WIRE ROPE LUBRICANT	19	35# PAIL
Plant 4 Pad	74	E	MINERAL SPIRITS	1	55 GL DRUM
			PORTER THINNER,T-5,XYLOL	6	GAL
Plant 1 Storage Pad	74	T	1,1,1 TRICHLOROETHANE	1	55 GAL DRUM
			ADHESIVE SEALANT	11207	TUBE
			ALL PURPOSE CLEANER	2	55 GAL DRUM
			BLACK ROLLMARK INK	86	EA
			CALCINED MAGNESITE	0	LB
			CLEAR INT. DRUM COATING	2	55 GL DRUM
			FLOOR DRI	330	40# BAG
			FLOOR DRY ABSORB-O-SOX	16	BOX
			FORMULA #205 PAINT	2	SF
			GREEN ROLLMARK INK	24	EA
			INSECTICIDE	3	EA
			MOBILE OIL	1	55 GAL DRUM
			NON-DETERGENT MOTOR OIL	1	QUART
			PAINT	1	2 GAL KIT
			PAINT	174	GAL
			PAINT REMOVER	3	QUART
			PAINT THINNER	34	GAL
			PAINT & CONVERTER, EPOXY	24	2 GL=1 KIT
			PAINT, DRUM BLACK	7	55 GL DRUM
			PAINT, DRUM RED	1	55 GL DRUM
			PAINT, ENAMEL	2	GAL
			PAINT, EPOXY	21	KIT
			PAINT, PRIMER	4	GAL
			PAINT, RUBBER BASE CEMENT	2	GAL
			PAINT, SPRAY	560	13oz CAN E
			PAINT, TRAFFIC	80	GAL
			PORTER THINNER,T-5,XYLOL	3	GAL
			RED ROLLMARK INK	24	EA
			RM-S SOLVENT	24	1 QT
			RUSTOLEUM SURFA ETCH	37	GAL
			STRIPPING DETERGENT SOAP	1	55 GAL DRUM
			WASP STOPPER INSECTISIDE	66	12 CAN/CTN
			WD-40 LUBRICANT	136	GAL
			WHITE ROLLMARK INK	329	EA
			XYLOL OR XYLENE THINNER	4	55 DL DRUM
Underground Storage Tanks	G-007		FLOOR DRI	8	40# BAG
			FLOOR DRY ABSORB-O-SOX	1	BOX
			PAINT, CHROME	1	GAL
			PAINT, SPRAY	3	13oz CAN E
Aboveground Storage Tanks	G-008		FORMULA #205 PAINT	2	SF
			PAINT	25	GAL
			PAINT, METAL PRIMER	2	GAL
			PAINT, PRIMER	2	GAL
			WD-40 LUBRICANT	1	GAL
Unknown			1,1,1 TRICHLOROETHANE	108	55 GAL DRUM
			ADHESIVE SEALANT	1945	TUBE

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TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Unknown (Cont.)			ALL PURPOSE CLEANER	12	55 GAL DRUM
			AMMONIUM CITRATE	3	1# BTL
			AMMONIUM HYDROXIDE/4# BTL	2	6 EA/CASE
			ANALYTICAL ACETONE	1456	2# BTL
			ANHYDROUS AMMONIA	4	100# CYL
			ANHYDROUS ETHER	3	5# BTL
			ANTI-FREEZE COOLANT	10	55 GAL DRUM
			AQUEOUS HF	107447	LB
			ASBESTOS BOARD 4X8	12	SHEET
			BARIUM CARBONATE	1750	LB
			BLACK ROLLMARK INK	8	EA
			BLUE COOLANT	1	55 GAL DRUM
			BORIC ACID	4	LB
			CALCINED MAGNESITE	8450	LB
			CALCIUM SLUFATE DRIERITE	15	5# BTL
			CARBOLINE PAINT	111	2 GAL KIT
			CARBOMASTIC THINNER	45	GAL
			CHEVRON LUBRICANT	8	120# DRUM
			COIL CLEANER	50	GAL
			CORLAR #576 THINNER	13	GAL
			CORLAR #586 ACTIVATOR	1	GAL
			CORRUGATED ASBESTOS SHEET	3	42inX12ft
			CUTTING FLUID	19	16oz CAN
			CUTTING OIL	1	55 GAL DRUM
			DENATURED ALCOHOL	25	GAL
			DIESEL FUEL OIL	48407	GAL
			DIGESTER	2	QUART
			EPOXY ENAMEL	1	2GL/KIT
			EPOXY FLOOR RESIN	0	9.2# CAN
			ETHYL ALCOHOL	24	GAL
			FERROSPERSE	1	55 GAL DRUM
			FLOOR COATING PAINT	8	KIT
			FLOOR DRI	241	40# BAG
			FLOOR DRY ABSORB-O-SOX	6	BOX
			FORMULA #205 PAINT	21	SF
			FORMULA #502	7	GAL
			FUEL OIL	7	55 GAL DRUM
			GARIA CUTTING OIL	4	55 GAL DRUM
			GASOHOL	21668	GAL
			GASOLINE	6123	GAL
			GEAR LUBRICANT	19	14-3/4oz CAN
			GLACIAL ACETIC ACID	2	5# BTL
			GLAZING COMPOUND	28	GAL
			HEAT TREAT SALT	400	LB
			HIGH VACUUM LUBRICANT	5	8# CAN
			HYDRAULIC FLUID	19	GAL
			HYDROCHLORIC ACID	12820	GAL
			HYDROCHLORIC ACID/6# BTL	12	6 EA/CASE
			HYDROFLUORIC ACID	299	1# BTL
			HYPREZ FLUID	6	4oz BTL
			INSECTICIDE	17	EA
			KEROSENE	2121	GAL
			LACQUIC ACTIVATOR	2	6oz CAN EA
			LACTITE SEALANT	8	8oz BT
			LEADOLENE OIL	1	GAL
			LINSEED OIL	5	GAL
			L-O SALVAREX GREASE	2	120# DRUM
			LUBRICATING OIL	5	5 GAL CAN
			LUBRITE #130 MOBILE OIL	6	55 GAL DRUM
			METHYL ALCOHOL	2	6# CAN
			MINERAL SPIRITS	11	55 GL DRUM
			MOBILE OIL	9	55 GAL DRUM
			MOBILUBE	11	120# DRUM
			MOTOR OIL	50	55 GAL DRUM

TABLE A.4.4a
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Component	Component Designation		Material	Quantities	Units of Measure
Unknown (Cont.)			MULTI-PURPOSE GREASE	6	120# DRUM
			NEVER-SEEZ LUBRICANT	387	1# CAN
			NITRIC ACID	158	7# BTL
			NITRIC ACID	33535	LB
			NON-DETERGENT MOTOR OIL	6	QUART
			PAINT	168	GAL
			PAINT REMOVER	18	GAL
			PAINT THINNER	185	GAL
			PAINT & CONVERTER, EPOXY	5	2 GL=1 KIT
			PAINT, ALUMINUM	4	GAL
			PAINT, CARBOMASTIC	85	2 GAL KIT
			PAINT, CHROME	1	GAL
			PAINT, ENAMEL	95	GAL
			PAINT, LATEX	156	GAL
			PAINT, METAL PRIMER	35	GAL
			PAINT, OIL BASE	8	GAL
			PAINT, PRIMER	92	GAL
			PAINT, RED EPOXY	12	2 GL=1 KIT
			PAINT, RUBBER BASE CEMENT	1	GAL
			PAINT, RUST INHIBITIV ALUM	1	13oz CAN E
			PAINT, SPRAY	1291	13oz CAN E
			PAINT, TERRA	-400	LB
			PAINT, TRAFFIC	2	GAL
			PAINT, YELLOW GLOSS	16	2 GAL KIT
			PENETRATING OIL	74	3oz CAN
			PERCHLORETHYLENE	2	55 GAL DRUM
			PERCHLORIC ACID	4	8# BTL
			PERMACOL	1	400# DRUM
			PERMATEX	134	11oz CAN
			PHERANTHROLINE MONOHYDRAT	-5	1 GRAM BTL
			PHOSPHORIC ACID/4 LITER B	1	4 BTLS/CAS
			POLY-FLOC BETZ 1110	2	50# BAG
			PORTER THINNER,T-5,XYLOL	80	GAL
			POT CLEANING SOAP	3	45# CASE
			POTASSIUM CARBONATE	200	LB
			POTASSIUM HYDROXIDE	29	LB
			POTASSIUM PRYOSULFATE PDR	6	1# BTL
			PVC SOLVENT CEMENT	1	1 PT CAN
			RECLAIMED 1,1,1 TRICHLOROETHANE	16	55 GAL DRUM
			REFRIGERATION OIL	2	GAL
			RID-LIME	146	30 GAL DRUM
			RUST PREVENTIVE LUBRICANT	1	CAN
			RUSTOLEUM SURFA ETCH	12	GAL
			SAUEREISEN CEMENT	5	QUART
			SHELLAC	8	QUART
			SOLUBLE C OIL	-7	55 GAL DRUM
			STRIPPING DETERGENT SOAP	1	55 GAL DRUM
			SULFURIC ACID/9# BLT	7	6 EA/CASE
			SUN-WAY LUBRICANT	1	420# DRUM
			SUPER CUT #S-5 COOLANT	2	5 GAL CAN
			SUPER DE SOIL	6	100# BAG
			THREAD CUTTING OIL	7	5 GAL CAN
			TRANSIT SIDING 4X8	-3	SHEET
			TRISODIUM PHOSPHATE	4	30# CASE
			TUF-N-HARD PAINT	3	GAL
			TURBO OIL	4	55 GAL DRUM
			TURPENTINE GUM SPIRITS	5	55 GAL DRUM
			VACUUM PUMP OIL	37	1 QT BTL
			WASP STOPPER INSECTISIDE	161	12 CAN/CTN
			WD-40 LUBRICANT	1201	GAL
			WHITE ROLLMARK INK	12	EA
			WIRE ROPE LUBRICANT	175	35# PAIL
			(CEMENT)SOLVENT CPVC	2	1 PINT CAN

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Material	Component	Component Designation		Quantities	Units of Measure
1,1,1 TRICHLOROETHANE	Preparation Plant	1	A	1	55 GAL DRUM
	Ore Refinery Plant	2	A	6	55 GAL DRUM
	NAR Towers	3	D	2	55 GAL DRUM
	Green Salt Plant	4	A	10	55 GAL DRUM
	Plant 4 Maintenance Building	4	C	2	55 GAL DRUM
	Metals Production Plant	5	A	34	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	33	55 GAL DRUM
	Recovery Plant	8	A	21	55 GAL DRUM
	Special Products Plant	9	A	15	55 GAL DRUM
	Boiler Plant	10	A	38	55 GAL DRUM
	Service Building	11		2	55 GAL DRUM
	Main Maintenance Building	12	A	46	55 GAL DRUM
	General Sump	18	B	1	55 GAL DRUM
	Water Plant	20	B	1	55 GAL DRUM
	Engine House/Garage	31	A	27	55 GAL DRUM
	Pilot Plant Annex	37		1	55 GAL DRUM
	Six to Four Reduction Facility #1	54	A	6	55 GAL DRUM
	Drum Reconditioning Building	66		1	55 GAL DRUM
	Decontamination Building	69		2	55 GAL DRUM
	Plant 1 Storage Pad	74	T	1	55 GAL DRUM
	Unknown			108	55 GAL DRUM
ACETONE TEN CAN	Metals Fabrication Warehouse	6	A	21	10 LITER C
	Laboratory	15		1529	10 LITER C
	Trailer Substation #1	16	F	4	10 LITER C
	Drum Reconditioning Building	66		2	10 LITER C
ACIDSILL LIQUID	Preparation Plant	1	A	1	50# PAIL
	Ore Refinery Plant	2	A	8	50# PAIL
	NAR Towers	3	D	6	50# PAIL
	Hot Raffinate Building	3	E	15	50# PAIL
	Refinery Sump	3	H	1	50# PAIL
	Metals Fabrication Warehouse	6	A	14	50# PAIL
	Plant 6 Salt Oil Heat Treat Building	6	F	1	50# PAIL
	Recovery Plant	8	A	5	50# PAIL
	Plant 8 Maintenance Building	8	B	2	50# PAIL
	Special Products Plant	9	A	4	50# PAIL
	Pilot Plant Wet Side	13	A	1	50# PAIL
	Decontamination Building	69		12	50# PAIL
ACIDSILL POWDER	Preparation Plant	1	A	1	100# DRUM
	Ore Refinery Plant	2	A	6	100# DRUM
	NAR Towers	3	D	4	100# DRUM
	Hot Raffinate Building	3	E	12	100# DRUM
	Refinery Sump	3	H	1	100# DRUM
	Metals Fabrication Warehouse	6	A	12	100# DRUM
	Recovery Plant	8	A	7	100# DRUM
	Plant 8 Maintenance Building	8	B	2	100# DRUM
	Special Products Plant	9	A	2	100# DRUM
	Pilot Plant Wet Side	13	A	1	100# DRUM
	Decontamination Building	69		10	100# DRUM
ADHESIVE SEALANT	Preparation Plant	1	A	63	TUBE
	Plant 1 Storage Building	1	B	10	TUBE
	Ore Refinery Plant	2	A	157	TUBE
	Maintenance Building	3	A	25	TUBE
	NAR Towers	3	D	6	TUBE
	Hot Raffinate Building	3	E	16	TUBE
	Green Salt Plant	4	A	138	TUBE
	Plant 4 Maintenance Building	4	C	32	TUBE
	Metals Production Plant	5	A	2299	TUBE
	Metals Fabrication Warehouse	6	A	57	TUBE
	Plant 6 Salt Oil Heat Treat Building	6	F	26	TUBE
	Recovery Plant	8	A	393	TUBE
	Plant 8 Maintenance Building	8	B	28	TUBE
	Plant 8 Old Drum Washer	8	F	4	TUBE
	Special Products Plant	9	A	148	TUBE
	Boiler Plant	10	A	60	TUBE

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
ADHESIVE SEALANT (Cont.)	Boiler Plant Maintenance Building	10	B	24	TUBE
	Service Building	11		15	TUBE
	Main Maintenance Building	12	A	677	TUBE
	Pilot Plant Maintenance Building	13	B	24	TUBE
	Pilot Plant Thorium Tank Farm	13	D	2	TUBE
	Administration Building	14	A	2	TUBE
	Laboratory	15		1213	TUBE
	General Sump	18	B	33	TUBE
	BDN Effluent Treatment Facility	18	H	3	TUBE
	Old North Tank Farm	19	D	6	TUBE
	Water Plant	20	B	15	TUBE
	Digester & Control Building	25	E	7	TUBE
	Security Building	28	A	4	TUBE
	Human Resources Building	28	B	22	TUBE
	Engine House/Garage	31	A	49	TUBE
	Pilot Plant Annex	37		17	TUBE
	Health & Safety Building	53	A	24	TUBE
	Six to Four Reduction Facility #1	54	A	261	TUBE
	CP Storage Warehouse	56	A	3	TUBE
	Thorium Warehouse	64		1	TUBE
	Drum Reconditioning Building	66		57	TUBE
	Decontamination Building	69		18	TUBE
	Plant 1 Storage Pad	74	T	11207	TUBE
	Unknown			1945	TUBE
ALL PURPOSE CLEANER	Preparation Plant	1	A	3	55 GAL DRUM
	Maintenance Building	3	A	1	55 GAL DRUM
	Green Salt Plant	4	A	12	55 GAL DRUM
	Metals Production Plant	5	A	190	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	114	55 GAL DRUM
	Recovery Plant	8	A	20	55 GAL DRUM
	Special Products Plant	9	A	140	55 GAL DRUM
	Service Building	11		3	55 GAL DRUM
	Laboratory	15		4	55 GAL DRUM
	Engine House/Garage	31	A	11	55 GAL DRUM
	Incinerator Building	39	A	1	55 GAL DRUM
	Six to Four Reduction Facility #1	54	A	3	55 GAL DRUM
	Drum Reconditioning Building	66		1	55 GAL DRUM
	Plant 1 Storage Pad	74	T	2	55 GAL DRUM
	Unknown			12	55 GAL DRUM
ALUMINUM SULFATE	Ore Refinery Plant	2	A	3500	LB
	General Sump	18	B	1000	LB
	Water Plant	20	B	390330	LB
	Digester & Control Building	25	E	0	LB
AMMONIUM CITRATE	Laboratory	15		217	1# BTL
	Unknown			3	1# BTL
AMMONIUM HYDROXIDE	Metals Fabrication Warehouse	6	A	771572	LB
	Special Products Plant	9	A	67362	LB
	Plant 9 Sump Treatment Facility	9	B	12248	LB
	Old North Tank Farm	19	D	-862818	LB
AMMONIUM HYDROXIDE/4# BTL	Laboratory	15		77	6 EA/CASE
	Water Plant	20	B	2	6 EA/CASE
	Health & Safety Building	53	A	1	6 EA/CASE
	Unknown			2	6 EA/CASE
AMMONIUM OXALATE	Laboratory	15		43	1 kg BTL
	Six to Four Reduction Facility #1	54	A	5	1 kg BTL
AMMONIUM THIOCYANATE CRYS	Laboratory	15		12	1# BTL

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
ANALYTICAL ACETONE	Laboratory	15		18713	2# BTL
	Water Plant	20	B	96	2# BTL
	Health & Safety Building	53	A	36	2# BTL
	Drum Reconditioning Building	66		18	2# BTL
	Unknown			1456	2# BTL
ANHYDROUS AMMONIA	Ore Refinery Plant	2	A	12	100# CYL
	Ore Refinery Plant	2	A	211875	LB
	Refinery Sump	3	H	2	100# CYL
	Green Salt Plant	4	A	2905337	LB
	Metals Fabrication Warehouse	6	A	3647	LB
	Recovery Plant	8	A	0	LB
	Administration Building	14	A	7	100# CYL
	Laboratory	15		2	100# CYL
	Main Tank Farm	19	A	20621	LB
	Pilot Plant Ammonia Tank Farm	19	B	8	100# CYL
	Pilot Plant Ammonia Tank Farm	19	B	113118	LB
	Old North Tank Farm	19	D	243861	LB
	Pilot Plant Annex	37		0	LB
	Health & Safety Building	53	A	6	100# CYL
	Six to Four Reduction Facility #1	54	A	795859	LB
	Unknown			4	100# CYL
ANHYDROUS ETHER	Unknown			3	5# BTL
ANHYDROUS HYDROFLORC ACID	Ore Refinery Plant	2	A	0	LB
	Green Salt Plant	4	A	6299426	LB
	Metals Production Plant	5	A	820	LB
	Special Products Plant	9	A	5040	LB
	Old North Tank Farm	19	D	267140	LB
	Water Plant	20	B	19750	LB
	Incinerator Building	39	A	-1000	LB
ANTI-FREEZE COOLANT	Engine House/Garage	31	A	29	55 GAL DRUM
	Thorium Warehouse	64		1	55 GAL DRUM
	Unknown			10	55 GAL DRUM
AQUEOUS HF	Ore Refinery Plant	2	A	0	LB
	Green Salt Plant	4	A	-4557746	LB
	Metals Production Plant	5	A	-66612	LB
	Recovery Plant	8	A	316473	LB
	Plant 8 Maintenance Building	8	B	0	LB
	Special Products Plant	9	A	599579	LB
	Old North Tank Farm	19	D	-339058	LB
	Six to Four Reduction Facility #1	54	A	-415103	LB
	Unknown			107447	LB
ASBESTOS BOARD 4X8 (TRANSITE)	Preparation Plant	1	A	2	SHEET
	Ore Refinery Plant	2	A	2	SHEET
	Green Salt Plant	4	A	15	SHEET
	Plant 4 Maintenance Building	4	C	3	SHEET
	Metals Production Plant	5	A	22	SHEET
	Metals Fabrication Warehouse	6	A	5	SHEET
	Recovery Plant	8	A	11	SHEET
	Special Products Plant	9	A	1	SHEET
	Water Plant	20	B	2	SHEET
	CP Storage Warehouse	56	A	4	SHEET
	Drum Reconditioning Building	66		1	SHEET
	Unknown			12	SHEET
BARIUM CARBONATE	Ore Refinery Plant	2	A	20675	LB
	Hot Raffinate Building	3	E	2750	LB
	Special Products Plant	9	A	0	LB
	Unknown			1750	LB
BETZ 1125 POLYMER	General Sump	18	B	2	55 GAL DRUM
BETZ 242 INHIBITOR	Water Plant	20	B	3	415# DRUM

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
BETZ 508 INHIBITOR	Water Plant	20	B	2	500 DRUM
	Boiler Plant	10	A	2	625# DRUM
BETZ COOLING/WATER TRMT	Boiler Plant	10	A	1	500# DRUM
	Water Plant	20	B	100	625# DRUM
	Water Plant	20	B	36	500# DRUM
	Digester & Control Building	25	E	0	500# DRUM
	Digester & Control Building	25	E	0	625# DRUM
BETZ NEUTRALFILM	Boiler Plant	10	A	45	55 GAL DRUM
BETZ NEUTRAMEEN	Boiler Plant	10	A	58	55 GAL DRUM
	Digester & Control Building	25	E	2	55 GAL DRUM
BLACK ROLLMARK INK	Ore Refinery Plant	2	A	13	EA
	Green Salt Plant	4	A	21	EA
	Metals Production Plant	5	A	33	EA
	Metals Fabrication Warehouse	6	A	6	EA
	Recovery Plant	8	A	33	EA
	Special Products Plant	9	A	18	EA
	Boiler Plant	10	A	2	EA
	Service Building	11		1	EA
	Main Maintenance Building	12	A	2	EA
	Laboratory	15		14	EA
	General Sump	18	B	1	EA
	Water Plant	20	B	2	EA
	Engine House/Garage	31	A	3	EA
	Health & Safety Building	53	A	1	EA
	Six to Four Reduction Facility #1	54	A	13	EA
	Decontamination Building	69		27	EA
	Plant 1 Storage Pad	74	T	86	EA
	Unknown			8	EA
BLASTING GRIT	Metals Production Plant	5	A	40	BAG
	Service Building	11		4	BAG
	Main Maintenance Building	12	A	2	BAG
	Administration Building	14	A	35	BAG
	Water Plant	20	B	1	BAG
	Pilot Plant Annex	37		822	BAG
	Six to Four Reduction Facility #1	54	A	110	BAG
BLUE COOLANT	Laboratory	15		1	55 GAL DRUM
	Unknown			1	55 GAL DRUM
BLUE ROLLMARK INK	Six to Four Reduction Facility #1	54	A	1	EA
BORIC ACID	Laboratory	15		20	LB
	Unknown			4	LB
CALCINED MAGNESITE	Ore Refinery Plant	2	A	8000	LB
	Refinery Sump	3	H	2485900	LB
	Green Salt Plant	4	A	0	LB
	Metals Production Plant	5	A	21700	LB
	Metals Fabrication Warehouse	6	A	24000	LB
	Recovery Plant	8	A	9400	LB
	Special Products Plant	9	A	282000	LB
	Incinerator Building	39	A	20000	LB
	Plant 1 Storage Pad	74	T	0	LB
	Unknown			8450	LB
CALCIUM SLUFATE DRIERITE	Administration Building	14	A	4	5# BTL
	Laboratory	15		29	5# BTL
	Water Plant	20	B	2	5# BTL
	Health & Safety Building	53	A	3	5# BTL
	Unknown			15	5# BTL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
CARBOLINE PAINT	Ore Refinery Plant	2	A	55	2 GAL KIT
	NAR Towers	3	D	25	2 GAL KIT
	Refinery Sump	3	H	4	2 GAL KIT
	Green Salt Plant	4	A	6	2 GAL KIT
	Metals Production Plant	5	A	6	2 GAL KIT
	Metals Fabrication Warehouse	6	A	7	2 GAL KIT
	Recovery Plant	8	A	7	2 GAL KIT
	Boiler Plant	10	A	2	2 GAL KIT
	Main Maintenance Building	12	A	8	2 GAL KIT
	General Sump	18	B	15	2 GAL KIT
	Old North Tank Farm	19	D	4	2 GAL KIT
	Water Plant	20	B	13	2 GAL KIT
	Digester & Control Building	25	E	3	2 GAL KIT
	Incinerator Building	39	A	1	2 GAL KIT
	Unknown			111	2 GAL KIT
CARBOMASTIC THINNER	Ore Refinery Plant	2	A	47	GAL
	NAR Towers	3	D	5	GAL
	Refinery Sump	3	H	2	GAL
	Green Salt Plant	4	A	13	GAL
	Metals Production Plant	5	A	5	GAL
	Recovery Plant	8	A	10	GAL
	Boiler Plant	10	A	3	GAL
	Main Maintenance Building	12	A	5	GAL
	General Sump	18	B	6	GAL
	Old North Tank Farm	19	D	5	GAL
	Water Plant	20	B	6	GAL
	Digester & Control Building	25	E	2	GAL
	Incinerator Building	39	A	1	GAL
	Unknown			45	GAL
CHEVRON LUBRICANT	Preparation Plant	1	A	1	120# DRUM
	Plant 1 Storage Building	1	B	1	120# DRUM
	Ore Refinery Plant	2	A	2	120# DRUM
	Green Salt Plant	4	A	2	120# DRUM
	Plant 4 Maintenance Building	4	C	1	120# DRUM
	Metals Production Plant	5	A	20	120# DRUM
	Metals Fabrication Warehouse	6	A	5	120# DRUM
	Recovery Plant	8	A	4	120# DRUM
	Special Products Plant	9	A	1	120# DRUM
	Boiler Plant	10	A	8	120# DRUM
	Main Maintenance Building	12	A	1	120# DRUM
	Engine House/Garage	31	A	17	120# DRUM
	Six to Four Reduction Facility #1	54	A	2	120# DRUM
	Drum Reconditioning Building	66		2	120# DRUM
	Unknown			8	120# DRUM
CHLOROFORM	Laboratory	15		434	4 LITER BT
CLEANING COMPOUND	Metals Fabrication Warehouse	6	A	58	500# DRUM
	Recovery Plant	8	A	1	500# DRUM
	Decontamination Building	69		0	500# DRUM
CLEAR INT. DRUM COATING	Preparation Plant	1	A	1	55 GL DRUM
	Green Salt Plant	4	A	-1	55 GL DRUM
	Drum Reconditioning Building	66		116	55 GL DRUM
	Plant 1 Storage Pad	74	T	2	55 GL DRUM
COIL CLEANER	Green Salt Plant	4	A	1	GAL
	Metals Production Plant	5	A	3	GAL
	Metals Fabrication Warehouse	6	A	1	GAL
	Recovery Plant	8	A	1	GAL
	Plant 8 Maintenance Building	8	B	1	GAL
	Main Maintenance Building	12	A	2	GAL
	Unknown			50	GAL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
CONCRETE FLOOR SEALER	Preparation Plant	1	A	4	55 GAL DRUM
	Ore Refinery Plant	2	A	1	55 GAL DRUM
	Green Salt Plant	4	A	8	55 GAL DRUM
	Metals Production Plant	5	A	1	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	3	55 GAL DRUM
	Recovery Plant	8	A	9	55 GAL DRUM
	Special Products Plant	9	A	15	55 GAL DRUM
CORLAR #576 THINNER	Ore Refinery Plant	2	A	1	GAL
	Green Salt Plant	4	A	1	GAL
	Unknown			13	GAL
CORLAR #586 ACTIVATOR	Laboratory	15		1	GAL
	Unknown			1	GAL
CORROSION INHIBITOR	Water Plant	20	B	6	625# DRUM
CORRUGATED ASBESTOS SHEET	Ore Refinery Plant	2	A	2	42inX12ft
	Refinery Sump	3	H	2	42inX12ft
	Green Salt Plant	4	A	2	42inX12ft
	Plant 4 Maintenance Building	4	C	2	42inX12ft
	Metals Fabrication Warehouse	6	A	5	42inX12ft
	Recovery Plant	8	A	4	42inX12ft
	Special Products Plant	9	A	2	42inX12ft
	Boiler Plant	10	A	2	42inX12ft
	Service Building	11		2	42inX12ft
	Main Maintenance Building	12	A	5	42inX12ft
	Security Building	28	A	1	42inX12ft
	Unknown			3	42inX12ft
CUTTING FLUID	Maintenance Building	3	A	6	16oz CAN
	Metals Production Plant	5	A	8	16oz CAN
	Metals Fabrication Warehouse	6	A	6	16oz CAN
	Plant 8 Maintenance Building	8	B	1	16oz CAN
	Main Maintenance Building	12	A	16	16oz CAN
	Old North Tank Farm	19	D	6	16oz CAN
	Water Plant	20	B	3	16oz CAN
	Engine House/Garage	31	A	2	16oz CAN
	Health & Safety Building	53	A	2	16oz CAN
	Six to Four Reduction Facility #1	54	A	6	16oz CAN
	Unknown			19	16oz CAN
CUTTING OIL	Unknown			1	55 GAL DRUM
DENATURED ALCOHOL	Preparation Plant	1	A	2	GAL
	Plant 1 Storage Building	1	B	1	GAL
	Ore Refinery Plant	2	A	1	GAL
	Green Salt Plant	4	A	1	GAL
	Metals Production Plant	5	A	1	GAL
	Metals Fabrication Warehouse	6	A	2	GAL
	Special Products Plant	9	A	1	GAL
	Main Maintenance Building	12	A	16	GAL
	Laboratory	15		7	GAL
	Old North Tank Farm	19	D	1	GAL
	Water Plant	20	B	6	GAL
	Digester & Control Building	25	E	2	GAL
	Security Building	28	A	1	GAL
	Human Resources Building	28	B	1	GAL
	Health & Safety Building	53	A	2	GAL
	Six to Four Reduction Facility #1	54	A	2	GAL
	Drum Reconditioning Building	66		2	GAL
	Unknown			25	GAL
DIESEL FUEL OIL	Plant 1 Storage Building	1	B	2326	GAL
	Boiler Plant	10	A	14617	GAL
	Main Maintenance Building	12	A	28876	GAL
	Water Plant	20	B	902	GAL
	Engine House/Garage	31	A	22970	GAL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
DIESEL FUEL OIL (Cont.)	Heavy Equipment Building	46		20034	GAL
	Health & Safety Building	53	A	10	GAL
	Six to Four Reduction Facility #1	54	A	14343	GAL
	Thorium Warehouse	64		231	GAL
	Unknown			48407	GAL
DIGESTER	Green Salt Plant	4	A	9	QUART
	Service Building	11		2	QUART
	Main Maintenance Building	12	A	2	QUART
	Unknown			2	QUART
DISODIUM PHOSPHATE	Boiler Plant	10	A	12500	LB
	Digester & Control Building	25	E	300	LB
DTE OIL	Preparation Plant	1	A	2	55 GAL DRUM
	Ore Refinery Plant	2	A	6	55 GAL DRUM
	NAR Towers	3	D	19	55 GAL DRUM
	Refinery Sump	3	H	1	55 GAL DRUM
	Green Salt Plant	4	A	1	55 GAL DRUM
	Metals Production Plant	5	A	14	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	28	55 GAL DRUM
	Recovery Plant	8	A	6	55 GAL DRUM
	Boiler Plant	10	A	24	55 GAL DRUM
	Main Maintenance Building	12	A	2	55 GAL DRUM
	Digester & Control Building	25	E	1	55 GAL DRUM
	Six to Four Reduction Facility #1	54	A	1	55 GAL DRUM
EPOXY ADHESIVE	Engine House/Garage	31	A	6	EA
EPOXY ENAMEL	Ore Refinery Plant	2	A	0	2GL/KIT
	Unknown			1	2GL/KIT
EPOXY FLOOR RESIN	Ore Refinery Plant	2	A	8	9.2# CAN
	Metals Production Plant	5	A	38	9.2# CAN
	Metals Fabrication Warehouse	6	A	8	9.2# CAN
	Special Products Plant	9	A	4	9.2# CAN
	Main Maintenance Building	12	A	125	9.2# CAN
	Pilot Plant Annex	37		8	9.2# CAN
	Unknown			0	9.2# CAN
EPOXY FLOOR SURFACER	Ore Refinery Plant	2	A	8	.75# CAN
	Metals Production Plant	5	A	42	.75# CAN
	Metals Fabrication Warehouse	6	A	6	.75# CAN
	Special Products Plant	9	A	4	.75# CAN
	Main Maintenance Building	12	A	125	.75# CAN
	Pilot Plant Annex	37		8	.75# CAN
ETHYL ACETATE	Metals Production Plant	5	A	23	5 GAL CAN
	Laboratory	15		202	5 GAL CAN
ETHYL ALCOHOL	Plant 6 Salt Oil Heat Treat Building	6	F	3	GAL
	Main Maintenance Building	12	A	3	GAL
	Laboratory	15		1203	GAL
	Water Plant	20	B	75	GAL
	Health & Safety Building	53	A	3	GAL
	Unknown			24	GAL
FERROSPERSE	Boiler Plant	10	A	112	55 GAL DRUM
	Water Plant	20	B	1	55 GAL DRUM
	Digester & Control Building	25	E	3	55 GAL DRUM
	Unknown			1	55 GAL DRUM
FLOCCULANT	General Sump	18	B	1	55 GAL DRUM
FLOOR COATING PAINT	Ore Refinery Plant	2	A	11	KIT
	Metals Fabrication Warehouse	6	A	6	KIT
	Water Plant	20	B	12	KIT
	Unknown			*8	KIT

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
FLOOR DRI	Underground Storage Tanks	G-007		8	40# BAG
	Preparation Plant	1	A	133	40# BAG
	Ore Refinery Plant	2	A	180	40# BAG
	NAR Towers	3	D	11	40# BAG
	Hot Raffinate Building	3	E	2	40# BAG
	Refinery Sump	3	H	2	40# BAG
	Green Salt Plant	4	A	15	40# BAG
	Metals Production Plant	5	A	514	40# BAG
	Metals Fabrication Warehouse	6	A	81	40# BAG
	Recovery Plant	8	A	43	40# BAG
	Special Products Plant	9	A	71	40# BAG
	Boiler Plant	10	A	12	40# BAG
	Service Building	11		7	40# BAG
	Main Maintenance Building	12	A	135	40# BAG
	Laboratory	15		7	40# BAG
	General Sump	18	B	3	40# BAG
	Water Plant	20	B	3	40# BAG
	Security Building	28	A	8	40# BAG
	Engine House/Garage	31	A	541	40# BAG
	Pilot Plant Annex	37		39	40# BAG
	Incinerator Building	39	A	518	40# BAG
	Heavy Equipment Building	46		10	40# BAG
	Health & Safety Building	53	A	45	40# BAG
	Six to Four Reduction Facility #1	54	A	99	40# BAG
	Thorium Warehouse	64		12	40# BAG
	Drum Reconditioning Building	66		100	40# BAG
	Decontamination Building	69		64	40# BAG
	Plant 1 Storage Pad	74	T	330	40# BAG
	Unknown			241	40# BAG
LOOR DRY ABSORB-O-SOX	Underground Storage Tanks	G-007		1	BOX
	Ore Refinery Plant	2	A	1	BOX
	Metals Production Plant	5	A	1	BOX
	Metals Fabrication Warehouse	6	A	2	BOX
	Boiler Plant	10	A	1	BOX
	Main Maintenance Building	12	A	8	BOX
	Laboratory	15		22	BOX
	Health & Safety Building	53	A	3	BOX
	Decontamination Building	69		3	BOX
	Plant 1 Storage Pad	74	T	16	BOX
	Unknown			6	BOX
FLOOR FINISH	Preparation Plant	1	A	1	55 GAL DRUM
	Green Salt Plant	4	A	5	55 GAL DRUM
	Metals Production Plant	5	A	8	55 GAL DRUM
	Recovery Plant	8	A	6	55 GAL DRUM
	Boiler Plant	10	A	2	55 GAL DRUM
	Service Building	11		51	55 GAL DRUM
	Incinerator Building	39	A	1	55 GAL DRUM
	Health & Safety Building	53	A	1	55 GAL DRUM
FLUOROLUBE OIL	Ore Refinery Plant	2	A	1	16# CAN
	Main Maintenance Building	12	A	2	16# CAN
	Old North Tank Farm	19	D	3	16# CAN
	Six to Four Reduction Facility #1	54	A	1	16# CAN
FLUSHING SOLVENT	Metals Production Plant	5	A	1	QUART
	Health & Safety Building	53	A	1	QUART
PAINT, FORMULA #205	Aboveground Storage Tanks	G-010		2	SF
	Ore Refinery Plant	2	A	4	SF
	Green Salt Plant	4	A	1	SF
	Plant 4 Maintenance Building	4	C	2	SF
	Metals Production Plant	5	A	4	SF
	Metals Fabrication Warehouse	6	A	4	SF
	Main Maintenance Building	12	A	12	SF
	Laboratory	15		1	SF

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
PAINT, FORMULA #205 (Cont.)	Old North Tank Farm	19	D	1	SF
	Water Plant	20	B	3	SF
	Incinerator Building	39	A	1	SF
	Health & Safety Building	53	A	2	SF
	Plant 1 Storage Pad	74	T	2	SF
	Unknown			21	SF
FORMULA #502 (CLEANER)	Ore Refinery Plant	2	A	1	GAL
	NAR Towers	3	D	2	GAL
	Metals Fabrication Warehouse	6	A	2	GAL
	Recovery Plant	8	A	1	GAL
	Special Products Plant	9	A	1	GAL
	Water Plant	20	B	1	GAL
	Security Building	28	A	1	GAL
	Unknown			7	GAL
FUEL OIL	Water Plant	20	B	4	55 GAL DRUM
	Engine House/Garage	31	A	1	55 GAL DRUM
	Unknown			7	55 GAL DRUM
FYRQUEL #150 FLUID	Metals Production Plant	5	A	1	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	13	55 GAL DRUM
	Engine House/Garage	31	A	3	55 GAL DRUM
	Six to Four Reduction Facility #1	54	A	2	55 GAL DRUM
	Thorium Warehouse	64		1	55 GAL DRUM
FYRQUEL #550 FLUID	Preparation Plant	1	A	1	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	33	55 GAL DRUM
GARGOYLE OIL	Preparation Plant	1	A	1	400# DRUM
	Ore Refinery Plant	2	A	4	400# DRUM
	Green Salt Plant	4	A	1	400# DRUM
	Plant 4 Maintenance Building	4	C	1	400# DRUM
	Metals Production Plant	5	A	8	400# DRUM
	Recovery Plant	8	A	3	400# DRUM
	Boiler Plant	10	A	1	400# DRUM
	Six to Four Reduction Facility #1	54	A	1	400# DRUM
GARIA CUTTING OIL	Metals Production Plant	5	A	-6	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	1	55 GAL DRUM
	Special Products Plant	9	A	568	55 GAL DRUM
	Main Maintenance Building	12	A	2	55 GAL DRUM
	Unknown			4	55 GAL DRUM
GASOHOL	Main Maintenance Building	12	A	18976	GAL
	Engine House/Garage	31	A	198532	GAL
	Heavy Equipment Building	46		33283	GAL
	Health & Safety Building	53	A	7070	GAL
	Six to Four Reduction Facility #1	54	A	514	GAL
	Unknown			21668	GAL
GASOLINE	Engine House/Garage	31	A	3956	GAL
	Heavy Equipment Building	46		2518	GAL
	Health & Safety Building	53	A	347	GAL
	Unknown			6123	GAL
GEAR LUBE	Ore Refinery Plant	2	A	3	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	1	55 GAL DRUM
	Recovery Plant	8	A	1	55 GAL DRUM
GEAR LUBRICANT	Preparation Plant	1	A	1	14-3/4oz CAN
	Ore Refinery Plant	2	A	24	14-3/4oz CAN
	Green Salt Plant	4	A	67	14-3/4oz CAN
	Metals Production Plant	5	A	70	14-3/4oz CAN
	Metals Fabrication Warehouse	6	A	18	14-3/4oz CAN
	Recovery Plant	8	A	12	14-3/4oz CAN
	Special Products Plant	9	A	8	14-3/4oz CAN
	Boiler Plant	10	A	36	14-3/4oz CAN

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
GEAR LUBRICANT (Cont.)	Main Maintenance Building	12	A	6	14-3/4oz CAN
	Water Plant	20	B	1	14-3/4oz CAN
	Engine House/Garage	31	A	49	14-3/4oz CAN
	Six to Four Reduction Facility #1	54	A	1	14-3/4oz CAN
	Decontamination Building	69		2	14-3/4oz CAN
	Unknown			19	14-3/4oz CAN
GLACIAL ACETIC ACID	Laboratory	15		11	5# BTL
	Water Plant	20	B	1	5# BTL
	Health & Safety Building	53	A	1	5# BTL
	Unknown			2	5# BTL
GLAZING COMPOUND	Preparation Plant	1	A	5	GAL
	Ore Refinery Plant	2	A	12	GAL
	NAR Towers	3	D	1	GAL
	Green Salt Plant	4	A	8	GAL
	Plant 4 Maintenance Building	4	C	6	GAL
	Metals Production Plant	5	A	32	GAL
	Metals Fabrication Warehouse	6	A	8	GAL
	Recovery Plant	8	A	14	GAL
	Plant 8 Maintenance Building	8	B	2	GAL
	Special Products Plant	9	A	1	GAL
	Boiler Plant	10	A	8	GAL
	Boiler Plant Maintenance Building	10	B	1	GAL
	Service Building	11		5	GAL
	Main Maintenance Building	12	A	48	GAL
	Pilot Plant Maintenance Building	13	B	1	GAL
	Laboratory	15		7	GAL
	Water Plant	20	B	1	GAL
	Security Building	28	A	2	GAL
	Human Resources Building	28	B	10	GAL
	Engine House/Garage	31	A	3	GAL
	Health & Safety Building	53	A	1	GAL
	Drum Reconditioning Building	66		1	GAL
	Decontamination Building	69		2	GAL
	Unknown			28	GAL
GRAPHITE LUBRICANT	Green Salt Plant	4	A	1	1# BOX
	Boiler Plant	10	A	4	1# BOX
	Digester & Control Building	25	E	1	1# BOX
GREASE 14oz CARTRIDGE	Main Maintenance Building	12	A	7	EA
GREEN ROLLMARK INK	Green Salt Plant	4	A	4	EA
	Metals Production Plant	5	A	22	EA
	Metals Fabrication Warehouse	6	A	8	EA
	Recovery Plant	8	A	26	EA
	Special Products Plant	9	A	6	EA
	Water Plant	20	B	1	EA
	Pilot Plant Annex	37		24	EA
	Six to Four Reduction Facility #1	54	A	25	EA
	Plant 1 Storage Pad	74	T	24	EA
HEAT TREAT SALT	Metals Fabrication Warehouse	6	A	473600	LB
	Unknown			400	LB
HFK POWDER	Green Salt Plant	4	A	2	20# CAN
	Plant 4 Maintenance Building	4	C	1	20# CAN
	Main Maintenance Building	12	A	1	20# CAN
HI DETERGENT OIL	Recovery Plant	8	A	1	55 GAL DRUM
HI TEMP GREASE	Engine House/Garage	31	A	1	120# DRUM
HIGH TEMPERATURE OIL	Service Building	11		1	5 GAL PAIL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
HIGH VACUUM LUBRICANT	Refinery Sump	3	H	1	8# CAN
	Green Salt Plant	4	A	1	8# CAN
	Metals Production Plant	5	A	38	8# CAN
	Metals Fabrication Warehouse	6	A	25	8# CAN
	Recovery Plant	8	A	3	8# CAN
	Special Products Plant	9	A	6	8# CAN
	Boiler Plant	10	A	1	8# CAN
	Engine House/Garage	31	A	2	8# CAN
	Pilot Plant Annex	37		3	8# CAN
	Health & Safety Building	53	A	1	8# CAN
	Six to Four Reduction Facility #1	54	A	2	8# CAN
	Thorium Warehouse	64		1	8# CAN
	Unknown			5	8# CAN
HYDRATED ALUMINA	Ore Refinery Plant	2	A	132650	LB
	Hot Raffinate Building	3	E	7000	LB
	Metals Fabrication Warehouse	6	A	5100	LB
	Special Products Plant	9	A	3600	LB
	Water Plant	20	B	1800	LB
HYDRAULIC FLUID	Preparation Plant	1	A	17	GAL
	Ore Refinery Plant	2	A	4	GAL
	Metals Production Plant	5	A	59	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	9	55 GAL DRUM
	Special Products Plant	9	A	12	55 GAL DRUM
	Service Building	11		4	GAL
	Main Maintenance Building	12	A	2	GAL
	Engine House/Garage	31	A	42	GAL
	Pilot Plant Annex	37		8	55 GAL DRUM
	Unknown			19	GAL
HYDROCHLORIC ACID	Security Building	28	A	14400	GAL
	Decontamination Building	69		204819	GAL
	Unknown			12820	GAL
HYDROCHLORIC ACID/6# BTL	Ore Refinery Plant	2	A	2	6 EA/CASE
	NAR Towers	3	D	1	6 EA/CASE
	Hot Raffinate Building	3	E	1	6 EA/CASE
	Refinery Sump	3	H	1	6 EA/CASE
	Plant 4 Maintenance Building	4	C	1	6 EA/CASE
	Metals Production Plant	5	A	2	6 EA/CASE
	Metals Fabrication Warehouse	6	A	2	6 EA/CASE
	Recovery Plant	8	A	16	6 EA/CASE
	Special Products Plant	9	A	3	6 EA/CASE
	Service Building	11		1	6 EA/CASE
	Main Maintenance Building	12	A	2	6 EA/CASE
	Pilot Plant Maintenance Building	13	B	1	6 EA/CASE
	Laboratory	15		436	6 EA/CASE
	General Sump	18	B	1	6 EA/CASE
	Water Plant	20	B	21	6 EA/CASE
	Digester & Control Building	25	E	1	6 EA/CASE
	Engine House/Garage	31	A	1	6 EA/CASE
	Health & Safety Building	53	A	1	6 EA/CASE
	Six to Four Reduction Facility #1	54	A	1	6 EA/CASE
	Decontamination Building	69		19	6 EA/CASE
	Unknown			12	6 EA/CASE
HYDROFLUORIC ACID	Laboratory	15		272	1# BTL
	Health & Safety Building	53	A	102	1# BTL
	Unknown			299	1# BTL
HYPREZ FLUID	Laboratory	15		162	4oz BTL
	Health & Safety Building	53	A	11	4oz BTL
	Unknown			6	4oz BTL
INDUSTRIAL GREASE	Ore Refinery Plant	2	A	1	20 GAL DRUM

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
INDUSTRIAL OIL	NAR Towers	3	D	1	55 GAL DRUM
	Recovery Plant	8	A	1	55 GAL DRUM
INSECTICIDE	Green Salt Plant	4	A	12	EA
	Metals Production Plant	5	A	10	EA
	Metals Fabrication Warehouse	6	A	23	EA
	Special Products Plant	9	A	1	EA
	Boiler Plant	10	A	9	EA
	Service Building	11		153	EA
	Main Maintenance Building	12	A	6	EA
	Main Tank Farm	19	A	2	EA
	Water Plant	20	B	2	EA
	Digester & Control Building	25	E	12	EA
	Security Building	28	A	5	EA
	Engine House/Garage	31	A	1	EA
	Health & Safety Building	53	A	5	EA
	Six to Four Reduction Facility #1	54	A	19	EA
	Decontamination Building	69		12	EA
	Plant 1 Storage Pad	74	T	3	EA
	Unknown			17	EA
KEROSENE	Main Maintenance Building	12	A	0	GAL
	Old North Tank Farm	19	D	840	GAL
	Water Plant	20	B	4032	GAL
	Unknown			2121	GAL
KEROSENE DILUENT	Preparation Plant	1	A	0	LB
	Ore Refinery Plant	2	A	228367	LB
	Laboratory	15		1183	LB
	Old North Tank Farm	19	D	-751	LB
	Drum Reconditioning Building	66		514	LB
	Decontamination Building	69		1018	LB
KLINGFAST #370 LUBRICANT	Metals Production Plant	5	A	0	420# DRUM
	Main Maintenance Building	12	A	1	420# DRUM
LACQUIC ACTIVATOR	Preparation Plant	1	A	1	6oz CAN EA
	Plant 4 Maintenance Building	4	C	1	6oz CAN EA
	Metals Production Plant	5	A	6	6oz CAN EA
	Metals Fabrication Warehouse	6	A	1	6oz CAN EA
	Special Products Plant	9	A	2	6oz CAN EA
	Unknown			2	6oz CAN EA
LACTITE SEALANT	Preparation Plant	1	A	2	8oz BT
	Ore Refinery Plant	2	A	2	8oz BT
	Plant 4 Maintenance Building	4	C	1	8oz BT
	Metals Production Plant	5	A	14	8oz BT
	Metals Fabrication Warehouse	6	A	1	8oz BT
	Special Products Plant	9	A	4	8oz BT
	Boiler Plant	10	A	1	8oz BT
	Service Building	11		1	8oz BT
	Main Maintenance Building	12	A	3	8oz BT
	Old North Tank Farm	19	D	1	8oz BT
	Digester & Control Building	25	E	1	8oz BT
	Six to Four Reduction Facility #1	54	A	6	8oz BT
	Unknown			8	8oz BT
LEADOLENE OIL	Unknown			1	GAL
LINSEED OIL	Ore Refinery Plant	2	A	1	GAL
	Metals Fabrication Warehouse	6	A	1	GAL
	Boiler Plant	10	A	1	GAL
	Main Maintenance Building	12	A	1	GAL
	Unknown			5	GAL

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
O SALVAREX GREASE	Green Salt Plant	4	A	1	120# DRUM
	Boiler Plant	10	A	1	120# DRUM
	Engine House/Garage	31	A	1	120# DRUM
	Unknown			2	120# DRUM
LUBRICATING OIL	Metals Production Plant	5	A	11	5 GAL CAN
	Sludge Drying Beds	25	F	6	5 GAL CAN
LUBRICATING OIL	Unknown			5	5 GAL CAN
LUBRIPLATE GREASE	Metals Fabrication Warehouse	6	A	1	120# DRUM
LUBRITE #130 MOBILE OIL	Engine House/Garage	31	A	8	55 GAL DRUM
	Unknown			6	55 GAL DRUM
MAGNESIUM PERCHLORATE	Laboratory	15		20	1# BTL
METHANOL	Administration Building	14	A	4	16 LITER/C
	Laboratory	15		18	16 LITER/C
	General Sump	18	B	140620	GAL
METHYL ALCOHOL	Metals Production Plant	5	A	2	6# CAN
	Administration Building	14	A	4	6# CAN
	Laboratory	15		856	6# CAN
	Water Plant	20	B	18	6# CAN
	Digester & Control Building	25	E	1	6# CAN
	Engine House/Garage	31	A	2	6# CAN
	Unknown			2	6# CAN
MINERAL SPIRITS	Ore Refinery Plant	2	A	2	55 GL DRUM
	Maintenance Building	3	A	-1	55 GL DRUM
	Green Salt Plant	4	A	0	55 GL DRUM
	Metals Fabrication Warehouse	6	A	1	55 GL DRUM
	Service Building	11		1	55 GL DRUM
	Main Maintenance Building	12	A	10	55 GL DRUM
	Engine House/Garage	31	A	1	55 GL DRUM
	Plant 4 Pad	74	E	1	55 GL DRUM
	Unknown			11	55 GL DRUM
MOBILE OIL	Preparation Plant	1	A	38	55 GAL DRUM
	Plant 1 Storage Building	1	B	3	55 GAL DRUM
	Ore Refinery Plant	2	A	3	55 GAL DRUM
	Green Salt Plant	4	A	3	55 GAL DRUM
	Plant 4 Maintenance Building	4	C	2	55 GAL DRUM
	Metals Production Plant	5	A	21	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	99	55 GAL DRUM
	Recovery Plant	8	A	4	55 GAL DRUM
	Special Products Plant	9	A	54	55 GAL DRUM
	Boiler Plant	10	A	39	55 GAL DRUM
	Main Maintenance Building	12	A	5	55 GAL DRUM
	General Sump	18	B	2	55 GAL DRUM
	Water Plant	20	B	2	55 GAL DRUM
	Engine House/Garage	31	A	3	55 GAL DRUM
	Drum Reconditioning Building	66		33	55 GAL DRUM
	Plant 1 Storage Pad	74	T	1	55 GAL DRUM
	Unknown			9	55 GAL DRUM
MOBILE VELOCITE	Recovery Plant	8	A	1	16 GAL DAN
	Engine House/Garage	31	A	1	16 GAL DAN
MOBILGEAR	Metals Production Plant	5	A	7	400# DRUM
	Metals Fabrication Warehouse	6	A	5	400# DRUM
MOBILGEAR LUBRICANT	Ore Refinery Plant	2	A	1	400# DRUM
	Boiler Plant	10	A	1	400# DRUM
OBILUBE	Special Products Plant	9	A	1	120# DRUM
	Engine House/Garage	31	A	14	120# DRUM
	Unknown			11	120# DRUM

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
MOTOR OIL	Service Building	11		3	55 GAL DRUM
	Engine House/Garage	31	A	147	55 GAL DRUM
	Heavy Equipment Building	46		1	55 GAL DRUM
	Unknown			50	55 GAL DRUM
MULTI-PURPOSE GREASE	Engine House/Garage	31	A	1	120# DRUM
	Unknown			6	120# DRUM
NEVER-SEEZ LUBRICANT	Preparation Plant	1	A	5	1# CAN
	Ore Refinery Plant	2	A	33	1# CAN
	NAR Towers	3	D	18	1# CAN
	Refrigeration Building	3	G	12	1# CAN
	Refinery Sump	3	H	12	1# CAN
	Green Salt Plant	4	A	109	1# CAN
	Plant 4 Maintenance Building	4	C	7	1# CAN
	Metals Production Plant	5	A	101	1# CAN
	Metals Fabrication Warehouse	6	A	61	1# CAN
	Plant 6 Salt Oil Heat Treat Building	6	F	1	1# CAN
	Recovery Plant	8	A	55	1# CAN
	Plant 8 Maintenance Building	8	B	1	1# CAN
	Special Products Plant	9	A	20	1# CAN
	Boiler Plant	10	A	138	1# CAN
	Service Building	11		1	1# CAN
	Main Maintenance Building	12	A	105	1# CAN
	Laboratory	15		5	1# CAN
	General Sump	18	B	12	1# CAN
	Old North Tank Farm	19	D	23	1# CAN
	Water Plant	20	B	17	1# CAN
	Digester & Control Building	25	E	35	1# CAN
	Sludge Drying Beds	25	F	4	1# CAN
	Human Resources Building	28	B	1	1# CAN
	Engine House/Garage	31	A	1	1# CAN
	Pilot Plant Annex	37		1	1# CAN
	Incinerator Building	39	A	30	1# CAN
	Health & Safety Building	53	A	2	1# CAN
	Six to Four Reduction Facility #1	54	A	65	1# CAN
	Decontamination Building	69		1	1# CAN
	Unknown			387	1# CAN
NITRIC ACID	Preparation Plant	1	A	202	7# BTL
	Plant 1 Storage Building	1	B	12	7# BTL
	Ore Refinery Plant	2	A	20109395	LB
	Refinery Sump	3	H	137000	LB
	Green Salt Plant	4	A	3002	LB
	Metals Production Plant	5	A	0	LB
	Metals Fabrication Warehouse	6	A	4340315	LB
	Special Products Plant	9	A	1919495	LB
	Service Building	11		-18	7# BTL
	Main Maintenance Building	12	A	18	7# BTL
	Laboratory	15		10216	7# BTL
	Main Tank Farm	19	A	70904	LB
	Old North Tank Farm	19	D	36	7# BTL
	Water Plant	20	B	28	7# BTL
	Digester & Control Building	25	E	6	7# BTL
	Health & Safety Building	53	A	766	7# BTL
	Six to Four Reduction Facility #1	54	A	0	LB
	Drum Reconditioning Building	66		6	7# BTL
	Decontamination Building	69		36977	LB
	Unknown			158	7# BTL
	Unknown			33535	LB

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Material	Component	Component Designation		Quantities	Units of Measure
ON-DETERGENT MOTOR OIL	Metals Production Plant	5	A	53	QUART
	Boiler Plant	10	A	2	QUART
	Main Maintenance Building	12	A	2	QUART
	Engine House/Garage	31	A	1	QUART
	Six to Four Reduction Facility #1	54	A	4	QUART
	Plant 1 Storage Pad	74	T	1	QUART
	Unknown			6	QUART
OXALIC ACID	Laboratory	15		22	5# BTL
	Six to Four Reduction Facility #1	54	A	1	5# BTL
PAINT	Aboveground Storage Tanks	G-010		25	GAL
	Preparation Plant	1	A	61	GAL
	Ore Refinery Plant	2	A	36	GAL
	Ore Refinery Plant	2	A	4	2 GAL KIT
	Maintenance Building	3	A	2	GAL
	NAR Towers	3	D	9	GAL
	NAR Towers	3	D	5	2 GAL KIT
	Hot Raffinate Building	3	E	2	GAL
	Hot Raffinate Building	3	E	1	2 GAL KIT
	Green Salt Plant	4	A	82	GAL
	Green Salt Plant	4	A	1	2 GAL KIT
	Plant 4 Maintenance Building	4	C	12	GAL
	Plant 4 Maintenance Building	4	C	1	2 GAL KIT
	Metals Production Plant	5	A	69	GAL
	Metals Fabrication Warehouse	6	A	44	GAL
	Recovery Plant	8	A	120	GAL
	Recovery Plant	8	A	4	2 GAL KIT
	Special Products Plant	9	A	53	GAL
	Boiler Plant	10	A	75	GAL
	Boiler Plant Maintenance Building	10	B	11	GAL
	Service Building	11		12	GAL
	Main Maintenance Building	12	A	454	GAL
	Main Maintenance Building	12	A	10	2 GAL KIT
	Pilot Plant Maintenance Building	13	B	2	GAL
	Administration Building	14	A	1	GAL
	Laboratory	15		29	GAL
	General Sump	18	B	4	GAL
	Water Plant	20	B	23	GAL
	Water Plant	20	B	1	2 GAL KIT
	Digester & Control Building	25	E	21	GAL
	Security Building	28	A	12	GAL
	Human Resources Building	28	B	22	GAL
	Engine House/Garage	31	A	35	GAL
	Engine House/Garage	31	A	11	2 GAL KIT
	Pilot Plant Annex	37		8	GAL
	Pilot Plant Annex	37		1	2 GAL KIT
	Incinerator Building	39	A	1	GAL
	Health & Safety Building	53	A	46	GAL
	Six to Four Reduction Facility #1	54	A	12	GAL
	Thorium Warehouse	64		13	GAL
	Drum Reconditioning Building	66		94	GAL
	Decontamination Building	69		1	GAL
	Plant 1 Storage Pad	74	T	174	GAL
	Plant 1 Storage Pad	74	T	1	2 GAL KIT
	Unknown			168	GAL
PAINT REMOVER	Preparation Plant	1	A	6	QUART
	NAR Towers	3	D	1	QUART
	Green Salt Plant	4	A	4	QUART
	Metals Production Plant	5	A	4	QUART
	Metals Fabrication Warehouse	6	A	7	QUART
	Recovery Plant	8	A	6.75	GAL
	Special Products Plant	9	A	1.75	GAL
	Service Building	11		1.75	GAL
	Main Maintenance Building	12	A	19.25	GAL
	Laboratory	15		1	QUART
	Old North Tank Farm	19	D	1	QUART

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
PAINT REMOVER (Cont.)	Water Plant	20	B	1	QUART
	Digester & Control Building	25	E	1	QUART
	Human Resources Building	28	B	3	QUART
	Pilot Plant Annex	37		1	QUART
	Health & Safety Building	53	A	4	QUART
	Six to Four Reduction Facility #1	54	A	2.25	GAL
	Drum Reconditioning Building	66		23.25	GAL
	Decontamination Building	69		12.75	GAL
	Plant 1 Storage Pad	74	T	3	QUART
	Unknown			17.75	GAL
PAINT THINNER	Preparation Plant	1	A	15	GAL
	Ore Refinery Plant	2	A	112	GAL
	Maintenance Building	3	A	4	GAL
	NAR Towers	3	D	21	GAL
	Hot Raffinate Building	3	E	5	GAL
	Refinery Sump	3	H	3	GAL
	Green Salt Plant	4	A	45	GAL
	Plant 4 Warehouse	4	B	2	GAL
	Plant 4 Maintenance Building	4	C	23	GAL
	Metals Production Plant	5	A	42	GAL
	Metals Fabrication Warehouse	6	A	55	GAL
	Plant 6 Salt Oil Heat Treat Building	6	F	2	GAL
	Recovery Plant	8	A	103	GAL
	Plant 8 Maintenance Building	8	B	2	GAL
	Special Products Plant	9	A	20	GAL
	Boiler Plant	10	A	14	GAL
	Boiler Plant Maintenance Building	10	B	4	GAL
	Service Building	11		15	GAL
	Main Maintenance Building	12	A	154	GAL
	Pilot Plant Maintenance Building	13	B	2	GAL
	Laboratory	15		9	GAL
	General Sump	18	B	9	GAL
	BDN Effluent Treatment Facility	18	H	3	GAL
	Old North Tank Farm	19	D	16	GAL
	Water Plant	20	B	18	GAL
	Digester & Control Building	25	E	9	GAL
	Security Building	28	A	7	GAL
	Human Resources Building	28	B	2	GAL
	Engine House/Garage	31	A	24	GAL
	Pilot Plant Annex	37		3	GAL
	Incinerator Building	39	A	1	GAL
	Health & Safety Building	53	A	1	GAL
	Six to Four Reduction Facility #1	54	A	20	GAL
	Thorium Warehouse	64		1	GAL
	Drum Reconditioning Building	66		7	GAL
	Decontamination Building	69		48	GAL
	Plant 1 Storage Pad	74	T	34	GAL
	Unknown			185	GAL
PAINT & CONVERTER, EPOXY	Preparation Plant	1	A	3	2 GL=1 KIT
	Ore Refinery Plant	2	A	22	2 GL=1 KIT
	Maintenance Building	3	A	3	2 GL=1 KIT
	NAR Towers	3	D	9	2 GL=1 KIT
	Hot Raffinate Building	3	E	4	2 GL=1 KIT
	Refinery Sump	3	H	2	2 GL=1 KIT
	Green Salt Plant	4	A	8	2 GL=1 KIT
	Plant 4 Warehouse	4	B	12	2 GL=1 KIT
	Plant 4 Maintenance Building	4	C	6	2 GL=1 KIT
	Metals Production Plant	5	A	4	2 GL=1 KIT
	Metals Fabrication Warehouse	6	A	3	2 GL=1 KIT
	Recovery Plant	8	A	21	2 GL=1 KIT
	Plant 8 Maintenance Building	8	B	4	2 GL=1 KIT
	Special Products Plant	9	A	4	2 GL=1 KIT
	Boiler Plant	10	A	3	2 GL=1 KIT
	Service Building	11		3	2 GL=1 KIT
	Main Maintenance Building	12	A	80	2 GL=1 KIT
	Pilot Plant Maintenance Building	13	B	1	2 GL=1 KIT

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TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

Material	Component	Component Designation		Quantities	Units of Measure
AINT & CONVERTER, EPOXY (Cont.)	Laboratory	15		3	2 GL=1 KIT
	General Sump	18	B	3	2 GL=1 KIT
	Old North Tank Farm	19	D	15	2 GL=1 KIT
	Water Plant	20	B	12	2 GL=1 KIT
	Digester & Control Building	25	E	3	2 GL=1 KIT
	Security Building	28	A	8	2 GL=1 KIT
	Engine House/Garage	31	A	2	2 GL=1 KIT
	Six to Four Reduction Facility #1	54	A	15	2 GL=1 KIT
	Decontamination Building	69		2	2 GL=1 KIT
	Plant 1 Storage Pad	74	T	24	2 GL=1 KIT
	Unknown			5	2 GL=1 KIT
PAINT, ALUMINUM	Ore Refinery Plant	2	A	28	GAL
	Metals Production Plant	5	A	34	GAL
	Recovery Plant	8	A	2	GAL
	Special Products Plant	9	A	4	GAL
	Main Maintenance Building	12	A	4	GAL
	Engine House/Garage	31	A	3	GAL
	Unknown			4	GAL
PAINT, CARBOMASTIC	Ore Refinery Plant	2	A	60	2 GAL KIT
	NAR Towers	3	D	13	2 GAL KIT
	Refinery Sump	3	H	4	2 GAL KIT
	Green Salt Plant	4	A	5	2 GAL KIT
	Metals Production Plant	5	A	-2	2 GAL KIT
	Metals Fabrication Warehouse	6	A	4	2 GAL KIT
	Recovery Plant	8	A	3	2 GAL KIT
	Boiler Plant	10	A	4	2 GAL KIT
	Main Maintenance Building	12	A	10	2 GAL KIT
	General Sump	18	B	14	2 GAL KIT
	Old North Tank Farm	19	D	9	2 GAL KIT
	Water Plant	20	B	6	2 GAL KIT
	Digester & Control Building	25	E	1	2 GAL KIT
	Incinerator Building	39	A	1	2 GAL KIT
	Unknown			85	2 GAL KIT
PAINT, CHROME	Underground Storage Tanks	G-007		1	GAL
	Metals Fabrication Warehouse	6	A	2	GAL
	Recovery Plant	8	A	2	GAL
	Boiler Plant	10	A	1	GAL
	Main Maintenance Building	12	A	8	GAL
	General Sump	18	B	2	GAL
	Human Resources Building	28	B	1	GAL
	Engine House/Garage	31	A	2	GAL
	Unknown			1	GAL
PAINT, DRUM BLACK	Preparation Plant	1	A	5	55 GL DRUM
	Green Salt Plant	4	A	-1	55 GL DRUM
	Laboratory	15		1	55 GL DRUM
	Drum Reconditioning Building	66		136	55 GL DRUM
	Plant 1 Storage Pad	74	T	7	55 GL DRUM
PAINT, DRUM RED	Preparation Plant	1	A	3	55 GL DRUM
	Drum Reconditioning Building	66		21	55 GL DRUM
	Plant 1 Storage Pad	74	T	1	55 GL DRUM
PAINT, ENAMEL	Preparation Plant	1	A	7	GAL
	Ore Refinery Plant	2	A	13	GAL
	Maintenance Building	3	A	6	GAL
	NAR Towers	3	D	1	GAL
	Green Salt Plant	4	A	13	GAL
	Plant 4 Maintenance Building	4	C	7	GAL
	Metals Production Plant	5	A	124	GAL
	Plant 5 Ingot Pickling	5	B	7	GAL
	Metals Fabrication Warehouse	6	A	83	GAL
	Recovery Plant	8	A	15	GAL
	Plant 8 Maintenance Building	8	B	2	GAL
	Special Products Plant	9	A	23	GAL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
ENAMEL PAINT (Cont.)	Boiler Plant	10	A	9	GAL
	Boiler Plant Maintenance Building	10	B	5	GAL
	Service Building	11		5	GAL
	Main Maintenance Building	12	A	339	GAL
	Pilot Plant Maintenance Building	13	B	1	GAL
	Laboratory	15		13	GAL
	Old North Tank Farm	19	D	2	GAL
	Water Plant	20	B	9	GAL
	Security Building	28	A	12	GAL
	Human Resources Building	28	B	4	GAL
	Pilot Plant Annex	37		5	GAL
	Health & Safety Building	53	A	204	GAL
	Six to Four Reduction Facility #1	54	A	4	GAL
	Drum Reconditioning Building	66		15	GAL
	Decontamination Building	69		1	GAL
	Plant 1 Storage Pad	74	T	2	GAL
	Unknown			95	GAL
PAINT, EPOXY	Recovery Plant	8	A	50	KIT
	Main Maintenance Building	12	A	17	KIT
	Plant 1 Storage Pad	74	T	21	KIT
PAINT, EPOXY PRIMER	Maintenance Building	3	A	1	2GAL/KIT
	NAR Towers	3	D	1	2GAL/KIT
	Service Building	11		12	2GAL/KIT
	Main Maintenance Building	12	A	6	2GAL/KIT
PAINT, LATEX	Preparation Plant	1	A	3	GAL
	Ore Refinery Plant	2	A	24	GAL
	NAR Towers	3	D	9	GAL
	Green Salt Plant	4	A	17	GAL
	Plant 4 Maintenance Building	4	C	1	GAL
	Metals Production Plant	5	A	38	GAL
	Metals Fabrication Warehouse	6	A	76	GAL
	Recovery Plant	8	A	8	GAL
	Plant 8 Maintenance Building	8	B	4	GAL
	Special Products Plant	9	A	87	GAL
	Main Maintenance Building	12	A	101	GAL
	Administration Building	14	A	19	GAL
	Laboratory	15		84	GAL
	Old North Tank Farm	19	D	4	GAL
	Water Plant	20	B	11	GAL
	Digester & Control Building	25	E	23	GAL
	Security Building	28	A	26	GAL
	Human Resources Building	28	B	65	GAL
	Engine House/Garage	31	A	124	GAL
	Pilot Plant Annex	37		5	GAL
	Health & Safety Building	53	A	41	GAL
	Six to Four Reduction Facility #1	54	A	6	GAL
	Decontamination Building	69		2	GAL
	Unknown			156	GAL
PAINT, METAL PRIMER	Aboveground Storage Tanks	G-010		2	GAL
	Preparation Plant	1	A	2	GAL
	Metals Production Plant	5	A	6	GAL
	Metals Fabrication Warehouse	6	A	3	GAL
	Recovery Plant	8	A	1	GAL
	Boiler Plant	10	A	1	GAL
	Service Building	11		3	GAL
	Main Maintenance Building	12	A	28	GAL
	Six to Four Reduction Facility #1	54	A	2	GAL
	Unknown			35	GAL
PAINT, OIL BASE	Preparation Plant	1	A	4	GAL
	Metals Production Plant	5	A	2	GAL
	Recovery Plant	8	A	1	GAL
	Service Building	11		2	GAL
	Main Maintenance Building	12	A	21	GAL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
PAINT, OIL BASE (Cont.)	Unknown			8	GAL
PAINT, PRIMER	Aboveground Storage Tanks	G-010		2	GAL
	Preparation Plant	1	A	14	GAL
	Ore Refinery Plant	2	A	27	GAL
	Maintenance Building	3	A	10	GAL
	NAR Towers	3	D	6	GAL
	Hot Raffinate Building	3	E	2	GAL
	Refinery Sump	3	H	5	GAL
	Green Salt Plant	4	A	148	GAL
	Plant 4 Maintenance Building	4	C	20	GAL
PAINT, PRIMER (Cont.)	Metals Production Plant	5	A	124	GAL
	Plant 5 Ingot Pickling	5	B	7	GAL
	Metals Fabrication Warehouse	6	A	43	GAL
	Recovery Plant	8	A	48	GAL
	Special Products Plant	9	A	41	GAL
	Boiler Plant	10	A	35	GAL
	Boiler Plant Maintenance Building	10	B	11	GAL
	Service Building	11		8	GAL
	Main Maintenance Building	12	A	204	GAL
	Pilot Plant Maintenance Building	13	B	4	GAL
	Laboratory	15		10	GAL
	General Sump	18	B	4	GAL
	BDN Effluent Treatment Facility	18	H	1	GAL
	Old North Tank Farm	19	D	12	GAL
	Water Plant	20	B	23	GAL
	Digester & Control Building	25	E	17	GAL
	Security Building	28	A	1	GAL
	Human Resources Building	28	B	2	GAL
	Engine House/Garage	31	A	16	GAL
	Pilot Plant Annex	37		3	GAL
	Health & Safety Building	53	A	21	GAL
	Six to Four Reduction Facility #1	54	A	9	GAL
	Thorium Warehouse	64		5	GAL
	Decontamination Building	69		3	GAL
	Plant 1 Storage Pad	74	T	4	GAL
	Unknown			92	GAL
PAINT, PVC PRIMER	Preparation Plant	1	A	1	1 PINT CAN
	Maintenance Building	3	A	1	1 PINT CAN
	Green Salt Plant	4	A	2	1 PINT CAN
	Metals Production Plant	5	A	3	1 PINT CAN
	Metals Fabrication Warehouse	6	A	6	1 PINT CAN
	Recovery Plant	8	A	2	1 PINT CAN
	Boiler Plant	10	A	5	1 PINT CAN
	Service Building	11		1	1 PINT CAN
	Main Maintenance Building	12	A	16	1 PINT CAN
	Laboratory	15		2	1 PINT CAN
	Old North Tank Farm	19	D	2	1 PINT CAN
	Water Plant	20	B	1	1 PINT CAN
	Engine House/Garage	31	A	1	1 PINT CAN
	Six to Four Reduction Facility #1	54	A	1	1 PINT CAN
PAINT, RED EPOXY	Preparation Plant	1	A	1	2 GL=1 KIT
	Ore Refinery Plant	2	A	1	2 GL=1 KIT
	NAR Towers	3	D	1	2 GL=1 KIT
	Green Salt Plant	4	A	7	2 GL=1 KIT
	Plant 4 Maintenance Building	4	C	20	2 GL=1 KIT
	Metals Production Plant	5	A	4	2 GL=1 KIT
	Metals Fabrication Warehouse	6	A	1	2 GL=1 KIT
	Recovery Plant	8	A	7	2 GL=1 KIT
	Plant 8 Maintenance Building	8	B	1	2 GL=1 KIT
	Special Products Plant	9	A	3	2 GL=1 KIT
	Boiler Plant	10	A	2	2 GL=1 KIT
	Service Building	11		5	2 GL=1 KIT
	Main Maintenance Building	12	A	33	2 GL=1 KIT
	Water Plant	20	B	4	2 GL=1 KIT
	Digester & Control Building	25	E	3	2 GL=1 KIT

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
INT, RED EPOXY (Cont.)	Engine House/Garage	31	A	2	2 GL=1 KIT
	Decontamination Building	69		1	2 GL=1 KIT
	Unknown			12	2 GL=1 KIT
PAINT, RUBBER BASE CEMENT	Preparation Plant	1	A	16	GAL
	Ore Refinery Plant	2	A	3	GAL
	Green Salt Plant	4	A	6	GAL
	Main Maintenance Building	12	A	14	GAL
	Water Plant	20	B	20	GAL
	Digester & Control Building	25	E	3	GAL
	Health & Safety Building	53	A	3	GAL
PAINT, RUBBER BASE CEMENT (Cont.)	Plant 1 Storage Pad	74	T	2	GAL
	Unknown			1	GAL
PAINT, RUST INHIBITIV ALUM	Unknown			1	13oz CAN E
PAINT, RUSTOLEUM	Main Maintenance Building	12	A	2	GAL
	Health & Safety Building	53	A	3	GAL
PAINT, SPRAY	Underground Storage Tanks	G-007		3	13oz CAN E
	Preparation Plant	1	A	3543	13oz CAN E
	Ore Refinery Plant	2	A	1391	13oz CAN E
	NAR Towers	3	D	24	13oz CAN E
	Hot Raffinate Building	3	E	12	13oz CAN E
	Green Salt Plant	4	A	2148	13oz CAN E
	Plant 4 Maintenance Building	4	C	7	13oz CAN E
	Metals Production Plant	5	A	8686	13oz CAN E
	Metals Fabrication Warehouse	6	A	4220	13oz CAN E
	Recovery Plant	8	A	4632	13oz CAN E
	Plant 8 Old Drum Washer	8	F	83	13oz CAN E
	Special Products Plant	9	A	2282	13oz CAN E
	Boiler Plant	10	A	32	13oz CAN E
	Service Building	11		336	13oz CAN E
	Main Maintenance Building	12	A	213	13oz CAN E
	Pilot Plant Maintenance Building	13	B	1	13oz CAN E
	Administration Building	14	A	10	13oz CAN E
	Laboratory	15		350	13oz CAN E
	General Sump	18	B	6	13oz CAN E
	Old North Tank Farm	19	D	148	13oz CAN E
	Water Plant	20	B	50	13oz CAN E
	Security Building	28	A	8	13oz CAN E
	Human Resources Building	28	B	1	13oz CAN E
	Engine House/Garage	31	A	111	13oz CAN E
	Pilot Plant Annex	37		139	13oz CAN E
	Incinerator Building	39	A	192	13oz CAN E
	Health & Safety Building	53	A	138	13oz CAN E
	Six to Four Reduction Facility #1	54	A	570	13oz CAN E
	Drum Reconditioning Building	66		120	13oz CAN E
	Decontamination Building	69		1046	13oz CAN E
	Plant 1 Storage Pad	74	T	560	13oz CAN E
	Unknown			1291	13oz CAN E
PAINT, TERRA	Metals Production Plant	5	A	202276	LB
	Special Products Plant	9	A	13900	LB
	General Sump	18	B	5049	LB
	Unknown			-400	LB
PAINT, TRAFFIC	Ore Refinery Plant	2	A	2	GAL
	Metals Production Plant	5	A	-8	GAL
	Metals Fabrication Warehouse	6	A	11	GAL
	Main Maintenance Building	12	A	128	GAL
	Pilot Plant Annex	37		3	GAL
	Plant 1 Storage Pad	74	T	80	GAL
	Unknown			2	GAL
INT, WHITE EPOXY (OSHA)	Ore Refinery Plant	2	A	36	KIT
	Plant 4 Maintenance Building	4	C	1	KIT
	Metals Fabrication Warehouse	6	A	2	KIT

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
AINT, WHITE EPOXY (OSHA) (Cont.)	Recovery Plant	8	A	5	KIT
	Special Products Plant	9	A	2	KIT
	Main Maintenance Building	12	A	14	KIT
	Laboratory	15		1	KIT
	Old North Tank Farm	19	D	3	KIT
	Water Plant	20	B	2	KIT
	Security Building	28	A	4	KIT
	Decontamination Building	69		12	KIT
PAINT, YELLOW GLOSS	Preparation Plant	1	A	1	2 GAL KIT
	Ore Refinery Plant	2	A	20	2 GAL KIT
	Maintenance Building	3	A	1	2 GAL KIT
	NAR Towers	3	D	5	2 GAL KIT
	Hot Raffinate Building	3	E	3	2 GAL KIT
	Refinery Sump	3	H	1	2 GAL KIT
	Green Salt Plant	4	A	8	2 GAL KIT
	Plant 4 Maintenance Building	4	C	6	2 GAL KIT
	Metals Production Plant	5	A	18	2 GAL KIT
	Metals Fabrication Warehouse	6	A	10	2 GAL KIT
	Recovery Plant	8	A	19	2 GAL KIT
	Plant 8 Maintenance Building	8	B	1	2 GAL KIT
	Special Products Plant	9	A	4	2 GAL KIT
	Boiler Plant Maintenance Building	10	B	1	2 GAL KIT
	Service Building	11		1	2 GAL KIT
	Main Maintenance Building	12	A	27	2 GAL KIT
	Pilot Plant Maintenance Building	13	B	1	2 GAL KIT
	Digester & Control Building	25	E	1	2 GAL KIT
	Engine House/Garage	31	A	10	2 GAL KIT
	Pilot Plant Annex	37		1	2 GAL KIT
	Six to Four Reduction Facility #1	54	A	10	2 GAL KIT
	Decontamination Building	69		4	2 GAL KIT
	Unknown			16	2 GAL KIT
ENETRATING OIL	Ore Refinery Plant	2	A	5	3oz CAN
	Maintenance Building	3	A	2	3oz CAN
	Green Salt Plant	4	A	3	3oz CAN
	Metals Production Plant	5	A	89	3oz CAN
	Metals Fabrication Warehouse	6	A	25	3oz CAN
	Recovery Plant	8	A	18	3oz CAN
	Plant 8 Maintenance Building	8	B	1	3oz CAN
	Special Products Plant	9	A	3	3oz CAN
	Boiler Plant	10	A	4	3oz CAN
	Main Maintenance Building	12	A	99	3oz CAN
	Administration Building	14	A	40	3oz CAN
	Laboratory	15		24	3oz CAN
	Digester & Control Building	25	E	3	3oz CAN
	Engine House/Garage	31	A	3	3oz CAN
	Pilot Plant Annex	37		2	3oz CAN
	Health & Safety Building	53	A	5	3oz CAN
	Six to Four Reduction Facility #1	54	A	17	3oz CAN
	Unknown			74	3oz CAN
PERCHLORETHYLENE	Metals Production Plant	5	A	1	55 GAL DRUM
	Service Building	11		218	55 GAL DRUM
	Water Plant	20	B	2	55 GAL DRUM
	Unknown			2	55 GAL DRUM
PERCHLORIC ACID	Laboratory	15		792	8# BTL
	Unknown			4	8# BTL
PERMA 12 LUBRICATOR	Green Salt Plant	4	A	20	3in CYL
	Metals Production Plant	5	A	24	3in CYL
PERMACOL	Boiler Plant	10	A	21	400# DRUM
	Health & Safety Building	53	A	1	400# DRUM
	Unknown			1	400# DRUM

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
PERMATEX	Ore Refinery Plant	2	A	3	11oz TUBE
	Metals Production Plant	5	A	12	11oz TUBE
	Metals Fabrication Warehouse	6	A	33	11oz CAN
	Plant 6 Salt Oil Heat Treat Building	6	F	1	11oz TUBE
	Special Products Plant	9	A	2	11oz TUBE
	Boiler Plant	10	A	3	11oz TUBE
	Main Maintenance Building	12	A	25	11oz CAN
	Main Maintenance Building	12	A	32	11oz TUBE
	Laboratory	15		1	11oz TUBE
	General Sump	18	B	1	11oz TUBE
	Water Plant	20	B	1	11oz TUBE
	Engine House/Garage	31	A	1	11oz TUBE
	Unknown			134	11oz CAN
PHERANTHROLINE MONOHYDRAT	Laboratory	15		294	1 GRAM BTL
	Unknown			-5	1 GRAM BTL
PHOSPHORIC ACID/4 LITER B	Laboratory	15		216	4 BTLS/CASE
	Water Plant	20	B	2	4 BTLS/CASE
	Unknown			1	4 BTLS/CAS
POLY-FLOC BETZ 1110	Metals Fabrication Warehouse	6	A	86	50# BAG
	Laboratory	15		5	50# BAG
	General Sump	18	B	158	50# BAG
	Water Plant	20	B	4	50# BAG
	Unknown			2	50# BAG
POLYMER GREASE	Boiler Plant	10	A	80	TUBE
PORTER THINNER,T-5,XYLOL	Preparation Plant	1	A	43	GAL
	Ore Refinery Plant	2	A	19	GAL
	Maintenance Building	3	A	2	GAL
	NAR Towers	3	D	3	GAL
	Hot Raffinate Building	3	E	2	GAL
	Refinery Sump	3	H	1	GAL
	Green Salt Plant	4	A	9	GAL
	Plant 4 Maintenance Building	4	C	9	GAL
	Metals Production Plant	5	A	50	GAL
	Plant 5 Ingot Pickling	5	B	2	GAL
	Metals Fabrication Warehouse	6	A	23	GAL
	Plant 6 Salt Oil Heat Treat Building	6	F	2	GAL
	Recovery Plant	8	A	17	GAL
	Special Products Plant	9	A	14	GAL
	Boiler Plant	10	A	19	GAL
	Service Building	11		4	GAL
	Main Maintenance Building	12	A	120	GAL
	Laboratory	15		5	GAL
	General Sump	18	B	3	GAL
	Old North Tank Farm	19	D	5	GAL
	Water Plant	20	B	16	GAL
	Security Building	28	A	2	GAL
	Human Resources Building	28	B	11	GAL
	Engine House/Garage	31	A	6	GAL
	Pilot Plant Annex	37		2	GAL
	Health & Safety Building	53	A	5	GAL
	Six to Four Reduction Facility #1	54	A	10	GAL
	Drum Reconditioning Building	66		2	GAL
	Decontamination Building	69		1	GAL
	Plant 4 Pad	74	E	6	GAL
	Plant 1 Storage Pad	74	T	3	GAL
	Unknown			80	GAL
POT CLEANING SOAP	Service Building	11		24	45# CASE
	Laboratory	15		54	45# CASE
	Unknown			3	45# CASE

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
POTASSIUM CARBONATE	Special Products Plant	9	A	168900	LB
	Laboratory	15		0	LB
	Unknown			200	LB
POTASSIUM HYDROXIDE	Ore Refinery Plant	2	A	-9675	LB
	Green Salt Plant	4	A	908484	LB
	Metals Fabrication Warehouse	6	A	687	LB
	Recovery Plant	8	A	88749	LB
	Special Products Plant	9	A	8937	LB
	Laboratory	15		22	LB
	Health & Safety Building	53	A	2	LB
	Unknown			29	LB
POTASSIUM PRYOSULFATE PDR	Laboratory	15		28	1# BTL
	Unknown			6	1# BTL
POWDERED BLEACH	Service Building	11		40	55# PAIL
PVC SOLVENT CEMENT	Preparation Plant	1	A	2	1 PT CAN
	Maintenance Building	3	A	1	1 PT CAN
	Recovery Plant	8	A	1	1 PT CAN
	Main Maintenance Building	12	A	8	1 PT CAN
	Old North Tank Farm	19	D	2	1 PT CAN
	Unknown			1	1 PT CAN
QUENCHING OIL	Metals Fabrication Warehouse	6	A	8	55 GAL DRUM
	Plant 6 Salt Oil Heat Treat Building	6	F	93	55 GAL DRUM
RAT BAIT	Service Building	11		2	5 GAL/PAIL
	Laboratory	15		1	5 GAL/PAIL
RECLAIMED 1,1,1 TRICHLOROETHANE	Green Salt Plant	4	A	1	55 GAL DRUM
	Metals Production Plant	5	A	3	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	4	55 GAL DRUM
	Recovery Plant	8	A	1	55 GAL DRUM
	Boiler Plant	10	A	4	55 GAL DRUM
	Unknown			16	55 GAL DRUM
RED ROLLMARK INK	Preparation Plant	1	A	6	EA
	Ore Refinery Plant	2	A	4	EA
	Green Salt Plant	4	A	12	EA
	Metals Production Plant	5	A	14	EA
	Metals Fabrication Warehouse	6	A	4	EA
	Recovery Plant	8	A	20	EA
	Special Products Plant	9	A	18	EA
	Boiler Plant	10	A	2	EA
	Service Building	11		1	EA
	Engine House/Garage	31	A	2	EA
	Health & Safety Building	53	A	12	EA
	Six to Four Reduction Facility #1	54	A	14	EA
	Decontamination Building	69		7	EA
	Plant 1 Storage Pad	74	T	24	EA
REFRIGERATION OIL	Metals Fabrication Warehouse	6	A	2	GAL
	Main Maintenance Building	12	A	4	GAL
	Pilot Plant Annex	37		1	GAL
	Six to Four Reduction Facility #1	54	A	2	GAL
	Unknown			2	GAL
RID-LIME	Ore Refinery Plant	2	A	60	30 GAL DRUM
	Plant 4 Maintenance Building	4	C	60	30 GAL DRUM
	Metals Production Plant	5	A	274	30 GAL DRUM
	Boiler Plant	10	A	91	30 GAL DRUM
	Main Maintenance Building	12	A	-2	30 GAL DRUM
	Pilot Plant Maintenance Building	13	B	1	30 GAL DRUM
	Laboratory	15		32	30 GAL DRUM
	Health & Safety Building	53	A	60	30 GAL DRUM
	Unknown			146	30 GAL DRUM

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
RM-S SOLVENT	Ore Refinery Plant	2	A	4	1 QT
	Green Salt Plant	4	A	5	1 QT
	Metals Production Plant	5	A	9	1 QT
	Metals Fabrication Warehouse	6	A	2	1 QT
	Special Products Plant	9	A	2	1 QT
	Main Maintenance Building	12	A	5	1 QT
	Laboratory	15		1	1 QT
	General Sump	18	B	1	1 QT
	Engine House/Garage	31	A	1	1 QT
	Six to Four Reduction Facility #1	54	A	4	1 QT
	Decontamination Building	69		12	1 QT
	Plant 1 Storage Pad	74	T	24	1 QT
RUST PREVENTIVE LUBRICANT	Main Maintenance Building	12	A	1	CAN
	Unknown			1	CAN
RUSTOLEUM SURFA ETCH	Preparation Plant	1	A	3	GAL
	Ore Refinery Plant	2	A	22	GAL
	NAR Control House	3	C	1	GAL
	Green Salt Plant	4	A	7	GAL
	Plant 4 Warehouse	4	B	14	GAL
	Plant 4 Maintenance Building	4	C	6	GAL
	Metals Production Plant	5	A	29	GAL
	Metals Fabrication Warehouse	6	A	32	GAL
	Recovery Plant	8	A	35	GAL
	Plant 8 Maintenance Building	8	B	1	GAL
	Special Products Plant	9	A	2	GAL
	Boiler Plant	10	A	1	GAL
	Service Building	11		24	GAL
	Main Maintenance Building	12	A	54	GAL
	Human Resources Building	28	B	1	GAL
	Six to Four Reduction Facility #1	54	A	40	GAL
	KC-2 Warehouse	63		34	GAL
	Drum Reconditioning Building	66		4	GAL
	Plant 1 Storage Pad	74	T	37	GAL
	Unknown			12	GAL
SAUEREISEN CEMENT	Metals Production Plant	5	A	289	QUART
	Laboratory	15		2	QUART
	Unknown			5	QUART
SEALANT(JOINT)	Ore Refinery Plant	2	A	1	15' ROLL
	Hot Raffinate Building	3	E	2	15' ROLL
	Metals Production Plant	5	A	1	15' ROLL
	Plant 8 Maintenance Building	8	B	1	15' ROLL
	Main Maintenance Building	12	A	1	15' ROLL
	Old North Tank Farm	19	D	2	15' ROLL
	Incinerator Building	39	A	4	15' ROLL
SHELLAC	Ore Refinery Plant	2	A	1	QUART
	Metals Production Plant	5	A	1	QUART
	Service Building	11		1	QUART
	Main Maintenance Building	12	A	4	QUART
	Laboratory	15		1	QUART
	Old North Tank Farm	19	D	1	QUART
	Human Resources Building	28	B	1	QUART
	Health & Safety Building	53	A	2	QUART
	Unknown			8	QUART
SILICONE OIL	Hot Raffinate Building	3	E	5	GAL
	Boiler Plant	10	A	5	GAL
	Old North Tank Farm	19	D	6	GAL
ODIUM HYPOCHLORITE (BLEACH)	Water Plant	20	B	110	55 GAL DRUM
	Digester & Control Building	25	E	3	55 GAL DRUM
SODIUM OXALATE	Laboratory	15		113	1# BTL

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

3296

Material	Component	Component Designation		Quantities	Units of Measure
SOLUBLE C OIL	Metals Production Plant	5	A	61	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	539	55 GAL DRUM
	Special Products Plant	9	A	84	55 GAL DRUM
	Main Maintenance Building	12	A	1	55 GAL DRUM
	Unknown			-7	55 GAL DRUM
STRIPPING DETERGENT SOAP	Preparation Plant	1	A	0	55 GAL DRUM
	Recovery Plant	8	A	4	55 GAL DRUM
	Boiler Plant	10	A	1	55 GAL DRUM
	Service Building	11		55	55 GAL DRUM
	Main Maintenance Building	12	A	3	55 GAL DRUM
	Plant 1 Storage Pad	74	T	1	55 GAL DRUM
	Unknown			1	55 GAL DRUM
SULFURIC ACID	Ore Refinery Plant	2	A	32367	LB
	General Sump	18	B	712375	LB
	Water Plant	20	B	323697	LB
SULFURIC ACID/9# BLT	Laboratory	15		58	6 EA/CASE
	Water Plant	20	B	29	6 EA/CASE
	Digester & Control Building	25	E	1	6 EA/CASE
	Health & Safety Building	53	A	8	6 EA/CASE
	Unknown			7	6 EA/CASE
SUN-WAY LUBRICANT	Metals Fabrication Warehouse	6	A	1	420# DRUM
	Special Products Plant	9	A	1	420# DRUM
	Unknown			1	420# DRUM
SUPER CUT #S-5 COOLANT	Unknown			2	5 GAL CAN
SUPER DE SOIL	Service Building	11		742	100# BAG
	Main Maintenance Building	12	A	6	100# BAG
	Unknown			6	100# BAG
SURFACTANT,DETERMICROBOND	Metals Production Plant	5	A	10	55 GAL DRUM
	Boiler Plant	10	A	16	55 GAL DRUM
	Laboratory	15		2	55 GAL DRUM
SYNTHETIC GREASE/24oz	Six to Four Reduction Facility #1	54	A	3	CARTRIDGE
THREAD CUTTING OIL	Preparation Plant	1	A	1	5 GAL CAN
	Ore Refinery Plant	2	A	4	5 GAL CAN
	Green Salt Plant	4	A	1	5 GAL CAN
	Metals Production Plant	5	A	3	5 GAL CAN
	Boiler Plant	10	A	1	5 GAL CAN
	Main Maintenance Building	12	A	8	5 GAL CAN
	Old North Tank Farm	19	D	1	5 GAL CAN
	Unknown			7	5 GAL CAN
TRANSIT SIDING 4X8	Metals Fabrication Warehouse	6	A	3	SHEET
	Plant 6 Salt Oil Heat Treat Building	6	F	1	SHEET
	Recovery Plant	8	A	1	SHEET
	Boiler Plant	10	A	0	SHEET
	Water Plant	20	B	12	SHEET
	Human Resources Building	28	B	2	SHEET
	Unknown			-3	SHEET
TRIBUTYL PHOSPHATE	Ore Refinery Plant	2	A	92802	LB
	Laboratory	15		1	LB
	Old North Tank Farm	19	D	0	LB
TRISODIUM PHOSPHATE	Metals Production Plant	5	A	2	30# CASE
	Recovery Plant	8	A	1	30# CASE
	Special Products Plant	9	A	1	30# CASE
	Service Building	11		1	30# CASE
	Main Maintenance Building	12	A	2	30# CASE
	Digester & Control Building	25	E	1	30# CASE

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
TRISODIUM PHOSPHATE (Cont.)	Health & Safety Building	53	A	1	30# CASE
	Unknown			4	30# CASE
TUF-N-HARD PAINT	Preparation Plant	1	A	8	GAL
	Ore Refinery Plant	2	A	1	GAL
	Metals Production Plant	5	A	10	GAL
	Recovery Plant	8	A	2	GAL
	Main Maintenance Building	12	A	24	GAL
	Unknown			3	GAL
TURBO OIL	Preparation Plant	1	A	2	55 GAL DRUM
	Green Salt Plant	4	A	1	55 GAL DRUM
	Metals Production Plant	5	A	211	55 GAL DRUM
	Metals Fabrication Warehouse	6	A	46	55 GAL DRUM
	Special Products Plant	9	A	53	55 GAL DRUM
	Main Maintenance Building	12	A	0	55 GAL DRUM
	Pilot Plant Maintenance Building	13	B	1	55 GAL DRUM
	Laboratory	15		2	55 GAL DRUM
	General Sump	18	B	3	55 GAL DRUM
	Pilot Plant Annex	37		2	55 GAL DRUM
	Six to Four Reduction Facility #1	54	A	3	55 GAL DRUM
	Unknown			4	55 GAL DRUM
TURPENTINE GUM SPIRITS	Unknown			5	55 GAL DRUM
URANYL NITRATE CRYSTAL	Laboratory	15		48	LB
VACUUM PUMP OIL	Metals Production Plant	5	A	9.75	GAL
	Metals Fabrication Warehouse	6	A	1	GAL
	Boiler Plant	10	A	14	1 QT BTL
	Main Maintenance Building	12	A	38	1 QT BTL
	Laboratory	15		795	1 QT BTL
	Water Plant	20	B	24	1 QT BTL
	Six to Four Reduction Facility #1	54	A	2	1 QT BTL
	Unknown			37	1 QT BTL
VALVE LUBRICANT	Metals Production Plant	5	A	1	8# CAN
	Metals Fabrication Warehouse	6	A	16	8# CAN
	Plant 6 Salt Oil Heat Treat Building	6	F	1	8# CAN
VISOLITE COMPOUND	Preparation Plant	1	A	8	5# CAN
	Ore Refinery Plant	2	A	15	300# DRUM
	Green Salt Plant	4	A	18	5# CAN
	Green Salt Plant	4	A	2	300# DRUM
	Metals Production Plant	5	A	41	5# CAN
	Metals Production Plant	5	A	30	300# DRUM
	Recovery Plant	8	A	12	5# CAN
	Special Products Plant	9	A	10	300# DRUM
	Special Products Plant	9	A	12	5# CAN
	Six to Four Reduction Facility #1	54	A	6	300# DRUM
	Six to Four Reduction Facility #1	54	A	21	5# CAN
	Drum Reconditioning Building	66		12	5# CAN
WASP STOPPER INSECTISIDE	Preparation Plant	1	A	1	12 CAN/CTN
	Ore Refinery Plant	2	A	2	12 CAN/CTN
	NAR Towers	3	D	3	12 CAN/CTN
	Hot Raffinate Building	3	E	12	12 CAN/CTN
	Refinery Sump	3	H	12	12 CAN/CTN
	Plant 4 Maintenance Building	4	C	2	12 CAN/CTN
	Metals Production Plant	5	A	40	12 CAN/CTN
	Metals Fabrication Warehouse	6	A	27	12 CAN/CTN
	Recovery Plant	8	A	60	12 CAN/CTN
	Special Products Plant	9	A	5	12 CAN/CTN
	Boiler Plant	10	A	38	12 CAN/CTN
	Service Building	11		48	12 CAN/CTN
	Main Maintenance Building	12	A	97	12 CAN/CTN
	Administration Building	14	A	24	12 CAN/CTN
	Laboratory	15		50	12 CAN/CTN

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
WASP STOPPER INSECTISIDE (Cont.)	General Sump	18	B	2	12 CAN/CTN
	Old North Tank Farm	19	D	2	12 CAN/CTN
	Water Plant	20	B	15	12 CAN/CTN
	Digester & Control Building	25	E	21	12 CAN/CTN
	Security Building	28	A	13	12 CAN/CTN
	Human Resources Building	28	B	5	12 CAN/CTN
	Engine House/Garage	31	A	130	12 CAN/CTN
	Pilot Plant Annex	37		14	12 CAN/CTN
	Health & Safety Building	53	A	157	12 CAN/CTN
	Six to Four Reduction Facility #1	54	A	106	12 CAN/CTN
	Thorium Warehouse	64		15	12 CAN/CTN
	Drum Reconditioning Building	66		2	12 CAN/CTN
	Decontamination Building	69		39	12 CAN/CTN
	Plant 1 Storage Pad	74	T	66	12 CAN/CTN
	Unknown			161	12 CAN/CTN
WD-40 LUBRICANT	Aboveground Storage Tanks	G-010		1	GAL
	Preparation Plant	1	A	81	GAL
	Ore Refinery Plant	2	A	223	GAL
	Maintenance Building	3	A	1	GAL
	NAR Towers	3	D	12	GAL
	Hot Raffinate Building	3	E	14	GAL
	Refinery Sump	3	H	24	GAL
	Green Salt Plant	4	A	1725	GAL
	Plant 4 Maintenance Building	4	C	31	GAL
	Metals Production Plant	5	A	2124	GAL
	Metals Fabrication Warehouse	6	A	314	GAL
	Recovery Plant	8	A	906	GAL
	Plant 8 Maintenance Building	8	B	16	GAL
	Special Products Plant	9	A	279	GAL
	Boiler Plant	10	A	231	GAL
	Boiler Plant Maintenance Building	10	B	4	GAL
	Service Building	11		35	GAL
	Main Maintenance Building	12	A	278	GAL
	Administration Building	14	A	29	GAL
	Laboratory	15		82	GAL
	General Sump	18	B	13	GAL
	Old North Tank Farm	19	D	98	GAL
	Water Plant	20	B	137	GAL
	Digester & Control Building	25	E	12	GAL
	Sludge Drying Beds	25	F	1	GAL
	Security Building	28	A	15	GAL
	Human Resources Building	28	B	4	GAL
	Engine House/Garage	31	A	92	GAL
	Pilot Plant Annex	37		34	GAL
	Heavy Equipment Building	46		12	GAL
	Health & Safety Building	53	A	11	GAL
	Six to Four Reduction Facility #1	54	A	353	GAL
	Thorium Warehouse	64		1	GAL
	Drum Reconditioning Building	66		25	GAL
	Decontamination Building	69		79	GAL
	Plant 1 Storage Pad	74	T	136	GAL
	Unknown			1201	GAL
WHITE ROLLMARK INK	Ore Refinery Plant	2	A	8	EA
	Green Salt Plant	4	A	13	EA
	Plant 4 Maintenance Building	4	C	3	EA
	Metals Production Plant	5	A	60	EA
	Metals Fabrication Warehouse	6	A	19	EA
	Recovery Plant	8	A	30	EA
	Special Products Plant	9	A	30	EA
	Boiler Plant	10	A	1	EA
	Service Building	11		1	EA
	Main Maintenance Building	12	A	7	EA
	Laboratory	15		3	EA
	General Sump	18	B	2	EA
	Engine House/Garage	31	A	2	EA
	Six to Four Reduction Facility #1	54	A	13	EA

TABLE A.4.4b
MATERIAL DISTRIBUTION FROM MAIN MAINTENANCE BUILDING (1980-1990)

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Material	Component	Component Designation		Quantities	Units of Measure
WHITE ROLLMARK INK (Cont.)	Decontamination Building	69		43	EA
	Plant 1 Storage Pad	74	T	329	EA
	Unknown			12	EA
WIRE ROPE LUBRICANT	Preparation Plant	1	A	25	35# PAIL
	Ore Refinery Plant	2	A	93	35# PAIL
	NAR Towers	3	D	6	35# PAIL
	Green Salt Plant	4	A	61	35# PAIL
	Plant 4 Maintenance Building	4	C	34	35# PAIL
	Metals Production Plant	5	A	340	35# PAIL
	Metals Fabrication Warehouse	6	A	38	35# PAIL
	Recovery Plant	8	A	160	35# PAIL
	Plant 8 Maintenance Building	8	B	4	35# PAIL
	Special Products Plant	9	A	10	35# PAIL
	Boiler Plant	10	A	73	35# PAIL
	Main Maintenance Building	12	A	13	35# PAIL
	Laboratory	15		1	35# PAIL
	General Sump	18	B	1	35# PAIL
	Old North Tank Farm	19	D	6	35# PAIL
	Water Plant	20	B	12	35# PAIL
	Digester & Control Building	25	E	12	35# PAIL
	Sludge Drying Beds	25	F	1	35# PAIL
	Tricling Filters	25	H	6	35# PAIL
	Engine House/Garage	31	A	13	35# PAIL
	Pilot Plant Annex	37		1	35# PAIL
	Six to Four Reduction Facility #1	54	A	41	35# PAIL
	Drum Reconditioning Building	66		12	35# PAIL
	Decontamination Building	69		19	35# PAIL
	Unknown			175	35# PAIL
XYLOL OR XYLENE THINNER	Preparation Plant	1	A	2	55 DL DRUM
	Drum Reconditioning Building	66		20	55 DL DRUM
	Plant 1 Storage Pad	74	T	4	55 DL DRUM
YTTRIUM OXIDE COATING	Metals Production Plant	5	A	50	GAL
	Pilot Plant Annex	37		1	GAL
(CEMENT)SOLVENT CPVC	Preparation Plant	1	A	1	1 PINT CAN
	Ore Refinery Plant	2	A	1	1 PINT CAN
	Green Salt Plant	4	A	3	1 PINT CAN
	Metals Production Plant	5	A	3	1 PINT CAN
	Metals Fabrication Warehouse	6	A	6	1 PINT CAN
	Recovery Plant	8	A	1	1 PINT CAN
	Boiler Plant	10	A	10	1 PINT CAN
	Service Building	11		1	1 PINT CAN
	Main Maintenance Building	12	A	18	1 PINT CAN
	Administration Building	14	A	1	1 PINT CAN
	Laboratory	15		2	1 PINT CAN
	Old North Tank Farm	19	D	2	1 PINT CAN
	Water Plant	20	B	2	1 PINT CAN
	Engine House/Garage	31	A	1	1 PINT CAN
	Six to Four Reduction Facility #1	54	A	2	1 PINT CAN
	Unknown			2	1 PINT CAN

TABLE A.4.5

MERCURY VAPOR SURVEY RESULTS FROM BUILDING 15

Table A.4.5 is a summary of an industrial hygiene monitoring survey for mercury vapor levels in the laboratory (OU3 component 15). The purpose of the survey was to support renovations and refurbishment of the laboratory. Not all rooms within the laboratory were surveyed. The report details information on the quantity of monitoring results in each room, the average room concentration, concentrations in lab sinks, and concentrations in lab drawers. A table entry of N/A represents no data collection in that room. An entry of <0.003 represents less than the minimum detectable amount.

TABLE A.4.5
MERCURY VAPOR SURVEY RESULTS FROM BUILDING 15

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Room #	Total Number Of Monitoring Results *	Number of Samples In Sinks	Average Concentration In Sinks (mg/m3)	Number of Samples In Drawers	Average Concentration In Drawers (mg/m3)
N-4	14	0	N/A	1	<0.003
N-7	22	1	<0.003	1	<0.003
N-8	14	0	N/A	1	<0.003
N-10	14	0	N/A	1	<0.003
N-11	24	1	<0.003	1	<0.003
N-12	18	1	<0.003	1	<0.003
N-14	12	0	N/A	1	<0.003
N-15	33	3	0.043	9	0.071
N-16	12	0	N/A	1	<0.003
N-18	14	0	N/A	1	<0.003
N-19	26	1	<0.003	1	<0.003
N-23	23	1	<0.003	1	<0.003
N-26	16	0	N/A	1	<0.003
N-27	22	1	<0.003	1	<0.003
N-30	18	1	<0.003	1	<0.003
N-31	30	4	0.031	1	<0.003
N-36	14	0	N/A	1	<0.003
N-37	52	1	<0.003	1	<0.003
N-38	14	1	<0.003	1	<0.003
N-40	6	0	N/A	0	N/A
N-40A	6	1	<0.003	1	<0.003
N-42	6	0	N/A	0	N/A
N-45	8	0	N/A	0	N/A
W-10	34	3	0.007	0	N/A
W-18	22	0	N/A	1	<0.003
W-22	28	1	<0.003	1	<0.003
W-22A	28	2	0.405	1	<0.003
W-24	8	1	0.074	1	<0.003
W-26	42	1	<0.003	1	<0.003
W-26A	8	0	N/A	0	N/A
W-28	34	0	N/A	1	<0.003
W-34	58	1	<0.003	1	<0.003
W-36	6	1	N/A	0	N/A
W-44	42	1	<0.003	1	<0.003
W-46	34	1	<0.003	1	<0.003
W-50	14	0	N/A	0	N/A
S-39	22	0	N/A	0	N/A
S-42	24	1	<0.003	1	<0.003
S-42A	8	1	<0.003	0	N/A
S-43	48	1	0.004	1	<0.003
C-25	22	1	<0.003	1	<0.003
C-27	12	1	<0.003	1	<0.003
C-29	8	0	N/A	0	N/A
C-31	32	1	<0.003	1	<0.003
C-35	30	1	<0.003	1	<0.003
C-37	10	0	N/A	1	<0.003
C-39	18	0	N/A	1	<0.003
C-41	20	1	<0.003	1	<0.003
C-43	34	1	<0.003	1	<0.003
E-47	26	1	<0.003	1	<0.003
CAVE	8	0	N/A	0	N/A

* The total number of monitoring results refers to the quantity of samples taken in the room, sinks, and drawers. The average concentration in all rooms monitored was less than 0.003 milligrams per meter cubed.

A - No data collected

TABLE A.4.6

RADON (Rn222) AND THORON (Rn220) MONITORING BY LOCATION AND PERIOD

The data presented in this table was collected by Terradex cups placed in several facilities across the site. Until recently, only the thorium warehouses were monitored for levels of radon and thoron. The data for other facilities is unavailable at this time except for Plant 8, the recovery plant.

The Terradex cups are passive collectors that are used over a three month period. Four cups are used in each facility. Two of these are analyzed for radon and thoron and two are analyzed for radon only. By subtracting the radon-only average from the radon and thoron average, an average thoron value is calculated. Also listed are the maximum and minimum thoron values.

Background values for radon have been reported between 0.5 and 0.95 pCi from multiple site documents. This value is location dependent. For worker health over a facility site, an annual average concentraion cannot exceed 30 pCi/L above background for radon. For public health, outside a facility site, an annual average concentration cannot exceed 3 pCi/L above background for radon. Values cannot exceed 100 pCi/L above background at any given point for radon.

During the third quarter of 1990 in the (old) Plant 5 warehouse, the average radon value exceeds the combined average value due to anomalies in the radon measurement.

TABLE A.4.6

RADON (Rn222) AND THORON (Rn220) MONITORING BY LOCATION AND PERIOD

Component	Component Designation	From	To	pCi/L	Contaminant Sampled	Average Rn222+Rn220	Average Rn222 Only	Average Rn220 Only	Maximum Rn220	Minimum Rn220
D QUARTER 1990										
orium Warehouse	64	07/11/90	10/12/90	68.7	Rn222+Rn220	63.9	1.4	62.5	67.3	57.7
				59.1	Rn222+Rn220					
				2.0	Rn222					
				0.8	Rn222					
(Old) Plant 5 Warehouse	65	07/11/90	10/12/90	85.0	Rn222+Rn220	76.25	94.5	a	a	a
				67.5	Rn222+Rn220					
				103.3	Rn222					
				85.7	Rn222					
Plant 1 Thorium Warehouse	67	07/11/90	10/12/90	33.0	Rn222+Rn220	33.15	5.55	27.6	27.8	27.5
				33.3	Rn222+Rn220					
				4.2	Rn222					
				6.9	Rn222					
Pilot Plant Warehouse	68	07/11/90	10/12/90	22.1	Rn222+Rn220	20.45	14.55	5.9	7.6	4.3
				18.8	Rn222+Rn220					
				15.7	Rn222					
				13.4	Rn222					
4TH QUARTER 1990										
Thorium Warehouse	64	10/12/90	01/09/91	30.1	Rn222+Rn220	29.15	1.6	27.6	28.5	27.2
				28.2	Rn222+Rn220					
				1.4	Rn222					
				1.8	Rn222					
(Old) Plant 5 Warehouse	65	10/12/90	01/09/91	78.6	Rn222+Rn220	77.85	59.45	18.4	19.2	17.7
				77.1	Rn222+Rn220					
				75.1	Rn222					
				43.8	Rn222					
Plant 1 Thorium Warehouse	67	10/12/90	01/09/91	19.9	Rn222+Rn220	23.55	5.6	18	21.6	14.3
				27.2	Rn222+Rn220					
				6.9	Rn222					
				4.3	Rn222					
Pilot Plant Warehouse	68	10/12/90	01/09/91	10.9	Rn222+Rn220	10.2	7.7	2.5	3.2	1.8
				9.5	Rn222+Rn220					
				6.8	Rn222					
				8.6	Rn222					
1ST QUARTER 1991										
Thorium Warehouse	64	01/09/91	04/10/91	43.0	Rn222+Rn220	42.6	1.1	41.5	41.9	41.1
				42.2	Rn222+Rn220					
				1.2	Rn222					
				1.0	Rn222					
Old) Plant 5 Warehouse	65	01/09/91	04/10/91	89.0	Rn222+Rn220	80.1	71.25	8.85	17.8	a
				71.2	Rn222+Rn220					
				80.0	Rn222					
				62.5	Rn222					
Plant 1 Thorium Warehouse	67	01/09/91	04/10/91	17.7	Rn222+Rn220	19.05	1.95	17.1	18.5	15.8
				20.4	Rn222+Rn220					
				1.9	Rn222					
				2.0	Rn222					
Pilot Plant Warehouse	68	01/09/91	04/10/91	32.0	Rn222+Rn220	31.35	5.1	26.25	26.9	25.6
				30.7	Rn222+Rn220					
				5.6	Rn222					
				4.6	Rn222					
2ND QUARTER 1991										
Thorium Warehouse	64	04/10/91	07/03/91	136.6	Rn222+Rn220	158.6	1.6	157	179	135
				180.6	Rn222+Rn220					
				0.9	Rn222					
				2.3	Rn222					
(Old) Plant 5 Warehouse	65	04/10/91	07/03/91	178.0	Rn222+Rn220	197	87.5	109.6	128.5	90.5
				216.0	Rn222+Rn220					
			72938	82.2	Rn222					
				92.7	Rn222					
Plant 1 Thorium Warehouse	67	04/10/91	07/03/91	68.6	Rn222+Rn220	73.6	7.5	66.1	71.1	61.1
				78.6	Rn222+Rn220					
				6.7	Rn222					
				8.3	Rn222					
Pilot Plant Warehouse	68	04/10/91	07/03/91	36.0	Rn222+Rn220	68.4	26.3	42.1	74.5	9.8
				100.7	Rn222+Rn220					
				20.5	Rn222					
				32.0	Rn222					
Recovery Plant	8 A	04/10/91	07/03/91	36.3	Rn222+Rn220	34.3	1.3	33	35	30.9
				32.2	Rn222+Rn220					
				1.3	Rn222					
				1.2	Rn222					

NOTE: All samples collected by Terradex Cups, a passive monitor.
Background value for Radon-222 has been reported between 0.5 pCi to 0.95 pCi from multiple site documents. This value is location dependent.
For worker health over a facility site, an annual average concentration cannot exceed 30 pCi/L above background for Radon-222.
For public health outside of a facility site, an annual average concentration cannot exceed 3 pCi/L above background for Radon-222. Values cannot exceed 100 pCi/L above background at any given point for Radon-222.

a - Values are not applicable due to anomalies in the measurement of Radon-220.

Average Rn220 is calculated by subtracting the Average Rn222 Only value from the Average Rn222+Rn220 value.
Maximum and Minimum Rn220 are calculated by subtracting the Average Rn220 value from the Average Rn222+Rn220 values.

TABLE A.4.7

SUMMARY TABLE OF SITE-WIDE ASBESTOS SURVEY

Table A.4.7 summarizes the results of the site-wide asbestos survey performed by Diagnostic Engineering, Incorporated (DEI). The report for this asbestos survey was submitted to Westinghouse Environmental Management Company of Ohio by DEI on February 28, 1992. A total of 74 FEMP components were investigated by this survey. Only components identified as potentially including asbestos-containing material (ACM) were investigated, e.g., newer facilities were not investigated due to the construction ban on ACMs.

Each facility or component was divided into homogeneous areas to facilitate sampling and characterization of the ACM. A homogeneous area is broadly defined as an area of material having similar type, consistency, color, appearance, or composition. Bulk samples were collected for analysis from each homogeneous area except where visual observations determined that there was no potential ACM to sample.

The ACM-positive areas, which were identified by the analysis of the bulk samples, were assigned a numeric hazard ranking by the survey. The hazard ranking range was from 1 (low potential for disturbance, ACM in good condition) to 7 (significant damage to ACM, immediate abatement necessary). Table A.4.7 identifies components containing homogeneous areas with a hazard ranking of 1 or above in the "Number of Positive Areas for ACM" column.

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TABLE A.4.7 Summary of Site-Wide Asbestos Survey Results

Component	Component	Homogeneous Areas Sampled	Number of Positive Areas for ACM	Number of Bulk Samples
Preparation plant and Plant 1 storage shelter	1A and 1B	23	20	62
Ore refinery building	2A	76	59	180
Lime handling building	2B	15	12	18
Bulk lime handling building	2C	2	2	3
Metal dissolver building	2D	11	9	12
NFS storage pump house	2E	5	5	11
Maintenance building	3A	13	10	25
Ozone building	3B	4	3[a]	5
Control house	3C	13	7	21
NAR towers	3D	8	5	27
Hot raffinate building	3E	33	27	71
Digestion fume recovery	3F	4	4	8
Refrigeration building	3G	4	4	5
Green salt plant	4A	107	87	187
Plant 4 warehouse	4B	0	0	0
Plant 4 maintenance building	4C	5	2	4
Metals production plant	5A	104	75	215
Metals fabrication plant	6A	205	87	421
Plant 7	7A	58	57	108
Recovery plant	8A	43	31	67
Maintenance building	8B	4	4	8
Rotary kiln/drum building	8C	0	0	0
Special products plant	9A	62	40	114
Boiler plant	10A	41	30	174
Boiler plant maintenance	10B	3	0	5
Service building	11	55	25	123
Main maintenance building	12A	49	40	91
Cylinder storage building	12B	0	0	0
Lumber storage building	12C	0	0	0
Pilot Plant wet side	13A	20	17	30
Pilot Plant maintenance building	13B	5	4	11
Administration building	14	53	53	114
Laboratory	15	141	105	315
Main electrical station	16A	2	2	1
General sump	18B	0	0	0
Main metal tank farm	19A	3	0	5
Valve/control building	20A	11	10	16
Filter/chemical building	20B	12	7	22

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TABLE A.4.7 Summary of Site-Wide Asbestos Survey Results

Component	Component	Homogeneous Areas Sampled	Number of Positive Areas for ACM	Number of Bulk Samples
Cooling towers	20C	1	1	1
Well house 1	20E	2	2	3
	20G	2	2	4
Well house 3				
Railroad scale house	24A	0	0	0
Security building	28A	12	8	21
Human resources building	28B	31	19	71
Chemical warehouse	30A	6	6	12
Engine house/garage	31	14	13	29
Magnesium storage building	32	7	5	9
Pilot plant annex	37	10	8	22
Propane storage	38	4	4	14
Incinerator building	39A	6	5	8
Rust building	45	18	9	38
Heavy equipment building	46	7	1	9
OS&H building	53A	3	1	5
UF_6 to UF_4 reduction facility 1	54A	54	23	83
Pilot Plant warehouse	54B	0	0	0
Slag recycling building	55A	9	6	17
CP storage warehouse	66	4	2	10
Quonset hut 1	60	0	0	0
Quonset hut 2	61	1	1[a]	3
Quonset hut 3	62	2	1[a]	3
KC-2 warehouse	63	5	0	3
Thorium warehouse	64	0	0	0
(old) Plant 5 warehouse	65	0	0	0
Drum reconditioning building	66	9	6	15
Plant 1 thorium warehouse	67	0	0	0
Pilot Plant warehouse	68	4	4	2
Decontamination building	69	5	5	24
General in process storage	71	3	1	7
Finished products warehouse	77	0	0	0

[a] ACM from these areas was abated during the survey so these facilities are not included in the 56 facilities containing ACM.

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TABLE A.5.0 and A.5.1

INVENTORY OF NON-RCRA and RCRA DRUMS

Both tables present information on drummed waste at the FEMP. The information presented is a summary of general types of waste that are currently stored in various buildings. This information is a compilation of data from the Material Control and Accountability (MC&A) department and the Removal Site Evaluation for Thorium Storage Buildings. Sizes of drums are unknown in the existing MC&A database. A new database is being created to track and control drum content, sizes, and locations.

These tables present drum information by storage location and then by enrichment code. The enrichment codes and their definitions are listed below. Within each code, all quantities of drums have been grouped together. The original quantities for each description are available if requested.

*Enrichment Codes		
A = normal alloy	N = normal waste, 0.710 to 0.712% U-235	3 = enriched 1.10% U-235
B = enriched alloy	P = depleted waste, <0.710% U-235	4 = enriched, 1.25% U-235
C = enriched, 2.1% U-235	T = thorium	5 = enriched, 0.94% U-235
D = depleted	V = enriched waste, >0.712% U-235	7 = enriched sweetener
G = normal	X = enriched	8 = enriched, 0.86% U-235
H = enriched, 0.947% U-235	1 = normal, 0.710 to 0.712% U-235	9 = enriched, 2.10% U-235
L = enriched, 0.947% U-235	2 = enriched, recycle tails	0 = enriched
M = enriched, 1.25% U-235		

TABLE A.9.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Metal Dissolver Building	2 D	H	SOLID METAL,NOT CORES, EMBEDDED STEEL	1
Green Salt Plant	4 A	0	CALCIUM URANATE	250
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			U3O8 ROTEXED PLANT 8 FURNACE PRODUCT	
			UF4 OR THF4	
			UNFIRED REDUCTION CHARGES + MGF2	
		2	SCRAP SALTS, HIGH FLUORIDE	3
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
		4	U3O8 ROTEXED PLANT 8 FURNACE PRODUCT	816
			UF4 FROM PILOT PLANT UF6	
			UO2 OR THO2 PRODUCT	
		7	OFF-SPEC UF4 OR THF4	254
			UF4 FROM PILOT PLANT UF6	
			UF4 OR THF4	
		D	UF4 FROM PILOT PLANT UF6	456
			UF4 OR THF4	
			UO3 REACTOR RECYCLE TAILS	
		M	SCRAP U3O8 OR THO2, HIGH FLUORIDE	33
Plant 4 Warehouse	4 B	0	UF4 OR THF4	283
		2	UF4 FROM HANFORD UO3	2,995
		D	OFF-SPEC UF4 OR THF4	10,659
			SCRAP SALTS, HIGH FLUORIDE	
			SLUDGES, OILY	
			UF4 FROM PILOT PLANT UF6	
			UF4 OR THF4	
Metals Production Plant	5 A	0	CONTAMINATED GRAPHITE	370
			CONTAMINATED MAGNESIUM	
			CONTAMINATED SOIL, ROCKS, SAND...	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			MGF2, +20 MESH, LOW U CONTENT	
			ROASTED MgF2 (BLENDED WITH OTHER MATERIALS)	
			ROCKWELL CLEANINGS	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	

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TABLE A-10
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Metals Production Plant (Cont.)	5 A	0 (Cont.)	U3O8 +8 MESH, LOW FLUORIDE	
			UNFIRED REDUCTION CHARGES + MGF2	
			ZIRNLO PRODUCT	
		1	DECLAD METAL, OTHER THAN ZIRNLO	6
			UO3 PRODUCT	
		2	DUST COLLECTOR BAGS	111
			SCRAP SALTS, HIGH FLUORIDE	
		3	METAL SAMPLES FOR DOUBLE MELTING	4
		4	DUST COLLECTOR BAGS	401
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP UO2	
			UO3 PRODUCT	
		5	CONTAMINATED SOIL, ROCKS, SAND...	152
		8	LEAD AND LEAD CONTAMINATED METAL	24
		D	CHARGED UF4 POTS, WIP	205
			CHEMICAL REJECT SOLID REMELT METAL	
			CLEAN PRILL FOR DOUBLE MELTING	
			CONTAMINATED MAGNESIUM	
			DEPLETED U INGOT CROPS FROM PRIMARY INGOTS	
			DIRTY PRIL, CODE 5 DERBIES, HIGH U CONTENT	
			DRY CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUE, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			INGOT CROPS AND DUDS	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			MGF2, +20 MESH, LOW U CONTENT	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			PARTIALLY OXIDIZED METAL OXIDATION FEED	
			PICKLED ARF REMELT MATERIAL	
			PICKLED PRIMARY INGO W/O TOP CROP METAL	
			PICKLED REJECT BILLETS OR BILLET SECTIONS	
			ROCKWELL CLEANINGS	
			SLUDGES, NON-OILY, FOR OXIDATION	
			SR STANDARD SOLID METAL-FOR REMELT	
			UNFIRED REDUCTION CHARGES + MGF2	
			UO3 REACTOR RECYCLE TAILS	
			WET CRUSHED SLAG FROM FURNACE POT BLOWOUTS	

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TABLE A
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Metals Production Plant (Cont.)	5 A	H	DUST COLLECTOR RESIDUES, LOW FLUORIDE	422
			INGOT CROPS FROM PRIMARY INGOTS	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			PARTIALLY OXIDIZED METAL	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			ZIRNLO PRODUCT	
			ZIRNLO: PARTIALLY DECLAD FUEL ELEMENTS	
		M	CHEMICAL REJECT SOLID METAL	144
			EXTRUSION BUTTS TO BE PICKLED	
			INGOT CROPS FROM PRIMARY INGOTS	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			PARTIALLY OXIDIZED METAL	
			PICKLED CHEMICAL REJECT CROPS	
			PICKLED CROPS FROM HW METAL	
			PICKLED PRIMARY INGO W/O TOP CROP METAL	
			PICKLED PRIMARY INGOT SECTIONS	
			SAWED SECT. REQ. PIKLG. FRM INGOTS W/O TOP CROPS	
			SAWED SECT. REQ. PIKLG. FRM INGOTS W/TOP CROPS	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
			SOLID REMELT METAL LOW IMPURITIES	
			ZIRNLO PRODUCT	
			ZIRNLO: PARTIALLY DECLAD FUEL ELEMENTS	
		P	MGF2 FOR MILLING OR DISCARD	21
			NON-BURNABLE METAL W/ URANIUM CONTENT	
		V	DUST COLLECTOR RESIDUES-HIGH FLUORIDE	24
			MGF2 FOR MILLING OR DISCARD	
Plant 5 Ingot Storage Shelter	5 G	D	BRIQUETTABLE CHIPS AND TURNINGS	304
			BRIQUETTES HIGH IN IMPURITIES	
			DEPLETED U INGOT CROPS FROM PRIMARY INGOTS	
			METAL SAMPLES FOR DOUBLE MELTING	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	
			SOLID REMELT METAL LOW IMPURITIES	
		P	METAL SAMPLES FOR DOUBLE MELTING	1

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TABLE A.3.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Metals Fabrication Plant	6 A	0	CALCIUM URANATE	14,931
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			MGF2, GROUND	
			OFF-SITE SUMP AND FILTER CAKES AFTER ROASTING	
			ROASTED Ca-PRECIPITATED SUMP AND FILTER CAKES	
			ROASTED, MILLED AND/OR SCREENED CALCIUM	
			U3O8 ROTEXED PLANT 8 FURNACE PRODUCT	
			UNROASTED BUT MILLED MGF2	
		1	MARK 25 ELEMENTS-INNER	41
			MARK 25 ELEMENTS-OUTER	
		2	SCRAP UO2	2
		3	MGF2 FOR MILLING OR DISCARD	3
		4	MGF2 FOR MILLING OR DISCARD	133
		7	UF4 FROM PILOT PLANT UF6	419
		D	CHEMICAL REJECT SOLID REMELT METAL	193
			DEPLETED U METAL	
			FURNACE SALT, SOLIDIFIED, NON-CHLORIDE	
			INGOT CROPS AND DUDS	
			METAL FROM SPILLS FOR DOUBLE MELTING	
			PRIMARY INGOT SEC., NOT PICKLED, 1ST GEN. TOP CROPS	
			ROCKWELL SPILLS	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
		H	CHEMICAL REJECT SOLID METAL	2
			SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
		M	CHEMICAL REJECT SOLID METAL	6
			METAL FROM SPILLS FOR DOUBLE MELTING	
Plant 7	7 A	0	UF4 OR THF4	36
		1	UF4 FROM PILOT PLANT UF6	2,388
		2	DUST COLLECTOR RESIDUES-HIGH FLUORIDE	253
			UF4 FROM HANFORD UO3	
		D	DUST COLLECTOR RESIDUES-HIGH FLUORIDE	3,259
			OFF-SPEC UF4 OR THF4	
			UF4 FROM PILOT PLANT UF6	
			UF4 OR THF4	

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TABLE A-3
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Recovery Plant	8 A	0	DUST COLLECTOR RESIDUES-HIGH FLUORIDE	14
			SLUDGES, CLEANOUT, NON-OILY	
		4	CALCIUM URANATE	1
		P	DISCARD PROCESS RESIDUES	9
		V	CONTAMINATED OIL, INSOLUBLE	5
			ROASTED Ca-PRECIPITATED SUMP AND FILTER CAKES	
Special Products Plant	9 A	0	CALCIUM URANATE	4,078
			DIRTY PRIL, CODE 5 DERBIES, HIGH U CONTENT	
			DRY CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			METAL FROM SPILLS FOR DOUBLE MELTING	
			METAL SAMPLES FOR DOUBLE MELTING	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	
			UNFIRED REDUCTION CHARGES + MGF2	
			UNROASTED BUT MILLED MGF2	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
		2	UNFIRED REDUCTION CHARGES + MGF2	3
		3	REJECT ELEMENTS-INNER	1
		5	UNFIRED REDUCTION CHARGES + MGF2	4
		B	ZIRNLO PRODUCT	3
		D	DEPLETED U INGOT CROPS FROM PRIMARY INGOTS	474
			DEPLETED U METAL	
			DUST COLLECTOR RESIDUE, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES, LOW FLUORIDE	
			METAL FROM SPILLS FOR DOUBLE MELTING	
			PICKLED EXTRUSION BUTTS	
			ROCKWELL SPILLS	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
		H	METAL SAMPLES FOR DOUBLE MELTING	24
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
		M	EXTRUSION BUTTS TO BE PICKLED	2
			TUBULAR ELEMENTS TO BE CRUSHED	
		V	METAL SAMPLES FOR DOUBLE MELTING	2

TABLE A-10
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Pilot Plant Wet Side	13 A	0	ZIRNLO ENDS	1
		B	ZIRNLO ENDS	1
		H	ZIRNLO ENDS	82
		M	SCRAP U3O8 OR THO2, HIGH FLUORIDE	94
Laboratory	15	0	CONTAM. TBP/KEROSENE MIXTURES & SLUDGES	5
			U3O8 NOT REQUIRING RE-OXIDATION	
		D	CONTAMINATED GRAPHITE	18
			CONTAMINATED SOIL, ROCKS, SAND...	
			METAL SAMPLES FOR DOUBLE MELTING	
			SAMPLES, NON-METALLIC, MISC.	
			SPECIAL SOLID INGOTS OR SLABS	
		H	METAL SAMPLES FOR DOUBLE MELTING	1
		M	METAL SAMPLES FOR DOUBLE MELTING	3
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
		P	CONTAMINATED SOLVENT	94
			NON-RECOVERABLE TRASH	
		V	NON-RECOVERABLE TRASH	6
Old North Tank Farm	19 D	P	DISCARD PROCESS RESIDUES	761
			SLUDGES, CLEANOUT, NON-OILY	
		V	SUMP CAKE-COPPER CONTAMINATED, LOW URANIUM	137
Pilot Plant Annex	37	H	ZIRNLO ENDS	12
Six to Four Reduction Facility #1	54 A	1	METAL SAMPLES FOR DOUBLE MELTING	3
		D	CONTAMINATED ALUMINA-SODA LIME	2,744
			OFF-SPEC UF4 OR THF4	
			UF4 FROM PILOT PLANT UF6	
		H	ZIRNLO ENDS	12
		M	SCRAP U3O8 OR THO2, HIGH FLUORIDE	82
			ZIRNLO ENDS	
Pilot Plant Shelter	54 B	0	WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	2,520
		D	UF4 FROM PILOT PLANT UF6	4,249
Quonset Huts #1, #2, and #3	60	T	NON-RECOVERABLE TRASH	1,788
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			UO2 (OR THO2) POWDER-REFINERY FEED	

TABLE A.6.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Thorium Warehouse	64	1	CHEMICAL REJECT SOLID METAL	230
			CODE 2 DERBIES FOR DOUBLE MELTING OR SHOT CLEANING	
			DERBIES, CODE 1 AND CODE 3	
			METAL FROM SPILLS FOR DOUBLE MELTING	
			METAL SAMPLES FOR DOUBLE MELTING	
			PARTIALLY OXIDIZED METAL	
			PICKLED CHEMICAL REJECT CROPS	
			SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
			ZIRNLO ENDS	
		D	CHEMICAL REJECT SOLID REMELT METAL	184
			DEPLETED U METAL	
			INGOT CROPS AND DUDS	
			PHYSICAL REJECT BILLETS	
			PICKLED PRIMARY INGO W/O TOP CROP METAL	
			PRIMARY INGOT SEC., NOT PICKLED, 1ST GEN. TOP CROPS	
			REJECT BILLETS, INCLUDING SAWED BILLET SECTIONS	
		G	ZIRNLO ENDS	2
		T	BRIQUETTES	420
			CLAD METAL FOR ACID DISSOLUTION	
			CLAD METAL FOR HNO3 DISSOLVER	
			CLAD U METAL	
			FIRST GENERATION TOP CROPS FROM PRODUCT INGOTS	
			INGOT CROPS FROM PRIMARY INGOTS	
			MATERIAL HELD FOR HISTORICAL PURPOSES	
			METAL SAMPLES FOR DOUBLE MELTING	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			METAL TO BE OXIDIZED	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			OX. CLAD OR MIX. W/ ANY METAL ELEM.; NOT AL,ZC,STEEL	
			OXIDES CLAD OR MIXED WITH ALUMINUM	
			OXIDES CLAD OR MIXED WITH ZIRCONIUM	
			PARTIALLY OXIDIZED METAL CONTAINING NO METL-X	
			PARTIALLY OXIDIZED METAL OXIDATION FEED	
			SAMPLES, NON-METALLIC, MISC.	
			SAWDUST FOR OXIDATION	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			SOLID METAL FOR PICKLING PRIOR TO REMELT	
			SOLID METAL TO BE PICKLED	
			SOLID METAL TO BE SAWED, SHEARED OR CRUSHED	

TABLE A-[illegible]
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Thorium Warehouse (Cont.)	64	T (Cont.)	SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
			U3O8 ROTEXED OTHER THAN PLT. 8'S PRODUCT	
			WET THORIUM OXALATE CAKE	
			ZIRCONIUM CLAD METAL	
			BRIQUETTES	
			CLAD U METAL	
			DERBIES, CODE 1 AND CODE 3	
			FIRST GENERATION TOP CROPS FROM PRODUCT INGOTS	
			METAL SAMPLES FOR DOUBLE MELTING	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			METAL TO BE OXIDIZED	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			OXIDES CLAD OR MIXED WITH ZIRCONIUM	
			SAWDUST FOR OXIDATION	
(Old) Plant 5 Warehouse	65	T	SOLID METAL FOR PICKLING PRIOR TO REMELT	5,599
			THORIUM HYDROXIDE, DRY	
			UO2(OR THO2) PELLETS-REFINERY FEED	
			WET SUMP OR FILTER CAKE, HALIDE CONTAM.	
			WET THORIUM OXALATE CAKE	
Plant 1 Thorium Warehouse	67	T	CLAD METAL FOR HNO3 DISSOLVER	6,004
			CODE 4 OR BOTTOM BURNOUT DERBIES FOR DBL. MELT.	
			CONTAMINATED GRAPHITE	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED RAGS, ETC.	
			DERBIES, CODE 1 AND CODE 3	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			MATERIAL HELD FOR HISTORICAL PURPOSES	
			METAL SAMPLES FOR DOUBLE MELTING	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			METAL TO BE OXIDIZED	
			MISCELLANEOUS MATERIAL	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			NON-BURNABLE METAL W/ URANIUM CONTENT	
			OFF-SPEC TH OXALATE, FRENCH SOURCE	
			OFF-SPEC THO2: FRENCH SOURCE	
			OFF-SPEC UF4 OR THF4	
			OFFSITE SUMP & FILTER CAKES	

TABLE A-10
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Thorium Warehouse (Cont.)	67	T (Cont.)	ORE CONCENTRATES-MISCELLANEOUS	
			OX. CLAD OR MIX. W/ ANY METAL ELEM.; NOT AL,ZC,STEEL	
			OXIDES CLAD OR MIXED WITH ALUMINUM	
			OXIDES CLAD OR MIXED WITH ZIRCONIUM	
			PARTIALLY OXIDIZED METAL	
			SAMPLES, NON-METALLIC, MISC.	
			SCRAP SALTS, LOW FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			SCRAP UO2	
			SOLID METAL FOR PICKLING PRIOR TO REMELT	
			SOLID METAL TO BE PICKLED	
			THO2 PRODUCED FROM SOL-GEL PROCESS	
			THO2 PRODUCED FROM UNPURIFIED HANFORD TH NITRATE	
			TRAILER CAKES, WASTE SLURRIES, RAFF., NOT TO SPEC.	
			U OR TH CHLORIDE SALTS, REJECT	
			UF4 OR THF4	
			UO2 (OR THO2) POWDER-REFINERY FEED	
			UO2 OR THO2 PRODUCT	
			UO2(OR THO2) PELLETS-REFINERY FEED	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
			WET THORIUM OXALATE CAKE	
Pilot Plant Warehouse	68	T	SCRAP U3O8 OR THO2, LOW FLUORIDE	1,317
			THO2 PRODUCED FROM UNPURIFIED HANFORD TH NITRATE	
Plant 8 East Pad	74 C	P	DISCARD PROCESS RESIDUES	2,037
Plant 4 Pad	74 E	0	UO3 PRODUCT	5
		2	UF4 OR THF4	42
		D	UF4 OR THF4	33
Plant 8 North Pad	74 R	0	CONTAMINATED RAGS, ETC.	381
			DRUM DECON. RESIDUES:WET MGF2	
			DUST COLLECTOR RESIDUES, LOW FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			MGF2, GROUND	
			OFF-SPEC UF4 OR THF4	
			SLUDGES, CLEANOUT, NON-OILY	
			SLUDGES, FOR BLENDING AND SCREENING	

TABLE A.3.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 8 North Pad (Cont.)	74 R	0 (Cont.)	SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	
			U3O8 +8 MESH, LOW FLUORIDE	
		1	CHIPS AND TURNINGS CONTAMINATED WITH NON-U MATERIALS	2
			SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	
		5	ROCKWELL SPILLS	3
		D	DUST COLLECTOR RESIDUES, LOW FLUORIDE	181
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			U3O8 +8 MESH, LOW FLUORIDE	
		P	MGF2 FOR MILLING OR DISCARD	1
		V	CONTAMINATED SOIL, ROCKS, SAND...	525
			SLUDGES, CLEANOUT, NON-OILY	
			SUMP CAKE-COPPER CONTAMINATED, LOW URANIUM	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
Plant 1 Storage Pad	74 T	0	CALCIUM URANATE	9,561
			CONTAM. FILTER ELEMENTS & CARTRIDGES	
			CONTAMINATED ALUMINA-SODA LIME	
			CONTAMINATED CARBON FILTER ELEMENTS	
			CONTAMINATED CaF2-MgO	
			CONTAMINATED GRAPHITE	
			CONTAMINATED GRAPHITE-CRUSHED	
			CONTAMINATED MAGNESIUM	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED OIL, INSOLUBLE	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOIL, ROCKS, SAND...	
			CONTAMINATED WATER OR SUMP, NON-CHLORIDE	
			DIRTY PRIL, CODE 5 DERBIES, HIGH U CONTENT	
			DISCARD PROCESS RESIDUES	
			DRUM DECON. RESIDUES:WET MGF2	
			DRY CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUE, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES, LOW FLUORIDE	
			DUST COLLECTOR RESIDUES, PYROPHORIC, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			FURNACE SALT, SOLIDIFIED, CHLORIDE	
			FURNACE SALT, SOLIDIFIED, NON-CHLORIDE	

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TABLE A.6.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	0 (Cont.)	INCINERATOR ASHES	
			INCINERATOR CINDERS	
			LEAD AND LEAD CONTAMINATED METAL	
			MATERIAL HELD FOR HISTORICAL PURPOSES	
			MGF2 FOR MILLING OR DISCARD	
			MGF2, +20 MESH, LOW U CONTENT	
			MGF2, GROUND	
			MISCELLANEOUS MATERIAL	
			MgF2 FOR MILLING OR DISCARD	
			MgF2, -20 MESH, HIGH FREE METAL FOR PLT. 8 ROASTING	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			NON-BURNABLE METAL W/ URANIUM CONTENT	
			NON-RECOVERABLE TRASH	
			OFF-SPEC UF4 OR THF4	
			OILY MgF2	
			OXIDES CLAD OR MIXED WITH STAINLESS STEEL	
			OXIDES CLAD OR MIXED WITH ZIRCONIUM	
			PARTIALLY OXIDIZED METAL	
			PARTIALLY OXIDIZED METAL CONTAINING METL-X	
			PARTIALLY OXIDIZED METAL OXIDATION FEED	
			ROASTED MgF2 (BLENDED WITH OTHER MATERIALS)	
			ROCKWELL CLEANINGS	
			ROCKWELL SPILLS	
			SAMPLES, NON-METALLIC, MISC.	
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP SALTS, LOW FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			SCRAP UO2	
			SLUDGES, CLEANOUT, NON-OILY	
			SLUDGES, OILY	
			SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	
			SLUDGES, SALT, SOFT, CHLORIDE	
			SUMP CAKE-COPPER CONTAMINATED, LOW URANIUM	
			TRAILER CAKES, WASTE SLURRIES, RAFF., NOT TO SPEC.	
			U ALLOYED OR CANNED W/ ELEMENTS OTHER THAN AL,MO,ZC	
			U OR TH NITRATE SOL'N, HIGH IMPURITY	
			U308 FOR REOXIDATION	
			U3O8 +8 MESH, LOW FLUORIDE	
			UNFIRED REDUCTION CHARGES + MGF2	

TABLE A-10
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	0 (Cont.)	UNROASTED BUT MILLED MGF2	
			WET CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			WET SUMP OR FILTER CAKE, CALIDE CONTAM.	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
			WET SUMP OR FILTER CAKE, OIL CONTAM.	
			ZIRCONIUM CLAD METAL	
			ZIRNLO ENDS	
		1	CHEM. REJECT PRIMARY INGOTS	1,586
			CHEMICAL REJECT SOLID METAL	
			CLAD U METAL	
			COLD METAL OXIDES-NON RADIUM	
			CONTAMINATED ALUMINA-SODA LIME	
			CONTAMINATED CARBON FILTER ELEMENTS	
			CONTAMINATED GRAPHITE	
			CONTAMINATED MAGNESIUM	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED RAGS, ETC.	
			DECLAD METAL, OTHER THAN ZIRNLO	
			DEPLETED U INGOT CROPS FROM PRIMARY INGOTS	
			DERBIES, CODE 1 AND CODE 3	
			DIRTY PRIL, CODE 5 DERBIES, HIGH U CONTENT	
			DISCARD PROCESS RESIDUES	
			DRY CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUES, LOW FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			EXPERIMENTAL SHAPES	
			EXTRUSION BUTTS TO BE PICKLED	
			IMPURE URANYL OR THROIUM NITRATE SOLID	
			INCINERATOR CINDERS	
			INGOT CROPS AND DUDS	
			INGOT CROPS FROM PRIMARY INGOTS	
			INGOTS FROM OFF-SITE TO BE REWORKED	
			MATERIAL HELD FOR HISTORICAL PURPOSES	
			METAL SAMPLES FOR DOUBLE MELTING	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			MGF2, +20 MESH, LOW U CONTENT	
			MISCELLANEOUS MATERIAL	

TABLE A-10
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	1 (Cont.)	NON-RECOVERABLE TRASH	
			OFF-SPEC UF4 OR THF4	
			ORE CONCENTRATES-MISCELLANEOUS	
			OXIDES CLAD OR MIXED WITH ALUMINUM	
			OXIDES CLAD OR MIXED WITH ZIRCONIUM	
			PARTIALLY OXIDIZED METAL	
			PARTIALLY OXIDIZED METAL OXIDATION FEED	
			PICKLED CHEMICAL REJECT CROPS	
			PICKLED CROPS FROM HW METAL	
			PICKLED EXTRUSION BUTTS	
			PICKLED PRIMARY INGO W/O TOP CROP METAL	
			PICKLED PRIMARY INGOT SECTIONS	
			PURIFIED URANYL OR THORIUM NITRATE SOL'N	
			RADIUM-BEARING MATERIALS	
			REJECT ELEMENTS-INNER	
			REJECT ELEMENTS-OUTER	
			REJECT UO3	
			SAMPLES, NON-METALLIC, MISC.	
			SAWED SECT. REQ. PIKLG. FRM INGOTS W/O TOP CROPS	
			SAWED SECT. REQ. PIKLG. FRM INGOTS W/TOP CROPS	
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP SALTS, LOW FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			SCRAP UO2	
			SOLID METAL TO BE PICKLED	
			SOLID METAL TO BE SAWED, SHEARED OR CRUSHED	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
			SOLID REMELT METAL LOW IMPURITIES	
			SR STANDARD SOLID METAL-FOR REMELT	
			U OR TH NITRATE SOL'N, HIGH IMPURITY	
			U308 FOR REOXIDATION	
			U3O8 NOT REQUIRING RE-OXIDATION	
			UF4 FROM PILOT PLANT UF6	
			UF4 OR THF4	
			UNFIRED REDUCTION CHARGES + MGF2	
			UNRECYCLED SLAG+20MESH,BALL MILL PROD.	
			UO2 (OR THO2) POWDER-REFINERY FEED	
			UO2 OR THO2 PRODUCT	

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TABLE A.5.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	2	UO2(OR THO2) PELLETS-REFINERY FEED	
			UO3 PRODUCT	
			URANIUM CARBIDE, UC	
			WET CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			WET SUMP OR FILTER CAKE, HALIDE CONTAM.	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
			ZIRNLO: PARTIALLY DECLAD FUEL ELEMENTS	
			CONTAM. FILTER ELEMENTS & CARTRIDGES	210
			CONTAMINATED CARBON FILTER ELEMENTS	
			CONTAMINATED GRAPHITE	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED SOIL, ROCKS, SAND...	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUES, PYROPHORIC, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			MATERIAL HELD FOR HISTORICAL PURPOSES	
			OFF-SPEC UF4 OR THF4	
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			SCRAP UO2	
			UNFIRED REDUCTION CHARGES + MGF2	
		3	CONTAMINATED SOIL, ROCKS, SAND...	3
			MATERIAL HELD FOR HISTORICAL PURPOSES	
		4	CALCIUM URANATE	192
			CONTAM. FILTER ELEMENTS & CARTRIDGES	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOIL, ROCKS, SAND...	
			DIRTY PRIL, CODE 5 DERBIES, HIGH U CONTENT	
			DISCARD PROCESS RESIDUES	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			OFF-SPEC UF4 OR THF4	
			ROCKWELL SPILLS	
			SCRAP SALTS, HIGH FLUORIDE	
			U3O8 +8 MESH, LOW FLUORIDE	
			UNFIRED REDUCTION CHARGES + MGF2	
		5	CONTAMINATED RAGS, ETC.	16
			CONTAMINATED SOIL, ROCKS, SAND...	
			ROCKWELL SPILLS	

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TABLE A[illegible].0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	7	CONTAM. FILTER ELEMENTS & CARTRIDGES	48
			CONTAMINATED CARBON FILTER ELEMENTS	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			OFF-SPEC UF4 OR THF4	
			SCRAP SALTS, HIGH FLUORIDE	
		8	NON-RECOVERABLE TRASH	2
		A	CLAD METAL FOR ACID DISSOLUTION	35
			OXIDES CLAD OR MIXED WITH ALUMINUM	
			OXIDES CLAD OR MIXED WITH STAINLESS STEEL	
			OXIDES CLAD OR MIXED WITH ZIRCONIUM	
			U3O8 ROTEXED PLANT 8 FURNACE PRODUCT	
			URANYL OR THORIUM NITRATE SOLUTION	
		B	MATERIAL HELD FOR HISTORICAL PURPOSES	4
			ZIRCONIUM CLAD METAL	
			ZIRNLO ENDS	
		D	BAD REDUCTION (NO DERBY)	18,726
			CHEMICAL REJECT SOLID REMELT METAL	
			CLAD U METAL	
			CLEAN PRILL FOR DOUBLE MELTING	
			CONTAM. FILTER ELEMENTS & CARTRIDGES	
			CONTAM. MERCO-DRI/HILCO CAKE	
			CONTAM. TBP/KEROSENE MIXTURES & SLUDGES	
			CONTAMINATED ALUMINA-SODA LIME	
			CONTAMINATED CARBON FILTER ELEMENTS	
			CONTAMINATED CaF2-MgO	
			CONTAMINATED GRAPHITE	
			CONTAMINATED GRAPHITE-CRUSHED	
			CONTAMINATED MAGNESIUM	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED OIL-SOLUBLE;COOLANT	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOIL, ROCKS, SAND...	
			DECLAD METAL, OTHER THAN ZIRNLO	
			DEPLETED U INGOT CROPS FROM PRIMARY INGOTS	
			DEPLETED U METAL	
			DIRTY PRIL, CODE 5 DERBIES, HIGH U CONTENT	
			DISCARD PROCESS RESIDUES	
			DRUM DECON. RESIDUES:WET MGF2	
			DRY CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			DUST COLLECTOR BAGS	

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TABLE A.5.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	D (Cont.)	DUST COLLECTOR RESIDUE, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES, LOW FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			EXPERIMENTAL SHAPES	
			EXTRUSION BUTTS TO BE PICKLED	
			FURNACE SALT, SOLIDIFIED, CHLORIDE	
			FURNACE SALT, SOLIDIFIED, NON-CHLORIDE	
			INCINERATOR CINDERS	
			INGOT CROPS AND DUDS	
			INGOTS FROM OFF-SITE TO BE REWORKED	
			LEAD AND LEAD CONTAMINATED METAL	
			METAL FROM SPILLS FOR DOUBLE MELTING	
			METAL SAMPLES FOR DOUBLE MELTING	
			METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			METAL TO BE OXIDIZED	
			MG OXIDE & MG ZIRCONATE FROM CRUCIBLE CLEANOUT	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			MGF2, +20 MESH, LOW U CONTENT	
			MGF2, GROUND	
			MISCELLANEOUS MATERIAL	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			NON-BURNABLE METAL W/ URANIUM CONTENT	
			OFF-SPEC UF4 OR THF4	
			OILY MGF2	
			PARTIALLY OXIDIZED METAL CONTAINING METL-X	
			PARTIALLY OXIDIZED METAL CONTAINING NO METL-X	
			PRIMARY INGOT SEC., NOT PICKLED, 1ST GEN. TOP CROPS	
			REJECT UO3	
			ROASTED Ca-PRECIPITATED SUMP AND FILTER CAKES	
			ROASTED MgF2 (BLENDED WITH OTHER MATERIALS)	
			ROASTED, MILLED AND/OR SCREENED AMMONIUM SUMP & F.C.	
			ROCKWELL CLEANINGS	
			ROCKWELL SPILLS	
			SAMPLES, NON-METALLIC, MISC.	
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP SALTS, LOW FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SCRAP U3O8 OR THO2, LOW FLUORIDE	
			SLUDGES, CLEANOUT, NON-OILY	

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TABLE [illegible].0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	D (Cont.)	SLUDGES, NON-OILY, FOR OXIDATION	
			SLUDGES, OILY, FOR OXIDATION, HIGH FREE METAL	
			SLUDGES, SALT, SOFT, CHLORIDE	
			SLUDGES, SALT, SOFT, NON-CHLORIDE	
			SOLID METAL FOR PICKLING PRIOR TO REMELT	
			SOLID METAL TO BE PICKLED	
			SOLID METAL, NOT PICKLED, FOR DOUBLE MELT	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
			SOLID REMELT METAL LOW IMPURITIES	
			SPECIAL SOLID INGOTS OR SLABS	
			SR STANDARD SOLID METAL-FOR REMELT	
			U ALLOYED OR CANNED W/ ELEMENTS OTHER THAN AL,MO,ZC	
			U OR TH NITRATE SOL'N, HIGH IMPURITY	
			U308 FOR REOXIDATION	
			U3O8 NOT REQUIRING RE-OXIDATION	
			U3O8 ROTEXED OTHER THAN PLT. 8'S PRODUCT	
			U3O8 ROTEXED PLANT 8 FURNACE PRODUCT	
			UF4 FROM PILOT PLANT UF6	
			UF4 OR THF4	
			UNFIRED REDUCTION CHARGES + MGF2	
			UNRECYCLED SLAG+20MESH,BALL MILL PROD.	
			UO3 PRODUCT	
			UO3 REACTOR RECYCLE TAILS	
			WET CRUSHED SLAG FROM FURNACE POT BLOWOUTS	
			WET SUMP OR FILTER CAKE, HALIDE CONTAM.	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
			WET SUMP OR FILTER CAKE, OIL CONTAM.	
		G	MATERIAL HELD FOR HISTORICAL PURPOSES	34
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			ZIRCONIUM CLAD METAL	
			ZIRNLO ENDS	
		H	CHIPS EMBEDDED IN CONCRETE-HIGH CALCIUM	1,188
			CONTAMINATED GRAPHITE	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOIL, ROCKS, SAND...	
			DUST COLLECTOR BAGS	
			DUST COLLECTOR RESIDUE, HIGH FLUORIDE	
			INGOT CROPS FROM PRIMARY INGOTS	
			MATERIAL HELD FOR HISTORICAL PURPOSES	

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TABLE A.5.0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	H (Cont.)	METAL SPILL & EXTRUSION ENDS; HIGH IMPURITIES	
			MG OXIDE & MG ZIRCONATE FROM CRUCIBLE CLEANOUT	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			PARTIALLY OXIDIZED METAL	
			SCRAP SALTS, LOW FLUORIDE	
			SCRAP U3O8 OR THO2, HIGH FLUORIDE	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			U3O8 +8 MESH, LOW FLUORIDE	
			WET SUMP OR FILTER CAKE, CALIDE CONTAM.	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
			ZIRCONIUM CLAD METAL	
			ZIRNLO ENDS	
		M	CHIPS EMBEDDED IN CONCRETE-HIGH CALCIUM	203
			CONTAMINATED GRAPHITE	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED SOIL, ROCKS, SAND...	
			DUST COLLECTOR RESIDUE, HIGH FLUORIDE	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			INGOT CROPS FROM PRIMARY INGOTS	
			MATERIAL HELD FOR HISTORICAL PURPOSES	
			NON-BRIQUETTABLE CHIPS AND TURNINGS	
			PARTIALLY OXIDIZED METAL	
			SCRAP SALTS, LOW FLUORIDE	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			U308 FOR REOXIDATION	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
			ZIRCONIUM CLAD METAL	
			ZIRNLO ENDS	
		N	NON-RECOVERABLE TRASH	3
		P	CONTAM. FILTER ELEMENTS & CARTRIDGES	5,533
			CONTAM. MERCO-DRI/HILCO CAKE	
			CONTAM. TBP/KEROSENE MIXTURES & SLUDGES	
			CONTAMINATED COPPER FOR DISCARD	
			CONTAMINATED GRAPHITE	
			CONTAMINATED GRAPHITE-CRUSHED	
			CONTAMINATED LEATHER GLOVES FOR LAUNDRY	
			CONTAMINATED MAGNESIUM	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED OIL, INSOLUBLE	
			CONTAMINATED SOIL, ROCKS, SAND...	

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TABLE [illegible].0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 1 Storage Pad (Cont.)	74 T	P (Cont.)	CONTAMINATED SOLVENT	
			CONTAMINATED WATER OR SUMP, NON-CHLORIDE	
			DISCARD PROCESS RESIDUES	
			DRUM DECON. RESIDUES:WET MGF2	
			DUST COLLECTOR RESIDUES-HIGH FLUORIDE	
			GLASS AND SAMPLE BOTTLES	
			GRIT BLAST RESIDUE	
			INCINERATOR CINDERS	
			MGF2 FOR MILLING OR DISCARD	
			MGF2 OR CAF2	
			NON-BURNABLE METAL W/ URANIUM CONTENT	
			NON-RECOVERABLE TRASH	
			SLUDGES, CLEANOUT, NON-OILY	
			SLUDGES, NON-OILY, FOR OXIDATION	
			SLUDGES, OILY	
			SLUDGES, SALT, SOFT, CHLORIDE	
			SLUDGES, SOLVENT	
			UF4 OR THF4	
		V	CONTAMINATED NON-BURNABLES	2,110
			CONTAMINATED SOIL, ROCKS, SAND...	
			CONTAMINATED STEEL AFTER WASHING/CLEANING	
			DISCARD PROCESS RESIDUES	
			MGF2 FOR MILLING OR DISCARD	
			NON-RECOVERABLE TRASH	
			SUMP CAKE-COPPER CONTAMINATED, LOW URANIUM	
			WET SUMP OR FILTER CAKE, NON-OILY/HALIDE	
		X	CONTAMINATED RAGS, ETC.	13
			OXIDES CLAD OR MIXED WITH STAINLESS STEEL	
			SCRAP UO2	
Finished Products Warehouse (4A)	77	D	CHEMICAL REJECT INGOTS AND OTHER MATERIAL	6,960
			CHEMICAL REJECT SOLID METAL	
			CHEMICAL REJECT SOLID REMELT METAL	
			CHEMICAL SCRAP FROM RECYCLE 4A FLAT BILLETS	
			CRUSHED TUBULAR ELEMENTS	
			FIRST GENERATION TOP CROPS FROM PRODUCT INGOTS	
			INGOT CROPS AND DUDS	
			INGOTS FROM OFF-SITE TO BE REWORKED	
			METAL SAMPLES FOR DOUBLE MELTING	
			PHYSICAL REJECT BILLETS	

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TABLE [illegible].0
INVENTORY OF NON-RCRA DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Finished Products Warehouse (Cont.)	77	D (Cont.)	PHYSICAL SCRAP FROM RECYCLE 4A FLAT BILLETS	
			PICKLED CHEMICAL REJECT CROPS	
			PICKLED REJECT BILLETS OR BILLET SECTIONS	
			REJECT ELEMENTS-INNER	
			REJECT ELEMENTS-OUTER	
			SOLID METAL TO BE PICKLED	
			SOLID METAL TO BE SAWED, SHEARED OR CRUSHED	
			SOLID METAL, NOT PICKLED, FOR DOUBLE MELT	
			SOLID METAL,NOT CORES, EMBEDDED STEEL	
			SOLID METAL-INCL. PHYSICAL BUT NOT CHEM. REJECT INGOTS	
			SPECIAL MACHINED SHAPES	
			SR STANDARD SOLID METAL-FOR REMELT	
			TOP CROP FROM PRODUCT 4A FLAT BILLETS	
Mobile Containers (Sea-Land)	G-015	P	CONTAMINATED NON-BURNABLES	922
			NON-RECOVERABLE TRASH	
		V	NON-RECOVERABLE TRASH	24

Total = 121,177

*Enrichment Codes

A = Normal Alloy
B = Enriched Alloy
C = Enriched, 2.1% U235
D = Depleted
G = Normal
H = Enriched, 0.947% U235
L = Enriched, 0.947% U235
M = Enriched, 1.25% U235

N = Normal Waste, 0.710 to 0.712%
P = Depleted Waste, <0.710% U235
T = Thorium
V = Enriched Waste, >0.712% U235
X = Enriched
1 = Normal, 0.710 to 0.712% U235
2 = Enriched, Recycle Tails

3 = Enriched, 1.10% U235
4 = Enriched, 1.25% U235
5 = Enriched, 0.94% U235
7 = Enriched Sweetener
8 = Enriched, 0.86% U235
9 = Enriched, 2.10% U235
0 = Enriched

** Sizes of drums are unknown within the Materials Contol and Accountability Database. Drum sizes and locations are being integrated into a new database to track and control this data.

NOTE: Uranium and Thorium compounds are included. For general category material descriptions, additional information is available to further identify the contents. For example, Scrap U3O8 or ThO2, High Fluoride is U3O8 because an enrichment is given.

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TABLE A.5.1
INVENTORY OF RCRA WASTE DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Metals Production Plant	5 A	4	CONTAMINATED TBP/KEROSENE	7
		D	CONTAM. MERCO-DRI & HILCO CAKE	6
			CONTAMINATED SOLVENT	
			CONTAMINATED TBP/KEROSENE	
		P	CONTAM. MERCO-DRI & HILCO CAKE	173
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED SOLVENT	
			CONTAMINATED TBP/KEROSENE	
			CONTAMINATED WATER	
			NON-RECOVERABLE TRASH	
		V	CONTAMINATED SOLVENT	101
			CONTAMINATED TBP/KEROSENE	
Metals Fabrication Plant	6 A	0	CONTAMINATED SOLVENT	17
			OIL SLUDGES - HIGH FREE METAL	
			SLUDGES, SOLVENT	
		D	CONTAMINATED SOLVENT	6
			SLUDGES, SOLVENT	
		N	CONTAMINATED SOLVENT	4
		P	CONTAMINATED MAGNESIUM	106
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED SOLVENT	
			CONTAMINATED WATER	
			NON-RECOVERABLE TRASH	
		V	CONTAMINATED BURNABLES	52
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED SOLVENT	
			NON-RECOVERABLE TRASH	
Plant 7	7 A	0	SLUDGES, SOLVENT	27
			WET SUMP OR FILTER CAKE	
		P	CONTAMINATED OIL-INSOLUBLE	52
			CONTAMINATED SOLVENT	
			CONTAMINATED WATER	
			NON-RECOVERABLE TRASH	
			SLUDGES, SOLVENT	
		V	CONTAMINATED SOLVENT	67

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TABLE A.5.1
INVENTORY OF RCRA WASTE DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Pilot Plant Thorium Tank Farm	13 D	0	DISCARD PROCESS RESIDUES	9
			SLUDGES, SOLVENT	
			CONTAMINATED SOLVENT	
			CONTAMINATED TBP/KEROSENE	
			SLUDGES, SOLVENT	
Plant 1 Thorium Warehouse	67	T	THORIUM NITRATE SOLUTION	35
			UNFIRED REDUCTION CHARGES	
			URANYL OR THORIUM	
Pilot Plant Warehouse	68	D	NON-BURNABLE METAL W/ U	1
		P	CONTAMINATED SOILS, ETC.	30
			NON-RECOVERABLE TRASH	
Plant 1 Storage Pad	74 T	0	DUST COLLECTOR RESIDUES	2
		3	SLUDGES, OILY	1
Plant 6 Warehouse	79	0	CONTAMINATED ALUMINA	797
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED OIL-SOLUBLE	
			CONTAMINATED SOLVENT	
			DISCARD PROCESS RESIDUES	
			OILY SLUDGE	
			SAMPLES, NON-METALLIC, MISC.	
			SLUDGES, OILY	
			SLUDGES, SOLVENT	
			WET SUMP OR FILTER CAKE	
		1	OILY SLUDGE	8
		D	CONTAM. MERCO-DRI & HILCO CAKE	627
			CONTAMINATED ALUMINA	
			CONTAMINATED OIL-INSOLUBLE	
			FURNACE SALT	
			INCINERATOR CINDERS	
			NON-RECOVERABLE TRASH	
			OIL SLUDGES - HIGH FREE METAL	
			OILY SLUDGE	
			SLUDGES, NON-OILY	
			SUMP CAKE/CU CONTAM. LOW U	
			WET SUMP OR FILTER CAKE	

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TABLE A.5.1
INVENTORY OF RCRA WASTE DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 6 Warehouse (Cont.)	79	H	CONTAM. MERCO-DRI & HILCO CAKE	62
			OILY SLUDGE	
		M	OILY SLUDGE	10
		N	NON-RECOVERABLE TRASH	1
		P	CONTAM. SOIL,BRICKS&ROCKS	630
			CONTAMINATED ASBESTOS MATERIAL	
			CONTAMINATED BURNABLES	
			CONTAMINATED NON-BURNABLES	
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED OIL-SOLUBLE	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOILS, ETC.	
			CONTAMINATED SOLVENT	
			CONTAMINATED TBP/KEROSENE	
			CONTAMINATED WATER	
			DISCARD PROCESS RESIDUES	
			MERCURY CONTAMINATED MATERIALS	
			NON-RECOVERABLE TRASH	
			OILY CONT. SUMP OR FILTER CAKE	
			OILY SLUDGE	
			PCB MATERIALS/BALLASTS	
			PCB/CAPACITOR	
			PCB/FLOOR DRY & CHEMICALS	
			PCB/LAB PACK	
			PCB/TRASH	
			PCB/WATER	
			SLUDGES, NON-OILY	
			SLUDGES, OILY	
			SLUDGES, SOLVENT	
		V	CONTAM. MERCO-DRI & HILCO CAKE	427
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOLVENT	
			CONTAMINATED WATER	
			NON-RECOVERABLE TRASH	
			OIL SLUDGES - HIGH FREE METAL	
			OILY SLUDGE	
			PCB/CAPACITOR	
			PCB/ELECTRICAL EQUIPMENT	

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TABLE A.5.1
INVENTORY OF RCRA WASTE DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 8 Warehouse	80	0	CONTAMINATED ALUMINA	38
			DUST COLLECTOR RESIDUES	
			FURNACE SALT	
			NON-RECOVERABLE TRASH	
			SAMPLES, NON-METALLIC, MISC.	
			WET SUMP OR FILTER CAKE	
		1	DUST COLLECTOR RESIDUES	5
			FURNACE SALT	
			SAMPLES, NON-METALLIC, MISC.	
		D	CONTAM. MERCO-DRI & HILCO CAKE	516
			CONTAMINATED ALUMINA	
			CONTAMINATED BURNABLES	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOILS, ETC.	
			DUST COLLECTOR RESIDUES	
			FURNACE SALT	
			INCINERATOR CINDERS	
			MISCELLANEOUS MATERIAL	
			NON-BURNABLE METAL W/ U	
			SAMPLES, NON-METALLIC, MISC.	
			SCRAP SALTS, HIGH FLUORIDE	
			SCRAP SALTS, LOW FLUORIDE	
			SLUDGES, SALT CHLORIDE	
			SUMP CAKE/CU CONTAM. LOW U	
			WET SUMP OR FILTER CAKE	
		P	CONTAM. MERCO-DRI & HILCO CAKE	1,262
			CONTAM. SOIL,BRICKS&ROCKS	
			CONTAMINATED ASBESTOS MATERIAL	
			CONTAMINATED BURNABLES	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOILS, ETC.	
			FURNACE SALT	
			LEAD & LEAD CONTAM. MATERIAL	
			MERCURY CONTAMINATED MATERIALS	
			NON-RECOVERABLE TRASH	
			SCRAP SALTS, LOW FLUORIDE	
			SOIL CONTAMINATED WITH OIL	
			WET SUMP OR FILTER CAKE	

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TABLE A.5.1
INVENTORY OF RCRA WASTE DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**
Plant 8 Warehouse (Cont.)	80	V	CONTAMINATED BURNABLES	128
			CONTAMINATED FLOOR DRY	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOILS, ETC.	
			DISCARD PROCESS RESIDUES	
			FURNACE SALT	
			NON-RECOVERABLE TRASH	
Plant 9 Warehouse	81	0	CONTAMINATED ALUMINA	211
			CONTAMINATED SOLVENT	
			DUST COLLECTOR RESIDUES	
			FURNACE SALT	
			SCRAP SALTS, HIGH FLUORIDE	
			WET SUMP OR FILTER CAKE	
		1	FURNACE SALT	2
		D	DUST COLLECTOR RESIDUES	160
			FURNACE SALT	
			OIL SLUDGES - HIGH FREE METAL	
			SCRAP SALTS, HIGH FLUORIDE	
			SUMP CAKE/CU CONTAM. LOW U	
		H	FURNACE SALT	2
		N	CONTAMINATED CARBON	1
		P	CONTAM. MERCO-DRI & HILCO CAKE	109
			CONTAMINATED ALUMINA-SODA LIME	
			CONTAMINATED ASBESTOS MATERIAL	
			CONTAMINATED CARBON	
			CONTAMINATED OIL-INSOLUBLE	
			CONTAMINATED RAGS, ETC.	
			CONTAMINATED SOLVENT	
			CONTAMINATED TBP/KEROSENE	
			CONTAMINATED WATER	
			DISCARD PROCESS RESIDUES	
			MERCURY CONTAMINATED MATERIALS	
			MISCELLANEOUS MATERIAL	
			NON-RECOVERABLE TRASH	
			SLUDGES, SOLVENT	
		V	CONTAMINATED SOLVENT	10
			CONTAMINATED WATER	

Total = 5,702

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TABLE A.5.1
INVENTORY OF RCRA WASTE DRUMS

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	# of Drums Per Enrichment Class**

*Enrichment Codes

A = Normal Alloy
B = Enriched Alloy
C = Enriched, 2.1% U235
D = Depleted
G = Normal
H = Enriched, 0.947% U235
L = Enriched, 0.947% U235
M = Enriched, 1.25% U235

N = Normal Waste, 0.710 to 0.712%
P = Depleted Waste, <0.710% U235
T = Thorium
V = Enriched Waste, >0.712% U235
X = Enriched
1 = Normal, 0.710 to 0.712% U235
2 = Enriched, Recycle Tails

3 = Enriched, 1.10% U235
4 = Enriched, 1.25% U235
5 = Enriched, 0.94% U235
7 = Enriched Sweetener
8 = Enriched, 0.86% U235
9 = Enriched, 2.10% U235
0 = Enriched

** Sizes of drums are unknown within the Materials and Accountability Control Database. Drum sizes and locations are being integrated into a new database to track and control this data.

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TABLE A.6

INVENTORY OF PRODUCT

Table A.6 presents a general summary of the types of product that are currently stored in various buildings. This information is a compilation of data from the Material Control and Accountability (MC&A) department. Product is classified as material above the Economic Discard Limit (EDL). Table A.6 quantities of metal product can be related to number of containers and associated drum equivalents as shown in the Work Plan Addendum Section 2.5.2, Product Shipping Activities.

The information is presented by storage location and then by enrichment code. The enrichment codes and their definitions are listed below. Within each code, all quantities of drums have been grouped together.

*Enrichment Codes		
D = Depleted	M = Enriched, 1.25% U-235	4 = Enriched, 1.25% U-235
H = Enriched, 0.947% U-235	1 = Normal, 0.710 to 0.712% U-235	5 = Enriched, 0.94% U-235

TABLE A.6.0
INVENTORY OF PRODUCT

Component	Component Designation	Enrichment Class Code*	Material Descriptions Per Enrichment Class	Quantity Per Enrichment Class
Metals Production Plant	5 A	D	Derbies, Grade 2	196
Plant 5 Ingot Storage Shelter	5 G	D	Physical reject billets to be sawed/metal from spills for DBL. melt	14
Metals Fabrication Plant	6 A	D	Cores - mark 31 elements - inner (salvage)	10,774
			Cores - mark 31 elements - outer (samples)	22,324
			Finished cores	27,692
			Ingot crops and duds - skids	2
			Scrap cores	35
			DBL. melt ingots to be sawed, but not pickled prior to remelt	63
			Derbies, Code 1 and Code 3	60
			Derbies, Grade 1	2,702
			Derbies, Grade 2	2
			Metal from spills for DBL. melt/ingot crops & duds	9
		H	DBL. melt ingots to be sawed & pickled prior to remelt	77
			N reactor ingots - finished	204
		M	DBL. melt ingots to be sawed & pickled prior to remelt	25
			N reactor ingots - finished	1
			N reactor ingots - raw	2
		4	Code 2 derbies for DBL. melting or shot cleaning	4
			Derbies, Code 1 and Code 3	706
		5	Derbies, Code 1 and Code 3	52
Special Products Plant	9 A	D	DBL. melt ingots to be sawed, but not pickled prior to remelt	94
Thorium Warehouse	64	D	Chem. reject solid remelt metal (scrap ingots)	14
			Classified shapes for double melting	1
			DBL. melt ingots to be sawed, but not pickled prior to remelt	1,592
			Mark 31 castings - finished - outer (prod. ingots)	1
			Mark 31 castings - raw - inner (prod. ingots)	16
			Mark 31 castings - raw - outer (prod. ingots)	671
			Physical reject billets to be sawed prior to remelt (scrap ingots)	144
			Reject billets, including sawed billet sections (scrap ingots)	6
			Special solid ingots or slabs	2
		1	DBL. melt ingots to be sawed & pickled prior to remelt	89
			N reactor ingots - finished	3
			N reactor ingots - raw	26
			Total =	67,603

*Enrichment Codes

D = Depleted
H = Enriched, 0.947% U235
M = Enriched, 1.25% U235
1 = Normal, 0.710 to 0.712% U235
4 = Enriched, 1.25% U235
5 = Enriched, 0.94% U235

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TABLE A.7

VOLUMES OF POTENTIALLY CONTAMINATED MATERIALS IN OU3

Table A.7 provides estimates of the volumes of potentially contaminated materials by component. These estimates assume that all materials in OU3 are potentially contaminated. The components are grouped into major categories as are the types of materials. The estimates provided are for in-place volumes and, in general, are not equal to the volumes of materials that might require treatment or disposal if such approaches are used. The quantities presented in the table are generally meaningful to only one or two significant figures.

Estimates for volumes of contents of buildings are provided separately from estimates for volumes of structural materials in buildings. The "other" category of material includes, in some cases, combinations of materials that could be distributed to the other categories if additional information were available. Contributors to the "other" category include the contents of buildings, coal (P-018), and wood (G-001).

Volumes were estimated using the following approaches:

Buildings. Volumes of structural materials were generally estimated using dimensions taken from as-built drawings. Estimates for building contents generally assume that the volume of contents equals 10% of the interior volume of the buildings. However, for certain buildings holding only drummed materials the volume of contents is noted as approximately zero (~0).

Containers. Volume estimates are based on available drawings or the volumes of the containers.

Bulk Materials. Volume estimates are taken from Table A.2.

Pads, etc. Volumes were estimated on the basis of horizontal dimensions and typical values for thickness and other missing dimensions.

Piping, etc. Volumes were estimated on the basis of information provided in Table A.2 and review of available drawings.

Ponds and Basins. Volumes were generally estimated using information in Table A.2.

A zero entry in Table A.7 means that the component either has no material in that category or has only a small volume in that category compared to other major categories for which estimates are provided. However, as already noted, the "other" category may include volumes that could be placed in one or more of the other categories if more information were available.

The following notes are associated with Table A.7:

a = Volume estimates are being developed.

b = Volume is included with estimate for 6A.

c = Volume is included with estimate for 5A.

d = Volume is included with estimate for 9A.

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
1.1 Buildings (structure)									
1A	33,534	0	1,783	2,206	0	0	0	0	37,523
1B	9,177	0	215	0	0	0	0	0	9,392
2A	50,195	0	1,104	4,668	0	0	0	0	55,967
2B	1,973	0	73	184	0	0	0	0	2,230
2C	1,104	0	95	55	0	0	0	0	1,254
2D	3,190	0	108	241	0	0	0	0	3,539
3A	3,226	0	205	293	0	0	0	0	3,724
3B	1,112	0	57	103	0	0	0	0	1,272
3C	2,971	0	77	249	0	0	0	0	3,297
3E	21,744	0	278	72	0	0	0	0	22,094
3G	1,009	0	35	82	0	0	0	0	1,126
3L	2,247	0	108	136	0	0	0	0	2,491
4A	97,980	0	1,104	3,040	0	0	0	0	102,124
4B	11,072	0	262	0	0	0	0	0	11,334
4C	3,578	0	77	279	0	0	0	0	3,934
5A	92,351	0	2,155	5,831	0	0	0	0	100,337
5B	1,584	0	37	0	0	0	0	0	1,621
5C	556	0	29	0	0	0	0	0	585
5D	7,521	0	361	0	0	0	0	0	7,882
5E	3,914	0	105	0	0	0	0	0	4,019
5F	9,046	0	545	0	0	0	0	0	9,591
5G	1,420	0	56	0	0	0	0	0	1,476
6A	141,760	0	4,606	6,822	0	0	0	0	153,188
6B	2,266	0	69	0	0	0	0	0	2,335
6C	375	0	25	0	0	0	0	0	400
6E	375	0	25	0	0	0	0	0	400
6F	b	0	b	b	0	0	0	0	b
6G	4,777	0	254	0	0	0	0	0	5,031
7A	36,408	0	720	2,302	0	0	0	0	39,430
8A	48,499	0	990	2,290	0	0	0	0	51,779
8B	1,861	1,383	0	0	0	0	0	0	3,244
8C	13,513	0	396	0	0	0	0	0	13,909
8D	66	0	1	0	0	0	0	0	67
9A	42,283	0	1,096	2,493	0	0	0	0	45,872
9B	a	0	a	a	0	0	0	0	a
9D	a	0	a	a	0	0	0	0	a
9E	41	0	0	9	0	0	0	0	50
9F	375	0	26	0	0	0	0	0	401
10A	33,466	0	773	1,618	0	0	0	0	35,857
10B	1,784	0	89	0	0	0	0	0	1,873
10C	3,578	0	0	0	0	0	0	0	3,578
11-	204,202	54,256	0	0	0	0	0	0	258,458
12A	56,749	5,082	972	2,732	0	0	0	0	65,535
12B	2,509	1,440	0	0	0	0	0	0	3,949

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TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
12C	2,111	0	64	0	0	0	0	0	2,175
13A	12,706	5,338	171	0	0	0	0	0	18,215
13B	4,815	2,631	0	0	0	0	0	0	7,446
13C	415	300	0	0	0	0	0	0	715
14A	75,389	35,498	0	0	0	0	0	0	110,887
15-	156,420	63,345	0	0	0	0	0	0	219,765
16A	a	0	a	0	0	0	0	a	a
16B	a	0	a	0	0	0	0	a	a
16D	777	815	0	0	0	0	0	0	1,592
18D	7,299	0	524	0	0	0	0	0	7,823
18G	263	0	0	48	0	0	0	0	311
18H	1,301	0	72	0	0	0	0	0	1,373
19C	870	0	41	0	0	0	0	0	911
20A	1,524	0	60	168	0	0	0	0	1,752
20B	3,346	0	87	194	0	0	0	133	3,759
20E	317	418	0	0	0	0	0	0	735
20F	317	418	0	0	0	0	0	0	735
20G	317	418	0	0	0	0	0	0	735
22A	814	575	0	0	0	0	0	0	1,389
22B	2,639	306	0	0	0	0	0	0	2,945
22C	3,457	0	0	0	0	0	0	0	3,457
22D	a	0	a	a	0	0	0	0	a
24A	414	361	0	0	0	0	0	0	775
24B	2,188	2,370	0	0	0	0	0	0	4,558
25A	257	164	0	0	0	0	0	0	421
25B	216	0	1	0	0	0	0	0	217
25C	2,877	431	0	0	0	0	0	0	3,308
25D	775	0	0	0	0	0	0	0	775
25E	7,591	5,687	30	0	0	0	0	0	13,308
26A	3,765	1,482	0	0	0	0	0	0	5,247
26C	216	244	0	0	0	0	0	0	460
28A/B	28,600	9,528	0	0	0	0	0	0	38,128
28C	79	0	1	0	0	0	0	0	80
28D	29	0	0	0	0	0	0	131	160
30A	22,048	0	524	1,332	0	0	0	0	23,904
30B	744	0	56	68	0	0	0	0	868
31A	12,480	8,082	0	0	0	0	0	0	20,562
32A	8,530	7,787	0	0	0	0	0	0	16,317
32B	1,518	0	14	0	0	0	0	0	1,532
37-	10,012	3,678	71	0	0	0	0	0	13,761
38A	1,537	989	0	0	0	0	0	0	2,526
39A	5,298	0	166	414	0	0	0	0	5,878
39B	613	0	22	0	0	0	0	0	635
39C	110	133	0	0	0	0	0	0	243
45A	11,687	0	444	0	0	0	0	0	12,131
45B	73	0	0	0	0	0	0	128	201

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
46-	8,990	0	331	0	0	0	0	0	9,321
51-	23,600	0	1,082	0	0	0	0	0	24,682
53A	75,775	37,460	0	0	0	0	0	0	113,235
53B	3,786	3,685	0	0	0	0	0	0	7,471
54A	15,386	0	323	993	0	0	0	0	16,702
54B	2,899	0	100	0	0	0	0	0	2,999
54C	729	0	92	0	0	0	0	0	821
55A	4,013	0	234	465	0	0	0	0	4,712
55B	979	0	44	88	0	0	0	0	1,111
56A	7,897	0	240	0	0	0	0	0	8,137
56B	724	0	35	0	0	0	0	0	759
56C	1,199	0	70	0	0	0	0	0	1,269
60-	2,475	0	0	0	0	0	0	3,838	6,313
61-	1,244	0	0	0	0	0	0	1,928	3,172
62-	1,244	0	0	0	0	0	0	1,928	3,172
63-	29,920	11,112	39	0	0	0	0	0	41,071
64-	13,690	0	485	0	0	0	0	0	14,175
65-	7,378	0	455	0	0	0	0	0	7,833
66-	3,032	0	116	0	0	0	0	0	3,148
67-	3,199	0	137	0	0	0	0	0	3,336
68-	4,098	0	133	459	0	0	0	0	4,690
69-	7,493	3,468	0	0	0	0	0	0	10,961
71-	40,207	8,551	487	0	0	0	0	0	49,245
72-	1,578	0	34	106	0	0	0	0	1,718
73A	1,405	1,257	0	0	0	0	0	0	2,662
77-	18,370	0	3,724	0	0	0	0	0	22,094
78-	7,298	0	128	0	0	0	0	0	7,426
79-	14,523	0	719	0	0	0	0	0	15,242
80-	8,696	0	217	0	0	0	0	0	8,913
81-	7,407	0	245	0	0	0	0	0	7,652
82-	10,420	0	282	0	0	0	0	0	10,702
90-	175	0	4	0	0	0	0	0	179
G-009	0	3,760	0	0	0	0	0	7,320	11,080
G-010	0	11,844	0	0	0	0	0	23,058	34,902
TS-001	0	0	a	0	0	0	0	a	a
TS-002	0	0	a	0	0	0	0	a	a
TS-003	0	0	a	0	0	0	0	a	a
Subtotals	1,681,973	294,296	31,017	40,041	0	0	0	38,463	2,085,790
1.2 Buildings (contents)									
1A	0	0	0	0	0	0	0	74,742	74,742
1B	0	0	0	0	0	0	0	0	0
2A	0	0	0	0	0	0	0	133,365	133,365
2B	0	0	0	0	0	0	0	5,303	5,303
2C	0	0	0	0	0	0	0	530	530
2D	0	0	0	0	0	0	0	4,308	4,308

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
3A	0	0	0	0	0	0	0	5,190	5,190
3B	0	0	0	0	0	0	0	1,316	1,316
3C	0	0	0	0	0	0	0	3,075	3,075
3E	0	0	0	0	0	0	0	11,534	11,534
3G	0	0	0	0	0	0	0	827	827
3L	0	0	0	0	0	0	0	2,383	2,383
4A	0	0	0	0	0	0	0	164,673	164,673
4B	0	0	0	0	0	0	0	0	~0
4C	0	0	0	0	0	0	0	5,096	5,096
5A	0	0	0	0	0	0	0	269,046	269,046
5B	0	0	0	0	0	0	0	c	c
5C	0	0	0	0	0	0	0	c	c
5D	0	0	0	0	0	0	0	c	c
5E	0	0	0	0	0	0	0	c	c
5F	0	0	0	0	0	0	0	0	~0
5G	0	0	0	0	0	0	0	0	~0
6A	0	0	0	0	0	0	0	514,118	514,118
6B	0	0	0	0	0	0	0	2,400	2,400
6C	0	0	0	0	0	0	0	818	818
6E	0	0	0	0	0	0	0	818	818
6F	0	0	0	0	0	0	0	b	b
6G	0	0	0	0	0	0	0	15,109	15,109
7A	0	0	0	0	0	0	0	0	~0
8A	0	0	0	0	0	0	0	72,413	72,413
8B	0	0	0	0	0	0	0	1,648	1,648
8C	0	0	0	0	0	0	0	44,895	44,895
8D	0	0	0	0	0	0	0	80	80
9A	0	0	0	0	0	0	0	104,592	104,592
9B	0	0	0	0	0	0	0	d	d
9D	0	0	0	0	0	0	0	d	d
9E	0	0	0	0	0	0	0	49	49
9F	0	0	0	0	0	0	0	818	818
10A	0	0	0	0	0	0	0	61,878	61,878
10B	0	0	0	0	0	0	0	3,989	3,989
10C	0	0	0	0	0	0	0	a	a
11-	0	0	0	0	0	0	0	205,223	205,223
12A	0	0	0	0	0	0	0	137,513	137,513
12B	0	0	0	0	0	0	0	1,482	1,482
12C	0	0	0	0	0	0	0	2,834	2,834
13A	0	0	0	0	0	0	0	37,491	37,491
13B	0	0	0	0	0	0	0	2,130	2,130
13C	0	0	0	0	0	0	0	154	154
14A	0	0	0	0	0	0	0	57,619	57,619
15-	0	0	0	0	0	0	0	110,587	110,587
16A	0	0	0	0	0	0	0	a	a
16B	0	0	0	0	0	0	0	a	a

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
16D	0	0	0	0	0	0	0	0	~0
18D	0	0	0	0	0	0	0	18,539	18,539
18G	0	0	0	0	0	0	0	363	363
18H	0	0	0	0	0	0	0	2,250	2,250
19C	0	0	0	0	0	0	0	994	994
20A	0	0	0	0	0	0	0	1,867	1,867
20B	0	0	0	0	0	0	0	6,048	6,048
20E	0	0	0	0	0	0	0	154	154
20F	0	0	0	0	0	0	0	154	154
20G	0	0	0	0	0	0	0	154	154
22A	0	0	0	0	0	0	0	391	391
22B	0	0	0	0	0	0	0	143	143
22C	0	0	0	0	0	0	0	0	~0
22D	0	0	0	0	0	0	0	32	32
24A	0	0	0	0	0	0	0	185	185
24B	0	0	0	0	0	0	0	2,072	2,072
25A	0	0	0	0	0	0	0	28	28
25B	0	0	0	0	0	0	0	154	154
25C	0	0	0	0	0	0	0	761	761
25D	0	0	0	0	0	0	0	179	179
25E	0	0	0	0	0	0	0	15,263	15,263
26A	0	0	0	0	0	0	0	2,752	2,752
26C	0	0	0	0	0	0	0	102	102
28A/B	0	0	0	0	0	0	0	17,067	17,067
28C	0	0	0	0	0	0	0	100	100
28D	0	0	0	0	0	0	0	225	225
30A	0	0	0	0	0	0	0	0	~0
30B	0	0	0	0	0	0	0	0	~0
31A	0	0	0	0	0	0	0	14,447	14,447
32A	0	0	0	0	0	0	0	0	~0
32B	0	0	0	0	0	0	0	1,200	1,200
37-	0	0	0	0	0	0	0	19,351	19,351
38A	0	0	0	0	0	0	0	777	777
39A	0	0	0	0	0	0	0	10,425	10,425
39B	0	0	0	0	0	0	0	615	615
39C	0	0	0	0	0	0	0	59	59
45A	0	0	0	0	0	0	0	18,915	18,915
45B	0	0	0	0	0	0	0	281	281
46-	0	0	0	0	0	0	0	23,884	23,884
51-	0	0	0	0	0	0	0	150,014	150,014
53A	0	0	0	0	0	0	0	72,731	72,731
53B	0	0	0	0	0	0	0	3,989	3,989
54A	0	0	0	0	0	0	0	36,008	36,008
54B	0	0	0	0	0	0	0	0	~0
54C	0	0	0	0	0	0	0	1,824	1,824
55A	0	0	0	0	0	0	0	8,402	8,402

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
55B	0	0	0	0	0	0	0	637	637
56A	0	0	0	0	0	0	0	0	~0
56B	0	0	0	0	0	0	0	1,210	1,210
56C	0	0	0	0	0	0	0	2,100	2,100
60-	0	0	0	0	0	0	0	0	~0
61-	0	0	0	0	0	0	0	0	~0
62-	0	0	0	0	0	0	0	0	~0
63-	0	0	0	0	0	0	0	0	~0
64-	0	0	0	0	0	0	0	35,495	35,495
65-	0	0	0	0	0	0	0	0	~0
66-	0	0	0	0	0	0	0	5,224	5,224
67-	0	0	0	0	0	0	0	0	~0
68-	0	0	0	0	0	0	0	0	~0
69-	0	0	0	0	0	0	0	6,837	6,837
71-	0	0	0	0	0	0	0	0	~0
72-	0	0	0	0	0	0	0	0	~0
73A	0	0	0	0	0	0	0	915	915
77-	0	0	0	0	0	0	0	0	~0
78-	0	0	0	0	0	0	0	18,720	18,720
79-	0	0	0	0	0	0	0	0	~0
80-	0	0	0	0	0	0	0	0	~0
81-	0	0	0	0	0	0	0	0	~0
82-	0	0	0	0	0	0	0	21,605	21,605
90-	0	0	0	0	0	0	0	225	225
G-009	0	0	0	0	0	0	0	19,200	19,200
G-010	0	0	0	0	0	0	0	50,480	50,480
TS-001	0	0	0	0	0	0	0	0	~0
TS-002	0	0	0	0	0	0	0	0	~0
TS-003	0	0	0	0	0	0	0	0	~0
Subtotals	0	0	0	0	0	0	0	2,655,589	2,655,589
2. Containers, etc.									
1C	11,433	0	548	0	0	0	0	3,077	15,058
2E	466	382	183	0	0	0	0	0	1,031
3D	13,183	0	1,255	0	0	0	0	199	14,637
3F	939	0	196	0	0	0	0	0	1,135
3H	2,750	0	0	0	0	0	0	458	3,208
3J	11,870	0	331	0	0	0	0	0	12,201
13D	3,291	0	75	0	0	0	0	750	4,116
18B	25,403	0	598	0	0	0	0	0	26,001
18J	3,197	0	122	0	0	0	0	0	3,319
18M	19,540	0	792	0	0	0	0	0	20,332
19A	14,620	0	547	0	0	0	0	0	15,167
19B	3,332	0	202	0	0	0	0	0	3,534
19D	2,808	0	264	0	0	0	0	0	3,072

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
20D	4,875	0	535	0	0	0	0	0	5,410
20H	5,024	0	0	0	0	0	0	0	5,024
25H	2,773	0	0	0	0	0	0	0	2,773
26B	4,875	0	860	0	0	0	0	0	5,735
73C	0	0	0	0	0	0	0	0	~0
73D	40	0	10	0	0	0	0	0	50
73E	0	0	a	0	0	0	0	0	a
G-004	1,345	0	154	0	0	0	0	0	1,499
G-005	50,000	0	0	0	0	0	0	0	50,000
G-007	0	0	51	0	0	0	0	0	51
G-008	0	0	2,688	0	0	0	0	0	2,688
G-015	0	0	a	0	0	0	0	0	a
Subtotals	181,764	382	9,411	0	0	0	0	4,485	196,041
3. Bulk Materials									
Various	0	0	0	0	0	1,350,000	0	0	1,350,000
P-017	0	0	0	0	150,000	0	0	0	150,000
P-018	0	0	0	0	0	0	0	115,000	115,000
P-023	0	0	0	0	400,000	0	0	0	400,000
P-025	0	0	a	0	0	0	0	a	a
Subtotals	0	0	0	0	550,000	1,350,000	0	115,000	2,015,000
4. Pads, etc.									
10D	2,381	0	0	0	0	0	0	0	2,381
30C	60	0	0	0	0	0	0	0	60
31B	753	0	0	0	0	0	0	0	753
74A	3,863	0	0	0	0	0	0	0	3,863
74B	5,500	0	0	0	0	0	0	0	5,500
74C	2,591	0	0	0	0	0	0	0	2,591
74D	4,923	0	0	0	0	0	0	0	4,923
74E	8,528	0	0	0	0	0	0	0	8,528
74F	873	0	0	0	0	0	0	0	873
74G	2,347	0	0	0	0	0	0	0	2,347
74H	1,500	0	0	0	0	0	0	0	1,500
74J	1,526	0	0	0	0	0	0	0	1,526
74K	5,104	0	0	0	0	0	0	0	5,104
74L	11,283	0	0	0	0	0	0	0	11,283
74M	12,104	0	0	0	0	0	0	0	12,104
74N	3,270	0	0	0	0	0	0	0	3,270
74P	24,651	0	0	0	0	0	0	0	24,651

TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
74Q	850	0	0	0	0	0	0	142	992
74R	2,054	0	0	0	0	0	0	0	2,054
74S	1,606	0	0	0	0	0	0	0	1,606
74T	181,865	0	0	0	0	0	0	0	181,865
74U	3,136	0	0	0	0	0	0	0	3,136
74V	1,348	0	0	0	0	0	0	0	1,348
89-east	0	0	0	0	0	0	114,614	0	114,614
89-west	0	0	0	0	0	0	185,169	0	185,169
G-001	0	0	2,059	0	0	0	0	33,264	35,323
G-002	145,926	0	0	0	0	0	145,926	0	291,852
Subtotals	428,037	0	2,059	0	0	0	445,708	33,406	909,209
5. Piping, etc.									
2F	764	0	251	0	0	0	0	0	1,015
2G	256	0	128	0	0	0	0	0	384
2H	1,225	0	1,314	0	0	0	0	0	2,539
3K	1,256	0	0	0	0	0	0	0	1,256
6D	868	0	a	0	0	0	0	0	868
7B	21,414	0	370	0	0	0	0	0	21,784
8E	253	0	a	0	0	0	0	0	253
8F	468	0	46	0	0	0	0	0	514
9C	707	0	a	0	0	0	0	0	707
14B	50	0	25	0	0	0	0	0	75
16C	47	0	152	0	0	0	0	0	199
16E	100	0	87	0	0	0	0	0	187
16F	0	0	0	0	0	0	0	0	a
16G	0	0	0	0	0	0	0	0	a
20C	1,828	0	0	0	0	0	0	5,032	6,860
22E	10,289	0	a	0	0	0	0	0	10,289
23-	36	0	156	0	0	0	0	0	192
38B	36	0	1	0	0	0	0	0	37
39D	709	0	37	0	0	0	0	0	746
88-	0	0	65	0	0	0	0	0	65
G-003	a	0	a	0	0	0	0	0	a
G-006	a	0	16,336	0	0	0	0	0	16,336
G-011	8,080	0	7,014	0	0	0	0	0	15,094
Subtotals	48,386	0	25,982	0	0	0	0	5,032	79,400

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TABLE A.7 Volumes (ft**3) of Potentially Contaminated Materials

Component	Concrete	Cement Block	Steel	Transite	Other Metal	Soil/Rubble	Asphalt	Other	Total
6.Ponds and Basins									
18A	0	0	a	0	0	0	0	0	a
18C	0	0	0	0	0	0	0	~0	~0
18E	0	0	0	0	0	0	0	~0	~0
18K	0	0	90	0	0	0	0	0	90
18L	0	0	90	0	0	0	0	0	90
25F	3,280	0	0	0	0	0	0	a	3,280
25G	696	0	0	0	0	0	0	a	696
73B	0	0	0	0	0	0	0	~0	~0
Subtotals	3,976	0	180	0	0	0	0	0	4,156
Totals, All Groups	2,344,136	294,678	68,649	40,041	550,000	1,350,000	445,708	2,851,974	7,945,186

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TABLES A.8.0, A.8.1, and A.8.2

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UNIQUENESS, FACILITY INTERIM USE, AND SIGNIFICANCE (U,F,S) REASONING AND CHARACTERIZATION APPROACHES FOR LEVEL I/II GROUPINGS

The level III categorizations for the OU3 components based on the U,F,S designations are summarized in Table A.8.0. The reason codes given in Table A.8.0 as the basis for the designations are defined in Table A.8.1. Table A.8.2 provides additional qualitative discussion of the rationale for placing each of the OU3 components into the respective level III categories.

TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Buildings — Administrative/Support							
NAR Control House	3 C	3	A	1	E	2	B
Service Building	11	2	A	2	A	3	B
Administration Building	14 A	1	A,B,C	2	A	2	B
Security Building	28 A	1	A,B,C	2	A	2	B
Human Resources Building	28 B	1	A,B,C	2	A	1	D
Guard Post on South End of 'D' St.	28 C	1	A,B,C	1	E	1	B,D
Rust Engineering Building	45 A	3	D	2	A	3	B
Health & Safety Building	53 A	2	A	2	A	2	C
In-Vivo Building	53 B	1	B	2	A,B	1	D
Fire Brigade Training Center Bldg.	73 A	1	A,B,C	1	E	1	D
Skeet Range Building	90	1	A,B	1	E	1	A,D
Process Trailers	G-009	1	B,C	2	A	1	B
Non-process Trailers	G-010	1	B,C	2	A,B	1	B,D
Buildings — Warehouse/Storage							
Plant 1 Storage Shelter	1 B	1	A,B,C	2	A	1	B
Plant 4 Warehouse	4 B	1	A,B,C	2	A,B	1	A
Plant 5 Filter Building	5 E	1	B,C	2	B	1	B,C,D
Plant 5 Covered Storage Pad	5 F	1	B,C	2	B	1	B,D
Plant 5 Ingot Storage Shelter	5 G	2	C	2	A	2	A,B
Plant 6 Covered Storage Area	6 B	1	B,C	2	A	2	A,B
Plant 7	7 A	3	A,B	1	D	3	C
Cylinder Storage Building	12 B	2	C	2	B	1	D
Lumber Storage Building	12 C	2	C	2	A	1	D
Chemical Warehouse	30 A	1	A,B,C	2	B	1	B
Drum Storage Warehouse	30 B	1	A,B,C	2	A	1	B
Magnesium Storage Building	32 A	1	A,B,C	2	B	1	B,C
Building 32 Covered Loading Dock	32 B	1	B,C	2	B	1	B,C
Pilot Plant Shelter	54 B	1	A,B,C	1	E	2	B
CP Storage Warehouse	56 A	1	A,C	2	B	2	C
Storage Shed (West)	56 B	1	C	1	E	1	D
Storage Shed (East)	56 C	1	C	1	E	1	D

TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Buildings — Warehouse/Storage (Cont'd)							
Quonset Hut #1	60	1	A,B,C	2	B	2	B,C
Quonset Hut #2	61	1	A,B,C	2	B	2	B,C
Quonset Hut #3	62	1	A,B,C	2	B	2	B,C
KC-2 Warehouse	63	1	A,C	2	B	2	C
Thorium Warehouse	64	3	B	1	E	3	B,C
(Old) Plant 5 Warehouse	65	3	B	1	E	3	B,C
Plant 1 Thorium Warehouse	67	3	B	1	E	3	B,C
Pilot Plant Warehouse	68	3	B	1	E	3	B,C
General In-Process Warehouse	71	1	A,C	2	A,B	2	A,C
Drum Storage Building	72	1	A,B,C	2	A	2	B
Finished Products Warehouse (4A)	77	1	A,B,C	2	B	2	B
Plant 6 Warehouse	79	2	B	2	A,B	3	B
Plant 8 Warehouse	80	2	B	2	A,B	2	C
Plant 9 Warehouse	81	2	B	2	A,B	2	C
Tension Support Structure #1	TS-001	2	C	2	A,B	1	A
Tension Support Structure #2	TS-002	2	C	2	A,B	1	A
Tension Support Structure #3	TS-003	2	C	2	A,B	1	A
Buildings — Processes							
Preparation Plant	1 A	1	A,C	2	A	2	B,C
Ore Refinery Plant	2 A	2	A,B	1	A,B,E	3	A,B,C,D
Metal Dissolver Building	2 D	1	A,C	1	E	3	A,D
Hot Raffinate Building	3 E	2	C	1	E	3	C
Green Salt Plant	4 A	1	A,C	1	E	3	B
Metals Production Plant	5 A	1	A,C	2	A,B	3	B
Metals Fabrication Plant	6 A	1	A,C	2	A,B	3	B,C
Plant 6 Electrostatic Precipitator (South)	6 C	2	C	1	E	2	C
Plant 6 Electrostatic Precipitator (North)	6 E	2	C	1	E	2	C

TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Buildings — Processes (Cont'd)							
Plant 6 Salt Oil Heat Treat Building	6 F	1	A	1	E	1	B
Plant 6 Sump Building	6 G	1	A,B,C	2	B	1	A,B,D
Recovery Plant	8 A	3	B	2	A	3	B,C
Rotary Kiln/Drum Reconditioning	8 C	1	A,B,C	2	B	1	D
Special Products Plant	9 A	1	A,C	1	E	3	B
Plant 9 Sump Treatment Facility	9 B	1	A	1	E	1	B
Electrostatic Precipitator	9 F	2	C	1	E	2	C
Pilot Plant Wet Side	13 A	3	D	1	A,B,E	3	A,B,C
Sump Pump House	13 C	1	C	1	E	3	B
Laboratory	15	3	A,B,D	2	A,B,C	3	C
Biodenitrification Towers	18 D	1	C	2	A,B	1	A,B
Clearwell Pump House	18 G	1	A	2	A	1	B
BDN Effluent Treatment Facility	18 H	1	C	2	A,B	1	B
Engine House/Garage	31 A	1	A,C	2	A,B	3	B
Pilot Plant Annex	37	2	A	1	E	3	B,C
Incinerator Building	39 A	2	A	1	E	3	B
Waste Oil Decant Shelter	39 B	1	C	1	B,E	2	C
Six to Four Reduction Facility #1	54 A	1	A,C	1	E	3	B
Slag Recycling Building	55 A	2	A,C	1	E	3	B
Slag Recycling Pit/Elevator	55 B	2	C	1	E	3	B
Drum Reconditioning Building	66	1	A,C	1	E	3	C
Decontamination Building	69	2	A	1	E	2	B,C
Buildings — Process Support							
General/Refinery Sump Control Building	2 B	1	A,C	2	A,B	3	B
Bulk Lime Handling Building	2 C	2	C	1	E	3	B
Maintenance Building	3 A	1	A,C	2	A	3	B
Ozone Building	3 B	2	C	1	E	3	B

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Buildings — Process Support (Cont'd)							
Refrigeration Building	3 G	1	A,B,C	1	E	1	B
Electrical Power Center Building	3 L	1	A,C	2	A,B	2	C
Plant 4 Maintenance Building	4 C	1	A,C	2	B	2	C
Plant 5 Ingot Pickling	5 B	1	A,C	1	E	1	D
Plant 5 Electrical Substation	5 C	1	A,C	2	B	2	C
West Derby Breakout/ Slag Milling	5 D	1	A,C	1	E	1	D
Plant 8 Maintenance Building	8 B	1	A,C	2	A	2	C
Plant 8 Railroad Filter Building	8 D	2	A	1	B,E	1	B
Plant 9 Substation	9 D	1	A,C	2	B	2	C
Plant 9 Cylinder Shed	9 E	2	A	1	E	1	B
Boiler Plant	10 A	1	A,C	2	A,B,C	1	B
Boiler Plant Maintenance Bldg.	10 B	1	A,C	2	A,B	2	B
Wet Salt Storage Bin	10 C	2	B	2	A	1	B
Main Maintenance Building	12 A	1	A,C	2	A,B	3	B
Pilot Plant Maintenance Bldg.	13 B	1	C	1	E	2	C
Main Electrical Station	16 A	1	A,C	2	A,B,C	2	C
Electrical Substation	16 B	1	A,C	2	A,B,C	2	C
Main Electrical Switch House	16 D	1	A,C	2	A,B,C	2	C
Tank Farm Control House	19 C	1	A,B,C	1	E	1	D
Pump Station & Power Center	20 A	1	A,C	2	A,B	1	B
Water Plant	20 B	1	C	2	A,B,C	1	B
Well House #1	20 E	1	A,B,C	2	A,B	1	D
Well House #2	20 F	1	A,B,C	2	A,B	1	D
Well House #3	20 G	1	A,B,C	2	A,B	1	D
Gas Meter Building	22 A	1	A,B,C	2	A,B	1	D
Storm Sewer Lift Station	22 B	2	A	2	A,B	1	B
Truck Scale	22 C	2	B	2	A,B	1	B
Scale House & Weigh Scale	22 D	2	B	2	A,B	1	B

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Buildings — Process Support (Cont'd)							
Railroad Scale House	24 A	2	B	2	A,B	1	B
Railroad Engine House	24 B	1	A,C	2	A,B	2	C
Chlorination Building	25 A	2	B	2	A,B,C	1	B
M.H.#175/Eff. Line/Sampling Bldg.	25 B	2	B	2	A,B,C	1	B
Sewage Lift Station Building	25 C	2	B	2	A,B,C	1	B
U.V. Disinfection Building	25 D	2	B	2	A,B,C	1	B
Digester & Control Building	25 E	2	B	2	A,B,C	2	B
Pump House-HP Fire Protection	26 A	1	A,B,C	2	A,B	1	B
Main Electrical Strainer House	26 C	1	A,C	2	A,B	2	A
Guard Post on West End of 2nd St.	28 D	2	A	1	A,E	1	B
Propane Storage	38 A	1	A,B,C	2	A,B	1	B
Incinerator Sprinkler Riser House	39 C	1	B	1	E	1	D
Utility Shed East of Rust Trailers	45 B	2	A	1	E	1	B
Heavy Equipment Building	46	1	A,C	2	A	3	B
Six to Four Reduction Facility #2	51	1	A,C	2	A,B,C	1	D
Pilot Plant Dissociator Shelter	54 C	1	A	1	E	2	C
D & D Building(Under Constr.)	78	3	A	2	A,B	1	B,D
Receiving/Incoming Mat'ls. Insp.	82	1	A,B,C	2	A,B	1	D
Containerized Material - Aboveground							
Plant 1 Ore Silos	1 C	3	A,B,C,D	1	D,E	3	D
NFS Storage & Pump House	2 E	2	A	1	C,E	2	B
NAR Towers	3 D	2	C	1	E	2	A
Harshaw System	3 F	2	C	1	E	3	B
Refinery Sump	3 H	1	A,C	2	A	1	A,B
Combined Raffinate Tanks	3 J	1	A,C	1	E	2	B
Pilot Plant Thorium Tank Farm	13 D	3	A	1	A,E	3	C
General Sump	18 B	1	C	2	A,B	1	B

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Containerized Material - Aboveground							
Methanol Tank	18 J	1	A,B,C	2	A	2	C
High Nitrate Storage Tank	18 M	1	A,B,C	2	B	1	D
Main Tank Farm	19 A	1	B,C	2	B	1	A,B
Pilot Plant Ammonia Tank Farm	19 B	1	C	1	E	1	A,B,C,D
Old North Tank Farm	19 D	1	B	1	A,B,E	2	A,B
Elevated Potable Storage Tank	20 D	2	B	2	A,B,C	1	D
Process Water Storage Tank	20 H	1	B,C	2	A,B	1	D
Trickling Filters	25 H	3	A	2	A,B	3	A
Elevated Water Storage Tank	26 B	2	B	2	A,B,C	1	D
Fire Training Tank	73 C	1	B,C	1	E	1	B
Confined Space Burn Tank	73 E	1	B,C	1	E	1	B
Dikes	G-005	1	B,C	1	E	2	A
Aboveground Storage Tanks	G-008	1	B,C	1	A,E	2	A
Drums (Non-RCRA)	G-012	1	A	1	E	2	B
RCRA Drums	G-013	1	A	1	E	2	B,C
Inventory	G-014	1	A	1	E	2	A,B,C
Mobile Containers (Sea-Land)	G-015	1	B,C	1	E	1	B,D
Containerized Material - Belowground							
Fire Training Burn Trough	73 D	3	A	1	D,E	2	A,C
Sumps	G-004	2	B	2	A	2	A
Underground Storage Tanks	G-007	1	B	1	A,B,E	2	A,C
Bulk Material							
East of Plant 2 (dirt)	P-001	1	A,B	1	B,E	1	B
South of Plant 8 (West) (dirt)	P-002	1	A,B	1	B,E	1	B
South of Plant 8 (Mid) (dirt)	P-003	1	A,B	1	B,E	1	B
South of Plant 8 (East) (dirt)	P-004	1	A,B	1	B,E	1	B

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Bulk Material (Cont'd)							
South of Bldg. 80 (dirt)	P-005	1	A,B	1	B,E	1	B
West of Plant 5 (dirt)	P-006	1	A,B	1	B,E	1	B
West of 7 Plex (North) (dirt)	P-007	1	A,B	1	B,E	1	B
Covered West of 7 Plex (South) (dirt)	P-008	1	A,B	1	B,E	1	B
North of Plant 9 (Near Basin) (dirt)	P-009	1	A,B	1	B,E	1	B
Covered Dirt Pile between R.R. track #6 and #9 (dirt)	P-010	1	A,B	1	B,E	1	B
Construction rubble pile East of coal pile run off basin (dirt)	P-011	1	A,B	1	B,E	1	B
East of coal pile run off basin (dirt)	P-012	1	A,B	1	B,E	1	B
Rock salt pile South of Bldg. 61 (rock salt)	P-013	2	B	2	A,B	1	D
Sand piles South of Bldg. 61 (sand)	P-014	1	A,B	2	A,B	1	D
Covered East of Bldg. 56 (dirt)	P-015	1	A,B	1	B,E	1	B
Gravel North of Bldg. 56 (gravel)	P-016	2	B	2	A,B	1	D
Copper metal scrap pile (copper)	P-017	3	A,B	1	B,D,E	3	B,C
Coal pile (coal)	P-018	3	A	2	A,B	2	B
Third Street dirt pile (dirt)	P-019	2	B	1	B,D,E	3	B
Partially covered along Track #11 (dirt)	P-020	1	A,B	1	B,E	1	B
Southwest corner of lab (dirt)	P-021	1	A,B	1	B,E	1	B
North of Bldg. 67 (dirt)	P-022	1	A,B	1	B,E	1	B
Scrap metal pile (metal)	P-023	3	A,B	1	B,E	3	B
NW rubble piles (dirt)	P-024	1	A,B	1	B,E	1	B
Outside Equipment Storage Area (metal)	P-025	2	B	1	B,E	1	B
Parking Lots/Storage Pads/Roads/Railroads							
Cont. Oil/Graphite Burn Pad	10 D	1	C	1	B,E	3	C
Old Ten Ton Scale	30 C	1	C	1	E	1	B
Old Truck Scale	31 B	1	B,C	1	E	1	D

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Parking Lots/Storage Pads/Roads/Railroads (Cont'd)							
Plant 2 East Pad	74 A	1	A,C	1	B,E	3	A,B
Plant 2 West Pad	74 B	1	A,C	1	B,E	2	A
Plant 8 East Pad	74 C	1	A,C	2	A	2	A
Plant 8 West Pad	74 D	1	A,C	2	A	2	A
Plant 4 Pad	74 E	1	A,C	2	A	3	A,B
Plant 7 Pad	74 F	1	A,C	2	A	2	A
Plant 5 East Pad	74 G	1	A,C	2	A	3	A,B
Plant 5 South Pad	74 H	1	A,C	2	A	2	A
Plant 6 Pads	74 J	1	A,C	2	A	3	A,B
Plant 9 Pad	74 K	1	A,C	2	A	3	A,B
Building 65 West Pad	74 L	2	B	1	B,E	2	B
Building 64 East Pad & R.R. Dock	74 M	2	B	1	B,E	2	B
Building 12 North Pad	74 N	1	A,C	2	A	2	A
Decontamination Pad	74 P	2	B	2	A	3	A,B
Plant 8 Old Metal Dissolver Pad	74 Q	1	C	1	B,E	3	C
Plant 8 North Pad	74 R	1	A,C	2	A	3	C
Building 63 West Pad	74 S	1	A,C	2	A	3	C
Plant 1 Storage Pad	74 T	2	B	2	A,B	2	A,B,C
Pilot Plant Pad	74 U	2	B	1	B,E	2	A
Laboratory Pad	74 V	1	A,C	2	A	3	C
Parking Lot	89	1	B	2	A,B	1	B
Railroad Tracks	G-001	2	B	2	A,B	1	B
Roads	G-002	1	B	2	A,B	1	B
Piping, Utilities, Equipment - Aboveground							
Cold Side Ore Conveyor	2 F	3	A	1	E	2	A
Hot Side Ore Conveyor	2 G	3	A	1	E	3	B

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Piping, Utilities, Equipment - Aboveground (Cont'd)							
Plant 6 Electrostatic Precipitator (Central)	6 D	3	C	1	E	2	C
Plant 7 Overhead Crane	7 B	3	A	1	C	1	B
Drum Conveyor Shelter	8 E	3	A	2	A,B	1	B,D
Plant 8 Old Drum Washer	8 F	3	A	1	B,E	2	A
Plant 9 Dust Collector	9 C	3	C	1	B,E	2	A
Building 14 EOC Generator Set	14 B	3	A	2	A,B	1	B,D
Electrical Panels & Transformer	16 C	3	C	2	A	3	C
Main Electrical Transformers	16 E	3	C	2	A	3	C
Trailer Substation #1	16 F	3	C	2	A	3	C
Trailer Substation #2	16 G	3	C	2	A	3	C
Cooling Towers	20 C	3	A	2	A,B	2	C
Meteorological Tower	23	3	A	2	A,B	1	B,D
Cylinder Filling Station	38 B	3	A	2	A,B	1	D
Sewage Treatment Plant Incinerator	39 D	3	A	1	D	3	A
Pipe Bridges	G-011	3	C	2	A	1	B,D
Piping, Utilities, Equipment - Belowground							
Conveyor Tunnel (From Plant 1)	2 H	3	A,B	1	E	3	A
Old Cooling Water Tower	3 K	1	B	1	E	2	C
Utility Trench to Pit Area	22 E	2	B	2	A,B	3	A
Clearwell Line	88	2	B	2	A,B	3	A
Storm Sewer System	G-003	2	B	2	A,B	3	A
Utility Lines	G-006	3	B	2	A	1	D
Basins							
BDN Surge Lagoon	18 A	1	A,C	2	A,B	3	C
Coal Pile Runoff Basin	18 C	2	C	2	A	2	C

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TABLE A.8.0 OU3 Component U,F,S Designations and Reason Codes

Component Name	Designation	Uniqueness, U		Facility Interim Use, F		Significance, S	
		Level	Reason	Level	Reason	Level	Reason
Basins (Cont'd)							
Storm Water Retention Basin	18 E	1	A,C	2	A,B	1	B
Low Nitrate Tank	18 K	1	A	2	A,B	2	B
High Nitrate Tank	18 L	1	A	2	A,B	2	B
Sludge Drying Beds	25 F	3	A	2	A	3	A
Primary Settling Basins	25 G	3	A	2	A	3	A
Fire Training Pond	73 B	3	A	1	B,E	3	C

TABLE A.8.1 Reason Codes for Evaluating U,F,S Designations 3296

U,F,S Designation		Reason Codes and Descriptions
Uniqueness[a]		
U1. Similar	A -	Typical of major group of components within the Level I/II category.
	B -	Routine assessment and cleanup.
	C -	Common construction materials and/or techniques.
U2. Uncommon	A -	Typical of a minor group of components within the Level I/II category.
	B -	Accessibility for assessment and clean-up is moderately difficult.
	C -	Construction materials and/or techniques moderately uncommon.
U3. Unique	A -	One-of-a-kind structure or facility.
	B -	Inaccessible assessment and/or difficult to clean up.
	C -	Atypical construction materials and/or techniques.
	D -	Highly specialized equipment or processes.
	E -	Requires specialized sampling protocols (as with RCRA)
Facility Interim Use[b]		
F1. No Foreseen Future Use	A -	Structural integrity questionable.
	B -	Lack of containment.
	C -	Impedes short-term response actions, or other ongoing site activities.
	D -	Identified as a removal action (predisposition).
	E -	Unsuitable for future use.
F2. Interim Use Foreseen	A -	Supports ongoing site activities, not necessarily unrestricted use.
	B -	Suitable for future use in remedial actions, not necessarily unrestricted use.
	C -	Necessary for use in remedial actions, not necessarily unrestricted use.
	D -	Potentially needed for unrestricted use after remedial action.
Significance[c]		
S1. Insignificant	A -	Well contained. Low release potential. Contaminants have low mobility.
	B -	Source term is small.
	C -	Low toxicity.
	D -	Little or no evidence of contamination.

TABLE A.8.1 Reason Codes for Evaluating U,F,S Designations

U,F,S Designation	Reason Codes and Descriptions	
S2. Moderate	A -	Moderate levels of containment. Moderate release potential.
	B -	Source term of moderate scale.
	C -	Contaminant(s) of moderate toxicity.
S3. Significant	A -	Contaminant(s) uncontained. Contaminant(s) have high mobility. High release potential.
	B -	Source term is large.
	C -	Extremely hazardous.
	D -	Structural integrity questionable.

[a] Relative ranking of the degree of conformity to a baseline established by the major similar subgroups within the level I/II category of components.

[b] Currently anticipated interim use potential for identified component.

[c] Relative ranking of the hazard associated with the component, based on qualitatively assessed risk factors.

TABLE A.8.2 Uniqueness, Facility Interim Use, and Significance (U,F,S) Reasoning and Characterization Approaches for Level I/II Groupings

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GROUP 1A WAREHOUSE/STORAGE

U,F,S = 1,1,1 Components = 56B, 56C

The two components designated with matrix element 1,1,1 for Group 1A are the Storage Shed (West) (56B) and Storage Shed (East) (56C).

Class U: These buildings were found to be represented by Type C building designation and consist of basic storage of construction tools or equipment. Assessment should be straight forward due to storage limited to construction tools.

Class F: Both of these facilities are considered to have little or no use for continued storage of construction tools and equipment to support maintenance actions on site. Once construction projects cease, the facilities may no longer be utilized and therefore would provide no significant difficulty in a temporal or spatial sense and the facilities would no longer affect any ongoing or proposed site activities.

Class S: No unique contaminants are expected in these facilities other than normal contaminants found in facilities in the process area. The level of contamination and the types of contaminants were found to be similar to many of the process buildings and therefore these facilities were considered to be a relative significance level of 1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,1,2 Component = 54B

The component designated with matrix element 1,1,2 for Group 1A is the Pilot Plant Shelter (54B).

Class U: This building was found to be represented by the Type C building designation and consists of temporary storage of materials from the Pilot Plant. Assessment should be straight forward due to past use and prior removal of all equipment.

Class F: This facility is considered to have little or no use in the long or short term. Upon removal of remaining UF_4 and Freon 11, no use is expected or designated for this facility.

Class S: Potential contaminants could consist of forms of Uranium and Thorium from the Pilot Plant. This facility has good containment and a limited source term.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,2,1 Components = 1B, 4B, 5E, 5F, 30A, 30B, 32A, 32B

The components in Group 1A that are specified by matrix element 1,2,1 are the Plant 1 Storage Shelter (1B), Plant 4 Warehouse (4B), Plant 5 Filter Building (5E), Plant 5 Covered Storage Pad (5F), Chemical Warehouse (30A), Drum Storage Warehouse (30B), Magnesium Storage Warehouse (32A), and Building 32 Covered Loading Dock (32B).

Class U: Although the building types in this category are varied, the components are similar because of past and present use as storage structures. Several components are covered storage pads while the others are Type A and C structures. All contaminants and residues are expected to be similar. Assessment is not expected to be difficult except for the presence of drummed materials which may require movement for complete characterization of the component.

Class F: These facilities are expected to be of use as storage or possible treatment system facilities (Plant 5 Filter Building) during the remedial action process. As warehouse and storage facilities, these may be some of the last facilities to undergo remedial action. Expected uses include temporary storage of wastes prior to transportation to final disposal facility.

Class S: All of these components reference many of the same potential contaminants with the emphasis on forms of Uranium and 1,1,1-Trichloroethane. The level of contamination and the types of contaminants were found to be similar to many of the process buildings and therefore these facilities were considered to be a significance level of 1.

Generalized Approach for Characterization: Systematic

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U,F,S = 1,2,2 Components = 6B, 56A, 60, 61, 62, 63, 71, 72, 77

The components of Group 1A sorted into the category with matrix elements 1,2,2 are the Plant 6 Covered Storage Pad (6B), CP Storage Warehouse (56A), Quonset Hut #1 (60), Quonset Hut #2 (61), Quonset Hut #3 (62), KC-2 Warehouse (63), General In-Process Warehouse (71), Drum Storage Building (72), and Finished Products Warehouse (77).

Class U: See discussion for Group 1A category 1,2,1 above.

Class F: These facilities are expected to be used for short term storage through the remedial action process. As warehouse and storage facilities these may be some of the last facilities to undergo remedial action. Expected uses include temporary storage of wastes prior to transportation to final disposal facility.

Class S: These components have moderate to good levels of containment with a moderate scale source term. The potential contaminants for these components are predominantly forms of Uranium and Thorium. Other contaminants mentioned are PCB's and 1,1,1-Trichloroethane.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,1 Components = TS-001, TS-002, TS-003, 12B, 12C

The components in category 2,2,1 for Group 1A are the three Tension Support Structures (TS-001 to TS-003), Cylinder Storage Building (12B), and Lumber Storage Building (12C).

Class U: The three tension support structures are unique structures because they are temporary structures that will likely remain in place well into remedial action. As storage structures no unique assessment methods will be necessary. This combination ranked these components as level 2. The Cylinder Storage and Lumber Storage Buildings are ranked as level 2 because of the steel and half shelter construction in addition to the uniqueness of the materials stored within.

Class F: See discussion for Group 1A category 1,2,2 above.

Class S: See discussion for Group 1A category 1,1,1 above.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,2 Components = 5G, 80, 81

Category 2,2,2 for Group 1A consists of components: Plant 5 Ingot Storage Shelter (5G), Plant 8 Warehouse (80), and Plant 9 Warehouse (81).

Class U: Except for the Plant 5 Ingot Storage Shelter these facilities are Type C buildings. The factor for separation of these from other components is the RCRA determination that the three warehouses are Hazardous Waste Management Units. For this reason, they were given a uniqueness level of 2. The Plant 5 Ingot Storage Shelter is ranked a 2 because of the ingot and derby storage on the covered pad and an assumed high contamination.

Class F: See discussion for Group 1A category 1,2,2 above. As HWMUs these components will have unique demands over and above normal storage requirements.

Class S: The potential contaminants are forms of Uranium and RCRA wastes. These components have moderate to good levels of containment with a moderate scale source term.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,3 Component = 79

The only component in Group 1A with a matrix element of 2,2,3 is the Plant 6 Warehouse (79).

Class U: This facility is a Hazardous Waste Management Unit currently storing drummed RCRA hazardous wastes and therefore is ranked a level 2.

Class F: See discussion for Group 1A level 2,2,2.

Class S: This facility has stored a variety of hazardous wastes with a moderate scale source term. High levels of fixed/total radiological contamination and average readings at moderate levels make this component a level 3.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,3 Components = 7A, 64, 65, 67, 68 3296

Category 3,1,3 for Group 1A consists of Plant 7 (7A), Thorium Warehouse (64), (Old) Plant 5 Warehouse (65), Plant 1 Thorium Warehouse (67), and Pilot Plant Warehouse (68).

Class U: These components have been ranked a uniqueness of 3 because of the inaccessibility of the structures. Most of these facilities are Type C buildings, but due to the Thorium in storage, it becomes difficult to gain access for assessment of the contaminants. Human access is limited to very brief time spans due to anticipated high external dose rates over and above allowable exposure levels. In addition, buildings 67 and 68 are RCRA HWMUs. Plant 7 is unique because it has been abandoned in place since 1956 and is still used for storage of miscellaneous materials.

Class F: These components are only acceptable for the short-term storage of the Thorium waste until removal and disposal can occur.

Class S: These components were ranked a 3 for significance because of the Thorium and RCRA wastes. The source term in these components is large and there are hazardous contaminants. Because Plant 7 has been abandoned without maintenance, the structural integrity is questionable and the contaminants are uncontained.

Generalized Approach for Characterization: Judgmental/Random

GROUP 1B ADMINISTRATION

U,F,S = 1,1,1 Components = 28C, 73A, 90

The two components in Group 1B with matrix element 1,1,1 are the Guard Post on South End of 'D' Street (28C), Fire Brigade Training Center Building (73A), and Skeet Range Building (90).

Class U: Although these components are designated Type B and C buildings, they are ranked a 1 for uniqueness due to the expected ease of assessment. Neither facility is presently anticipated to be used and no problems are expected.

Class F: These facilities are considered to be of little or no use in the short term. The facilities are no longer utilized and therefore provide no significant difficulty in a temporal or spatial sense and the facilities do not affect any ongoing or proposed site activities.

Class S: Potential contaminants within the security checkpoint is expected to be limited to Uranium products being tracked through by traffic flow from the process area. This traffic flow is limited. Within the Fire Brigade Training Center Building, the potential contaminants are abandoned tires and Uranium contaminated wood. No fire training was performed within this component. No contaminants are expected in the Skeet Range Building. The level of contamination and the types of contaminants were found to be similar to many of the process buildings and therefore these facilities were considered to be a relative significance level of 1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,1 Components = G-009, G-010, 28B, 53B

The components assigned to Group 1B with matrix elements 1,2,1 are Process Trailers (G-009), Non-process Trailers (G-010), Human Resources Building (28B), and In-Vivo Building (53B).

Class U: The Human Resources and Health and Safety Buildings are both Type B buildings. Assessment will be constrained by the present uses of the components for office space and other miscellaneous duties. The trailers were ranked a 1 for uniqueness because none of the trailers are unusual or extraordinary from the others.

Class F: These components are expected to be used throughout the remedial action process for short term use identical or nearly identical to their present use.

Class S: No unique contaminants are expected in these facilities other than normal contaminants found in facilities in the non-process area except for the process trailers. The process trailers are expected to have potential contaminants associated with normal structures and facilities within the controlled process area. The level of contamination and the types of contaminants were found to be similar to many of the non-process buildings and therefore these facilities were considered to be a relative significance level of 1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,2 Components = 14A, 28A

The two components in Group 1B with matrix element 1,2,2 are the Administration Building (14A), and the Security Building (28A).

Class U: Both components are type B buildings and house activities typical of Group 1B buildings. The only constraint on assessment will be their present use as office buildings.

Class F: These components are expected to be used throughout the remedial action process for short term use identical or nearly identical to their present use.

Class S: There are no unique contaminants expected in these facilities other than normal contaminants found in the non-process area. Although the types of contaminants are similar, the level of contamination is on a moderate scale for several locations in these two buildings.

Generalized Approach for Characterization: Systematic

U,F,S = 2,2,2 Component = 53A

The component identified with matrix element 2,2,2 in Group 1B is the Health and Safety Building (53A).

Class U: The component is a Type B building, but the assessment is expected to be more difficult compared to level 1 due to different uses within the facility (e.g. Medical Services Labs, Bio-Assay Labs, and offices).

Class F: This component is expected to be used throughout the remedial action process for short term use identical or nearly identical to its present use.

Class S: There are no unique contaminants expected in this facility other than normal contaminants expected in the non-process area. This building is ranked as a significance level 2 based on uncertain control of substances used in the various labs and the controlled/process nature of a portion of the building, including fire safety and radiological safety technician departments.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,3 Component = 11

The only component in Group 1B with a matrix element 2,2,3 is the Service Building (11).

Class U: This is a type B building and is typical of Group 1B components, but assessment is expected to be more complex than others due to different departments within the facility (e.g., cafeteria, laundry, and maintenance).

Class F: See discussion for Group 1B level 2,2,2.

Class S: The potential contaminants expected in this facility other than normal contaminants found in facilities in the non-process area are Trichloroethylene, Perchloroethylene, and organic and inorganic contaminants detected through RI/FS media sampling. Because of the additional contaminants of concern, this facility is a relative significance level 3.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,2 Component = 3C

The component in Group 1B with matrix elements 3,1,2 is the NAR Control House (3C).

Class U: This component is unique because it is located within the process area and contains the electrical control panels for the nitric acid recovery system in addition to a small conference room, offices, and a restroom.

Class F: This facility is considered to have little or no use in the short term other than use as a conference room available in the process area. Once remedial action has commenced, there is no foreseen need for this component.

Class S: No unique contaminants are expected in this facility other than normal contaminants found in facilities in the process area. This facility has a relative significance level of 2 based on radiation survey data which shows a sufficient number of samples with moderate levels of contamination.

Generalized Approach for Characterization: Judgmental

U,F,S = 3,2,3 Component = 45A 3296

The component in Group 1B with matrix element 3,2,3 is the Rust Engineering Building (45A).

Class U: This facility is unique because it is presently being used as an administrative facility combined with a light machine shop in support of construction activities. Prior to this use, the facility was used as the experimental machine shop and performed activities similar to the Pilot Plant.

Class F: This component is expected to be used throughout the remedial action process for short term use identical or nearly identical to its present use.

Class S: The potential contaminants expected in this facility other than normal contaminants found in facilities in the process area are Uranium Carbide, Ammonium Sulfate, Black Oxide, and oils. Because of the additional contaminants of concern and high levels of fixed/total radiological contamination, this facility was considered to be a relative significance level of 3.

Generalized Approach for Characterization: Judgmental/Systematic

GROUP 1C PROCESS

U,F,S = 1,1,1 Components = 6F, 9B

The two components, Plant 6 Salt Oil Heat Treat Building (6F) and Plant 9 Sump Treatment Facility (9B), are contained in the matrix element 1,1,1 for Group 1C.

Class U: These buildings were found to be represented by Type A building designation with approximately the same area. Although the buildings were found to have dissimilar uses (heat treating versus sump water treatment versus slag milling and processing) the common construction characteristics give a relative ranking of 1 for uniqueness.

Class F: See discussion for Group category 1B 1,1,1.

Class S: These components contain similar contamination from uranium, which was a direct result of the processing of uranium product and other uranium metal. Additional potential contaminants within the facilities are NaCl, KCl, and oils. For

the Group 1C, the level of contamination and the types of contaminants were found to be similar to many of the process buildings and therefore these facilities were considered to be a relative significance level of 1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,1,2 Component = 39B

The component within Group 1C with matrix element 1,1,2 is the Waste Oil Decant Shelter (39B).

Class U: This component is a steel shelter over a concrete pad, and similar to other process buildings. The common construction characteristics give it a relative ranking of 1 for uniqueness.

Class F: See discussion for category Group 1B 1,1,1. In addition, this structure could be removed as part of the potential removal actions for Plant 2/3.

Class S: The potential contaminants expected in this facility other than normal contaminants found in facilities in the process area are oils, spent solvents, 1,1,1-Trichloroethane, Trichloroethylene, and Perchloroethylene. Because of the additional contaminants of concern, this facility was considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,1,3 Components = 2D, 4A, 9A, 13C, 54A, 66

The components in Group 1C with matrix element 1,1,3 are the Metal Dissolver Building (2D), Green Salt Plant (4A), Special Products Plant (9A), Sump Pump House (13C), Six to Four Reduction Facility #1 (54A), and Drum Reconditioning Building (66).

Class U: All except the Drum Reconditioning Building are Type A buildings with a variety of sizes. The residues within these components are expected to be similar in types of contaminants.

Class F: See discussion for category Group 1B 1,1,1. In addition, the Metal Dissolver Building (2D), Sump Pump House (13C), and the Six to Four Reduction Facility #1 (54A) could be removed as part of the potential removal actions for Plant 2/3 and the Pilot Plant.

Class S: The potential contaminants expected in these facilities other than normal contaminants found in facilities in the process area are oils, 1,1,1-Trichloroethane, Trichloroethylene, Xylene, Paint, Th, Ra, Sr, NaOH, TBP, Hg, KOH, Zr, Cu, Ni, Al, Mg, Zn, and Ca. The source term in many of these components is large and uncontained. For the Metal Dissolver Building (2D), the unsound structure of Plant 2/3 has contributed to the significance level of this component. Because of the additional contaminants of concern, these facilities were considered to be a relative significance level of 3.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 1,2,1 Components = 6G, 8C, 18D, 18G, 18H

The components categorized in Group 1C with matrix elements 1,2,1 are the Plant 6 Sump Building (6G), Rotary Kiln/Drum Reconditioning (8C), Biodenitrification Towers (18D), Clearwell Pump House (18G), and BDN Effluent Treatment Facility (18H).

Class U: These components are designated as Type C buildings except for the Clearwell Pump House (18G). The Plant 6 Sump Building (6G) and the Rotary Kiln/Drum Reconditioning (8C) are new facilities with no previous use. All of these components are expected to have routine assessment and cleanup.

Class F: These components are expected to be used throughout the remedial action process for short term use identical or nearly identical to their present use. The BDN treatment facilities could be linked into the eventual sitewide water treatment system necessary during the remedial action process for all operable units. The Plant 6 Sump and Rotary Kiln/Drum Reconditioning facilities have the size and space to either be used for their designed use or be modified to accept new treatment systems for any of the operable units.

Class S: See discussion for category Group 1A 1,1,1 above. Additional potential contaminants are Fluoride and 1,1,1-Trichloroethane.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,2 Component = 1A

The component in Group 1C with matrix element 1,2,2 is the Preparation Plant (1A).

Class U: This component is a type A building, and is typical of the major group of components within the Group 1C.

Class F: This component has the potential to be used throughout the remedial action process for short term use. The use of the Preparation Plant may be modified for the application of treatment systems for some of the operable units.

Class S: The potential contaminants expected in this facility other than normal contaminants found in facilities in the process area are oils, solvents, 1,1,1-Trichloroethane, Perchloroethylene, 1,1-Dichloroethylene, 1,2-Dichloroethane, Thorium, Plutonium, Radium, Ar, Cd, Cr, and organic contaminants detected through RI/FS media sampling. Because of the additional contaminants of concern, this facility was considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,2,3 Components = 5A, 6A, 31A

The three components in Group 1C with matrix elements 1,2,3 are the Metals Production Plant (5A), the Metals Fabrication Plant (6A), and the Engine House/Garage (31A).

Class U: The Metals Production and Metals Fabrication Plants are designated as Type A buildings and are two of the largest components on site. The Engine House/ Garage is a type B building. These components are typical of the major group of components within the Group 1C.

Class F: These components have the potential to be used throughout the remedial action process for short term use. The use of these components may be modified for the application of treatment systems for some of the operable units. The Engine House/Garage will continue to be used in its present capacity for the Maintenance of Vehicles for and during the remedial action process.

Class S: These components are large source terms for contamination. The potential contaminants expected in these facilities other than normal contaminants found in facilities in the process area are oils, solvents, paint, Benzene, Yttria, Chlorobenzene,

Toluene, 1,1,1-Trichloroethane, Trichloroethylene, Perchloroethylene, 1,1-Dichloroethane, Cd, Cr, Mg, NaOH, NaCl, Zr, and organic contaminants detected through RI/FS media sampling. Because of the additional contaminants of concern and the large source terms, these facilities were considered to be a relative significance level of 3.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 2,1,2 Components = 6C, 6E, 9F, 69

Group 1C with matrix elements 2,1,2 consists of the Plant 6 Electrostatic Precipitator (South) (6C), Plant 6 Electrostatic Precipitator (North) (6E), Electrostatic Precipitator (9F), and Decontamination Building (69).

Class U: The diversity of the building types for the components in this category (C, B, and D) lead to a uniqueness ranking level of 2. The electrostatic precipitators are unique due to the designed use of the facility. The Decontamination Building is a one of a kind facility based upon the processes performed within it, but due to common construction materials and moderate accessibility, it was ranked a level 2.

Class F: See discussion in Group 1B category 1,1,1.

Class S: These components are moderate source terms for contamination. The potential contaminants expected in these facilities other than normal contaminants found in facilities in the process area are oils, 1,1,1-Trichloroethane, Trichloroethylene, Perchloroethylene, NaOH, Methyl Ethyl Ketone, Acetone, and Methylene Chloride. Because of the additional contaminants of concern and the moderate source terms in these components, they were considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,1,3 Components = 2A, 3E, 37, 39A, 55A, 55B

The components in the Group 1C matrix element 2,1,3 are Ore Refinery Plant (2A), Hot Raffinate Building (3E), Pilot Plant Annex (37), Incinerator Building (39A), Slag Recycling Building (55A), and Slag Recycling Pit/Elevator (55B).

Class U: These components are Type A and B building designations. The characteristics that differentiate them from other components are the uranium extraction and associated processes performed in the Ore Refinery and the Hot Raffinate Building and all the associated equipment with the wet operations. Accessibility for characterization within these components will be moderately difficult. For the Pilot Plant Annex, the quantity of different processes performed combined with moderately difficult accessibility lead to a uniqueness ranking level of 2. Because of the slag milling process and the elevator/pit associated with the Slag Recycling Buildings they also have a relative ranking of 2 for uniqueness.

Class F: See discussion in Group 1B category 1,1,1.

Class S: These components are large source terms for contamination. The potential contaminants expected in these facilities other than normal contaminants found in facilities in the process area are oils, paint, Kerosene, 1,1,1-Trichloroethane, Tetrachloroethylene, Thorium, NaOH, TBP, KCl, NaCl, Zn, Mg, and organic contaminants detected through RI/FS media sampling. Because of the additional contaminants of concern and the large source terms in both components, these facilities were considered to be a relative significance level of 3.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 3,1,3 Component = 13A

The component in Group 1C with matrix element 3,1,3 is the Pilot Plant Wet Side (13A).

Class U: Within this component, most on site Thorium processing occurred. The Thorium would undergo a process similar to the extraction and digestion process performed for Uranium in Plant 2/3. The specialized equipment necessary to support the Thorium processing resulted in the uniqueness ranking level being a 3.

Class F: See discussion in Group 1B category 1,1,1.

Class S: With the initial testing of most site processes within this structure, in addition to the Thorium processing, the Pilot Plant has most potential contaminants associated with it. The potential contaminants expected in this facility other than normal contaminants found in facilities in the process area are Thorium, Radium,

Kerosene, 1,1,1-Trichloroethane, Ammonia, NaOH, TBP, DAAP, NaCl, Zn, Mg, HCl, Cd, Ba, Cr, Ni, Al, BaCl, Cu, Hg, HF, Pb, Mg, and organic contaminants detected through RI/FS media sampling. Because of the additional contaminants of concern and the large source term in this component, this facility was considered to be a relative significance level of 3.

Generalized Approach for Characterization: Judgmental/Random

U,F,S = 3,2,3 Components = 8A, 15

The components in the Group 1C with matrix elements 3,2,3 are the Recovery Plant (8A) and the Laboratory (15).

Class U: These facilities are unique because of the nature of the actions occurring within them. The Recovery Plant was the main focal point for all waste generated on site. Any recoverable materials from all processes was routed to Plant 8 for Uranium extraction and recovery. The Laboratory is unique because it is the major lab on site which supports all actions since the beginning of production. In addition, the North and Center halls of the lab have recently undergone a renovation. Assessment of both facilities are expected to pose problems.

Class F: These components have the potential to be used throughout the remedial action process for short term use. The Recovery Plant is expected to continue processing all site rainwater and waste water until a sitewide Advanced Waste Water Treatment system can be incorporated into the water flows to support remedial action.

Class S: These components were ranked a significance level of 3 because of the large source terms and the quantity of contaminants within each component. The Recovery Plant has received all waste waters generated on site since the early 1950's. Similarly, the Laboratory has received all forms of processed product and waste for sampling and analysis during the production years. Because of the potential contaminants and the large source term in these components, these facilities are ranked a significance level of 3.

Generalized Approach for Characterization: Judgmental/Random

GROUP 1D PROCESS SUPPORT 3296

U,F,S = 1,1,1 Components = 5B, 5D, 19C, 39C

The matrix element 1,1,1 for Group 1D consists of Plant 5 Ingot Pickling (5B), West Derby Breakout/Slag Milling (5D), Tank Farm Control House (19C), and Incinerator Sprinkler Riser House (39C).

Class U: Although the components in this category have no consistent building type, the factor of routine assessment and clean up leads to a uniqueness level ranking of 1. The Plant 5 Ingot Pickling and West Derby Breakout/Slag Milling facility are new additions to Plant 5 that have not yet been used.

Class F: See discussion in Group 1B category 1,1,1.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,1,2 Components = 3G, 13B, 54C

The two components in Group 1D with matrix element 1,1,2 are the Refrigeration Building (3G), Pilot Plant Maintenance Building (13B) and Pilot Plant Dissociator Shelter (54C).

Class U: Although these components are designated Type A, B and C buildings, they are ranked a 1 for uniqueness because they are typical of components in Group 1D. The Pilot Plant Dissociater Shelter has been used for processes different from the norm, but the common construction materials and techniques used on this facility classify it with a uniqueness level ranking of 1.

Class F: See discussion in Group 1B category 1,1,1.

Class S: The potential contaminants expected in these facilities other than normal contaminants found in facilities in the process area are oils, Ammonia, and Thorium. Because of the additional contaminants of concern, these facilities were considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

3296

U,F,S = 1,2,1 Components = 10A, 20A, 20B, 20E, 20F, 20G, 22A, 26A, 38A, 51, 82

The following components comprise Group 1D matrix element 1,2,1:

Water Plant	20 B	Pump Station & Power Center	20 A
Well House #2	20 F	Well House #1	20 E
Gas Meter Building	22 A	Well House #3	20 G
Propane Storage	38 A	Pump House-HP Fire Protection	26 A
Six to Four Reduction Facility #2	51	Receiving/Incoming Materials Insp.	82
Boiler Plant	10 A		

Class U: Although the components within this category consist of building Types A, B, and C and have varieties of uses from warehouses to water treatment to boiler operations, all have a uniqueness level ranking of 1. Within the process support group, there is no set standard for categorization of uniqueness. For these components, the overriding factor for a ranking level of 1 was the ease of assessment and expected ease of clean up.

Class F: These components are expected to be used throughout the remedial action process for short term use identical or nearly identical to their present use. Many of these process support structures will have their use modified to support the remedial action process. During the last phases of the remedial action, many of these components will be addressed. The Six to Four Reduction Facility #2 has been allocated as the facility for the sitewide Advance Waste Water Treatment system.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,2 Components = 3L, 4C, 5C, 8B, 9D, 10B, 16A, 16B, 16D, 24B, 26C

The following components comprise Group 1D matrix element 1,2,2:

Plant 4 Maintenance Building	4 C	Plant 5 Electrical Substation	5 C
Plant 8 Maintenance Building	8 B	Plant 9 Substation	9 D
Electrical Substation	16 B	Main Electrical Station	16 A
Railroad Engine House	24 B	Main Electrical Switch House	16 D
Boiler Plant Maintenance Building	10 B	Main Electrical Strainer House	26 C
Electrical Power Center Building	3 L		

Class U: See discussion in Group 1D category 1,2,1.

Class F: These components are expected to be used throughout the remedial action process for short term use identical or nearly identical to their present use. Many of these process support structures will have their use modified to support the remedial action process. During the last phases of the remedial action, many of these components will be addressed.

Class S: The potential contaminants expected in these facilities other than normal contaminants found in facilities in the process area are PCB oils, 1,1,1-Trichloroethane, Trichloroethylene, solvents, Ethylene Glycol, Halon, and organic contaminants detected through RI/FS media sampling. Because of the additional contaminants of concern, these facilities were considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,2,3 Components = 2B, 3A, 12A, 46

The components with matrix elements 1,2,3 within Group 1D are the General/Refinery Sump Control Building (2B), Plant 2/3 Maintenance Building (3A), Main Maintenance Building (12A), and the Heavy Equipment Building (46).

Class U: These components are typical process support facilities in which building types are a combination of types A, B, and C. Expected ease of assessment and clean up gives them a uniqueness ranking of 1.

Class F: See discussion for Group 1D category 1,2,2.

Class S: Potential contaminants expected in the Heavy Equipment and Maintenance Buildings, other than normal contaminants found in facilities in the process area, are various contaminated oils and solvents. The amount of radiation survey samples exceeding moderate levels of contamination and the additional contaminants gives these components a significance ranking of 3.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,1,1 Components = 8D, 9E, 28D, 45B

The components within Group 1D with matrix elements 2,1,1 are the Plant 8 Railroad Filter Building (8D), Plant 9 Cylinder Shed (9E), Guard Post on West End of Second Street (28D), and Utility Shed East of Rust Trailers (45B).

Class U: The components in this category have been ranked with a uniqueness level of 2 because of their diversity from the normal process support facilities. The Plant 8 Railroad Filter Building, Plant 9 Cylinder Shed, guard post, and Utility Shed East of Rust Trailers are small structures designed to support other site activities and are steel sheds and wood structures.

Class F: See discussion in Group 1B category 1,1,1.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,1,3 Components = 2C, 3B

The components in Group 1D with matrix element 2,1,3 are the Bulk Lime Handling Building (2C), and the Ozone Building (3B).

Class U: These two facilities differ from the normal process support facilities in that they housed atypical processes and equipment which led to a ranking of 2.

Class F: See discussion in Group 1B level 1,1,1.

Class S: Bulk quantities of calcium oxide and calcium hydroxide in the Bulk Lime Handling Building are the only contaminants unique to typical process support facilities. Radiological survey data showed several locations with levels of fixed/total contamination exceeding the guidance for moderate contamination. These two factors attributed to these components receiving a significance ranking of 3.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,1 Components = 10C, 22B, 22C, 22D, 24A, 25A, 25B, 25C, 25D

3296

The following components comprise Group 1D matrix element 2,2,1:

Wet Salt Storage Bin	10 C	Storm Sewer Lift Station	22 B
Truck Scale	22 C	Scale House & Weigh Scale	22 D
Railroad Scale House	24 A	Chlorination Building	25 A
M.H.#175/Eff. Line/Sampling Bldg.	25 B	Sewage Lift Station Building	25 C
U.V. Disinfection Building	25 D		

Class U: The components in this category have been ranked with a uniqueness level of 2 because of their diversity from the normal process support facilities. Components 25A through 25D are all associated with the Sewage Treatment Plant and therefore have been ranked accordingly. The scales and scale houses are uncommon with respect to the average process support facilities.

Class F: See discussion in Group 1D category 1,2,2.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,2 Component = 25E

The only Group 1D component with matrix element 2,2,2 is the Digester and Control Building (25E).

Class U: This sewage treatment plant facility differs from normal process support facilities, and has been ranked a 2 for uniqueness.

Class F: Sewage treatment plant facilities are expected to be used throughout the remedial action process for short-term use identical, or nearly identical, to their present use. These facilities will be addressed during the last phase of the remedial action process.

Class S: Contaminant types found in this facility are typical of process support buildings, but the levels of available radiological data and lack of data on fixed/total radiological contamination cause this facility to be ranked a 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,2,1 Component = 78 3296

The component in Group 1D with matrix element 3,2,1 is the Decontamination and Dismantling Facility (78).

Class U: This component is ranked a 3 because it is presently under construction. The facility is designed to perform decontamination of equipment and vehicles.

Class F: Upon completion of the facility, it will be used for short term decontamination of equipment and vehicles.

Class S: See discussion in Group 1A category 1,1,1.

GROUP 2A ABOVEGROUND CONTAINERS AND CONTAINERIZED MATERIAL

U,F,S = 1,1,1 Components = G-015, 19B, 73C, 73E

The components contained within Group 2A with matrix elements 1,1,1 are Mobile Containers (Sea-Land) (G-015), Pilot Plant Ammonia Tank Farm (19B), Fire Training Tank (73C), and Confined Space Burn Tank (73E).

Class U: All components that represent a significant quantity of similar items was assumed to be typical and ordinary and steel tanks or groups of steel tanks with associated piping housed above a diked spill collection area were assigned a uniqueness level ranking of 1.

Class F: See discussion in Group 1B category 1,1,1.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,1,2 Components = G-005, G-008, G-012, G-013, G-014, 3J, 19D

The components in Group 2A with matrix elements 1,1,2 are Dikes (G-005), Aboveground Storage Tanks (G-008), Drums (Non-RCRA) (G-013), Inventory (G-014), Combined Raffinate Tanks (3J), and Old North Tank Farm (19D).

Class U: See discussion in Group 2A category 1,1,1.

Class F: See discussion in Group 1B category 1,1,1.

Class S: These components are moderate source terms for contamination. The potential contaminants expected in these components other than normal contaminants found in facilities in the process area are Ammonia, HF, KF, HCl, Fe, Barium Carbonate, Alum, Raffinate, Perchloroethylene, oil, Trichloroethylene, and 1,1,1-Trichloroethane. Each of the general component will require sampling of some measure from each item in the component. Because of the additional contaminants of concern and the moderate source terms, these components were considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,2,1 Components 3H, 18M, 19A, 20H

The Refinery Sump (3H), High Nitrate Storage Tank (18M), Main Tank Farm (19A), and Process Water Storage Tank (20H) are assigned to Group 2A with matrix element 1,2,1.

Class U: See discussion in Group 2A category 1,1,1.

Class F: See discussion in Group 1D category 1,2,2. These components will continue to be used in conjunction with sitewide water collection and treatment.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,2 Components = 18B, 18J

The General Sump (18B) and the Methanol Tank (18J) are assigned to Group 2A matrix element 1,2,2.

Class U: See discussion in Group 2A category 1,1,1.

Class F: See discussion in Group 1D category 1,2,2. These components will continue to be used in conjunction with sitewide water collection and treatment.

Class S: A potential contaminant expected in the Methanol Tank, other than normal contaminants found in facilities in the process area, is Methanol. For this reason, this component has been ranked a significance level of 2. The lack of fixed/total radiological data and high levels of removable contamination in the General Sump give it a ranking of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,1,2 Components = 2E, 3D

The NFS Storage and Pump House (2E) and the NAR Towers (3D) are contained in Group 2A matrix element 2,1,2.

Class U: The NFS Storage and Pump House is a combination of 4 tanks containing Uranyl Nitrate and a pump house (Type B). The NAR Towers performed recovery of Nitric Acid for reuse within the Refinery Plant digestion and denitration process. The uniqueness of the components and processes performed dictated a ranking level of 2.

Class F: See discussion in Group 1B category 1,1,1.

Class S: The NFS Storage and Pump House has moderate source terms for contamination. The potential contaminants expected in these components other than normal contaminants found in facilities in the process area are Ammonia, Nitric Acid, and Uranyl Nitrate. Because of the additional contaminants of concern and the moderate source term, these components were considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S =2,1,3 Component = 3F

The only component in Group 2A with matrix element 2,1,3 is the Harshaw System (3F).

Class U: The Harshaw System performed recovery of nitric acid for reuse within the Refinery Plant digestion and denitration process. This process was not successful in operation, and the uniqueness of the equipment and processes involved give it a ranking of 2.

Class F: See discussion in Group 1B category 1,1,1.

Class S: The recovery of nitrogen oxide, the presence of additional contaminants, such as ammonia and nitric acid, and high levels of fixed/total radiological contamination warrant a significance ranking of 3 for this component.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,1 Components = 20D, 26B

The components within Group 2A with matrix element 2,2,1 are the Elevated Potable Storage Tank (20D) and Elevated Water Storage Tank (26B).

Class U: These two components are moderately unique because of the elevated nature of the storage tanks. These tanks are approximately 100 and 265 feet tall respectively.

Class F: See discussion in Group 1D category 1,2,2. These components will continue to be used in conjunction with sitewide water use during remedial action.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,3 Components = 1C, 13D

The components in Group 2A matrix element 3,1,3 are the Plant 1 Ore Silos (1C) and Pilot Plant Thorium Tank Farm (13D).

Class U: The Plant 1 Ore Silos are unique because it is a one-of-a kind structure. The silos are approximately 80 feet tall and stored dried raffinate. Due to the height of the structure, access for assessment is limited. The Pilot Plant Tank Farm is unique because of the variety of tankage and uses of the tanks over the many years. This component is a one-of-a kind structure.

Class F: See discussion in Group 1B category 1,1,1.

Class S: The Plant 1 Ore Silos are ranked a significance level of 3 because of the questionable structural integrity. A structural assessment of the facility has estimated that an 80 mph may cause collapse. In addition, the source term in this component is moderate. The Pilot Plant Thorium Tank Farm is ranked a level of 3 because of the large source term presently contained in one of the tanks (Thorium Nitrate Tetrahydrate) and the past contaminants held within the tanks.

Generalized Approach for Characterization: Judgmental/Random

U,F,S = 3,2,3 Component = 25H

The component in Group 2A with matrix element 3,2,3 is the Trickling Filters (25H).

Class U: The Trickling Filters are 2 40 foot diameter concrete tanks which provide aerobic bacterial digestion of sewage from the site.

Class F: See discussion in Group 1D category 1,2,2. These components will continue to be used in conjunction with sitewide sewage treatment.

Class S: The addition of water and chemicals to the wastes contained in the trickling filters increase the mobility and release potential of the contaminants.

Generalized Approach for Characterization: Judgmental/Random

GROUP 2B BELOWGROUND CONTAINERS AND CONTAINERIZED MATERIAL

U,F,S = 1,1,2 Component = G-007

The component in Group 2B with matrix element 1,1,2 is the general category for Underground Storage Tanks (USTs) (G-007).

Class U: This general category of uniqueness is defined as single steel tanks housed below grade. Ten of the thirteen onsite USTs have been removed and three USTs remain. The remaining USTs are undergoing assessment and closure under the Authority of the State of Ohio Fire Marshall. Two tanks will be abandoned in place upon approval of their closure plans. One tank is suspect Subtitle C and is awaiting confirmation of the Subtitle C applicability.

Class F: See discussion in Group 1B category 1,1,1.

Class S: These components have been given a significance level ranking of 2 because of the oils and suspect RCRA contaminants.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,2 Component = G-004 3296

The component in Group 2B with matrix element 2,2,2 is sumps (G-004).

Class U: This general component has been ranked a uniqueness level of 2 because these sumps have been used throughout the life of the site to collect process wastes, residues, liquid spills, and excess water. The sumps will create moderate difficulty in assessment and clean up.

Class F: See discussion in Group 1D category 1,2,2. These components will continue to be used in conjunction with sitewide waste water collection and treatment. Sumps will be addressed in the remedial action process in conjunction with associated components.

Class S: A significance level ranking of 2 has been applied due to the moderate levels of containment and the moderate release potential from the sumps.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,2 Component = 73D

The component in Group 2B with matrix element 2,2,2 is the Fire Training Burn Trough (73D).

Class U: This component is unique because it is a partly subgrade steel trough which was used for volatile liquid fire training and oil fire extinguisher training. This component is a Hazardous Waste Management Unit (HWMU).

Class F: See discussion in Group 1B category 1,1,1.

Class S: A significance level ranking of 2 has been applied due to the potential contaminants from the fire training practiced at this component. This component is a HWMU.

Generalized Approach for Characterization: Judgmental/Systematic

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GROUP 3 BULK MATERIAL

U,F,S = 1,1,1 Components = P-001, P-002, P-003, P-004, P-005, P-006, P-007, P-008, P-009, P-010, P-011, P-012, P-015, P-020, P-021, P-022, P-024

The following components comprise Group 3 matrix element 1,1,1:

East of Plant 2	P-001	South of Plant 8 (West)	P-002
South of Plant 8 (Mid)	P-003	South of Plant 8 (East)	P-004
South of Building 80	P-005	West of Plant 5	P-006
West of 7 Plex (North)	P-007	Covered West of 7 Plex (South)	P-008
North of Plant 9 (Near Basin)	P-009	Covered East of Building 56	P-015
Covered Dirt Pile between R.R. track #6 and #9	P-010	Southwest corner of lab	P-021
Construction rubble pile East of coal pile run off basin	P-011	NW rubble piles	P-024
East of coal pile run off basin	P-012		
Partially covered along Track #11	P-020		
North of Building 67	P-022		

Class U: All of the above reference components are relatively identical because all are dirt piles as a result of construction activities occurring around the site.

Class F: These piles offer no practical value to the site and contain levels of radioactivity in excess of the preliminary remedial action goal of 35 pCi/g. Due to continuing site activities and potential removal actions, additional soils are expected to be generated. Remedial actions will be integrated with Operable Unit 5.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,1 Component = P-014

The component in Group 3 with matrix element 1,2,1 is Sand Piles South of Building 61 (P-014).

Class U: See discussion in Group 3 category 1,1,1.

Class F: See discussion in Group 1D category 1,2,2. Sand will continue to be used on site to support construction and maintenance actions as fill material.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Systematic

U,F,S = 2,1,1 Component = P-025

The Outside Equipment Storage Area (P-025) is designated as Group 3 with matrix element 2,1,1.

Class U: The equipment storage consists of contaminated junk equipment and vehicles on the North side of the process area. Equipment or vehicles with no practical use and with activity levels above free release limits imposed by the onsite Industrial Radiation Safety Department were placed in this area for storage.

Class F: There is no practical use for any of the equipment stored in the equipment storage area. Present plans are for volume reduction if possible combined with packaging and shipment to disposal facilities where possible.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,1,3 Component = P-019

The only component designated as a Group 3 with matrix element 2,1,3 is the Third Street Dirt Pile (P-019).

Class U: This pile is the largest on site, contains construction rubble (concrete slabs, wood pallets, etc.) mixed with the dirt, and is, therefore, given a uniqueness ranking of 2.

Class F: This pile offers no practical value to the site and contains levels of radioactivity in excess of the preliminary remedial action goal of 35 pCi/g. Due to continuing site activities and potential removal actions, additional soils are expected to be generated.

Class S: Due to the various combinations of contaminants expected in the pile and unknown levels and types of contamination, the pile is given a conservative significance ranking of 3.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 2,2,1 Components = P-013, P-016

The two components in Group 3 with matrix element 2,2,1 are the Rock Salt Pile South of Building 61 (P-013) and Gravel North of Building 56 (P-016).

Class U: These components are moderately unique because the piles are rock salt and gravel. The rock salt is used for ice control of roads during the winter. The gravel is used for fill and road development.

Class F: See discussion in Group 1D category 1,2,2. Rock salt and gravel will continue to be used on site to support construction and maintenance actions.

Class S: See discussion in Group 1A category 1,1,1.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,3 Components = P-017, P-023

The two components in Group 3 with element matrix 3,1,3 are the Copper Metal Scrap Pile (P-017) and the Scrap Metal Pile (P-023).

Class U: These components are unique because they are scrap metal piles. The two Copper Metal Scrap Piles are located on the Plant 1 Storage Pad and contain scrap copper, asbestos liners, and copper ingots. The Metal Scrap Pile is a composite of high and low level ferrous material, high and low level non-ferrous material, and high and low level refuse material. The separation between high and low levels are 200,000 disintegrations per minute.

Class F: There is no practical use on this site for any of the scrap metal contained within these piles. Some of the materials may be salvage through recycling. This option is being pursued.

Class S: The potential contaminants expected in these components other than normal contaminants found in facilities in the process area are Copper, Thorium, and Radium. Because of the additional contaminants of concern, the moderate source terms, and the moderately high levels of fixed/total radiological contamination in the copper metal scrap pile, these components were considered to be a relative significance level of 3.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,2,2 Component = P-018

The component that comprises Group 3 matrix element 3,2,1 is the Coal Pile (P-018).

Class U: The coal pile is deemed to be the most unique pile on site because of the use and contaminants associated with it.

Class F: See discussion in Group 1D category 1,2,2. coal will continue to be used on site until the Boiler Plant operations are halted permanently.

Class S: The potential contaminants expected in this component other than normal contaminants found in facilities in the process area are Sulfur, Radium, Thorium, and inorganics detected in RI/FS media sampling. Because of the additional contaminants of concern and the moderate source terms, these components were considered to be a relative significance level of 2.

Generalized Approach for Characterization: Judgmental

GROUP 4 PARKING LOTS/ROADS/RAILROADS/STORAGE PADS

U,F,S = 1,1,1 Components = 30C, 31B

The components designated with matrix element 1,1,1 for Group 4 are the Old Ten Ton Scale (30C) and the Old Truck Scale (31B).

Class U: Although neither of the components matches the base model assumptions for the group, each is expected to be straight forward to assess, and therefore neither warrants special sampling attention.

Class F: Neither component is currently in use and no future use is anticipated.

Class S: A low significance value is applicable due to an expectation of minimal contamination (based on process knowledge).

Generalized Approach for Characterization: Systematic

U,F,S = 1,1,2 Component = 74B

The component designated with matrix element 1,1,2 for Group 4 is the Plant 2 West Pad (74B).

Class U: This storage pad fits the base model assumptions for this group well, and will allow for easy assessment of contaminants.

Class F: This storage pad is closely associated with and in close proximity to the Refinery (2A).

Class S: A moderate significance is assigned since probable contaminants are of concern and runoff control is minimal. The potential contaminants other than normal contaminants are Aluminum Oxide, Magnesium Fluoride, Oil, Urea, Ammonia Diuranate, and Uranyl Nitrate.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,1,3 Components = 10D, 74A, 74Q

The components designated with matrix element 1,1,3 for Group 4 are the Oil Burner/Graphite Burner Pad (10D), Plant 2 East Pad (74A), and the Plant 8 Old Metal Dissolver Pad (74Q).

Class U: Each component in this matrix element group is anticipated to allow for ease of assessment.

Class F: Neither the Oil Burner/Graphite Burner Pad nor the Metal Dissolver Pad are currently in use nor is either suitable any longer for its intended use. Therefore neither is expected to be retained for short term use. The Plant 2 East Pad is also unlikely to be retained due to its association with the Ore Refinery (2A).

Class S: Past operations of these components is expected to have resulted in significant local contamination. The Oil Burner and Graphite Burner Pad was

utilized in incineration activities which would have generated contaminated ashes. The Metal Dissolver Pad housed a process for acid dissolution of uranium metal. The acidic solutions involved may have generated relatively mobile contaminants. Potential contaminants include TBP, Kerosene, oils, solvents, 1,1,1-Trichloroethane, Trichloroethylene, Perchloroethylene, and organics detected in RI/FS media sampling. The Plant 2 East Pad was used for temporary storage, and questionable containment, of UO_3 and other waste residues. It still contains high levels of fixed/total radiological contamination. All three components have been given a significance ranking of 3.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 1,2,1 Components = G-002, 89

The components designated with matrix element 1,2,1 for Group 4 are the Roads (G-002) and the Parking Lots (89).

Class U: Straight forward assessment techniques and simple access are expected for these components.

Class F: The current mode of usage for these components will likely continue well into the remedial phase of work at the site. Both have a high utility value and could foreseeably be retained indefinitely.

Class S: A low significance is applicable in general, however, site roads within the process area may have significantly greater levels of contamination (primarily uranium compounds from transportation losses) to be assessed.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,2 Components = 74C, 74D, 74F, 74H, 74N

The components designated with matrix element 1,2,2 for Group 4 are the following storage pads:

Plant 8 East Pad	74 C	Plant 7 Pad	74 F
Building 12 North Pad	74 N	Plant 5 South Pad	74 H
Plant 8 West Pad	74 D		

Class U: Each fits the standard model assumptions for this grouping sufficiently well to warrant a ranking of 1 for uniqueness. Each of the pads is composed of a reinforced poured concrete base.

Class F: Each of the components is involved in current use and would likely be retained for short term continuation of service.

Class S: A ranking of 2 for significance is based primarily on containment questions and the variety of materials stored over the service life.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,2,3 Components = 74E, 74G, 74J, 74K, 74R, 74S, 74V

The components designated with matrix element 1,2,3 for Group 4 are the Plant 4 Pad (74E), Plant 5 East Pad (74G), Plant 6 Pads (74J), Plant 9 Pad (74K), Plant 8 North Pad (74R), the Building 63 West Pad (74S), and the Laboratory Pad (74V).

Class U: Each fits the standard model assumptions for this grouping sufficiently well to warrant a ranking of 1 for uniqueness. Each of the pads is composed of a reinforced poured concrete base.

Class F: Each of these components is involved with current site activities, which may continue into the remedial phase of work at the site.

Class S: A ranking of 3 for significance has been assigned due to the variety of materials which have been stored over the service life and due to the known level of prior contamination.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 2,1,2 Components = 74L, 74M, 74U

The components designated with matrix element 2,1,2 for Group 4 are Building 65 West Pad (74L), Building 64 East Pad & Railroad Dock (74M), and the Pilot Plant Pad (74U).

Class U: Each of these components varies from the base assumption to a degree deserving highlight. Each has been used to store a wide variety of products and wastes.

Class F: None of the components provides for maximal containment of effluents. Each is also associated with a facility likely to be targeted for removal.

Class S: A moderate significance has been assigned due to the variety of materials which have been stored (and the resulting potential contamination).

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,1 Component = G-001

The component designated with matrix element 2,2,1 for Group 4 are the Railroad Tracks (G-001).

Class U: Site railroad tracks are significantly different than the base assumption for this group, and therefore may require additional customization of field sampling activities.

Class F: The high utility value of site rail service would likely be retained for potential short term use throughout the remedial action process.

Class S: No significant contamination is anticipated other than with contaminants associated with railroad construction materials.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,2 Component = 74T

The component designated with matrix element 2,2,2 for Group 4 is the Plant 1 Storage Pad (74T).

Class U: A uniqueness ranking of 2 has been assigned to this component due to the expected complexity of the assessment. It has stored a wide variety of substances, and is significantly involved in ongoing storage activities. The Plant 1 Storage Pad is an extremely large pad, adding to the complexity of sampling.

Class F: The pad is heavily involved in ongoing site activities and would likely be retained short term or possibly long term.

Class S: A ranking of 2 for significance is based primarily on containment questions and the variety of materials stored over the service life.

Generalized Approach for Characterization: Judgmental/Systematic

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U,F,S = 2,2,3 Component = 74P

The only component designated in Group 4 with a matrix element of 2,2,3 is the Decontamination Pad (74P).

Class U: Due to the variety of substances stored on this pad, and its involvement in ongoing storage activities, it is expected that assessment will be complex and, therefore, given a ranking of 2.

Class F: The pad is significantly involved in ongoing site activities and will likely be retained for short term use.

Class S: The variety of substances, questions on containment, and the presence of the moderately contaminated Copper Metal Scrap Pile result in this component receiving a significance ranking of 3.

Generalized Approach for Characterization: Judgmental/Systematic

GROUP 5A ABOVEGROUND EQUIPMENT/UTILITIES/PIPING

U,F,S = 3,1,1 Component = 7B

The component with matrix element 3,1,1 for Group 5A is the Plant 7 Overhead Crane (7B).

Class U: The crane is a very large and unique component, however, accessibility for sampling and surveying should be straight forward due to the open nature of the structure.

Class F: The structure is no longer in use and may impede the Plant 7 Removal Action, due its close proximity, however, the utility value of the structure may require it to be retained for use during the remedial phase (i.e. for loading waste forms on railcars or trucks for transport).

Class S: A ranking of 1 has been assigned since little residual contamination is expected to be encountered during assessment.

Generalized Approach for Characterization: Judgmental

U,F,S = 3,1,2 Components = 2F, 6D, 8F, 9C

The components with matrix element 3,1,2 for Group 5A are the Refinery Cold Side Ore Conveyor (2F), the Plant 6 Electrostatic Precipitator (Central) (6D), the Plant 8 Old Drum Washer (8F), and the Plant 9 Dust Collector (9C).

Class U: Each of these facilities has a unique of design which will require additional inspection to allow adequate specification of requirements for field sampling.

Class F: None of the facilities is currently in use or foreseen to have significant utility value for retention.

Class S: Although the thorough assessment has not yet been performed, each of these components can be expected to retain residual contamination associated with its former use. Each was involved with uranium residues handling. A moderate scale source term is possible for the Cold Side Ore Conveyor.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,3 Components = 2G, 39D

The components with matrix element 3,1,3 for Group 5A are the Refinery Hot Side Ore Conveyor (2G) and the Sewage Treatment Plant Incinerator (39D).

Class U: The components are not similar to the base assumption for the group. Inaccessibility for assessment is a special consideration for the Hot Side Ore Conveyor, which has many confined spaces.

Class F: Neither component is currently in use, nor is there any use foreseen for short term applications.

Class S: Both components have a potential for contamination by hazardous constituents. The incinerator is associated with a removal action for soils surrounding and contaminated by the unit. The Hot Side Ore Conveyor processed ores high in radium content and containing other natural constituents of concern.

Generalized Approach for Characterization: Judgmental/Random

U,F,S = 3,2,1 Components = G-011, 8E, 14B, 23, 38B

The components with matrix element 3,2,1 for Group 5A are the Pipe Bridges (G-011), the Plant 8 Drum Conveyor Shelter (8E) (not yet in use), the Administration Building Emergency Operations Center Generator (14B), the Meteorological Tower (23), and the Cylinder Filling Station (38B).

Class U: Although each of these components is aboveground equipment, each bears little resemblance to another or to the base assumption for this group. Uniqueness of design will impact field sampling program design.

Class F: Each of the components has been identified to serve a use in the short term due to utility value or direct involvement with identified ongoing activities. The Drum Conveyor Shelter is part of a new process due to be started in the near future to support waste management activities.

Class S: None of these components was directly involved with uranium processing nor should they be contaminated with other hazardous constituents (thus the ranking of 1), however one of the components is to be started yet after construction activities, and rankings will likely change as a result.

Generalized Approach for Characterization: Judgmental

U,F,S = 3,2,2 Component = 20C

The component with matrix element 3,2,2 for Group 5A is the Cooling Towers (20C).

Class U: The cooling tower structure is primarily redwood construction and the only one of its kind at the site. Due to the porous nature of the construction, and the need to maintain its use, assessment of the degree of contamination of the structure may be difficult.

Class F: The component is both suitable and required for continued use in its current role of providing water cooling.

Class S: Contaminants of moderate concern may be present due to the additives previously used for maintenance of efficient operation. Containment of contaminants is also important to the significance criteria, since cooling water is routinely lost to the air during operation.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,2,3 Components = 16C, 16E, 16F, 16G

The components with matrix element 3,2,3 for Group 5A are the Electrical Panels and Transformers (16C), the Main Electrical Transformers (16E), the Trailer Substation #1 (16F), and the Trailer Substation #2 (16G).

Class U: These components are physically unique from the base assumptions developed for this grouping and therefore require special attention in development of field sampling directions.

Class F: Each of the components is currently employed in electrical distribution to ongoing activities and each is expected to continue in this service into the remedial phase.

Class S: Due to the hazardous nature of PCBs which may have been integral to past operations of these components, a significance ranking of 3 has been assigned.

Generalized Approach for Characterization: Judgmental/Random

GROUP 5B BELOWGROUND EQUIPMENT/UTILITIES/PIPING

U,F,S = 1,1,2 Component = 3K

The component with matrix element 1,1,2 for Group 5B is the Old Cooling Water Tower (3K).

Class U: The component is similar to the base assumption for this group.

Class F: The component is not suitable for future use, as it is only the remaining subgrade portions of the former cooling tower.

Class S: Since cooling tower operations historically utilized trace quantities of contaminants of concern to maintain efficient operation, the potential exists for these contaminants in the remaining structure.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,3 Components = G-003, 22E, 88

The three components with matrix element 2,2,3 for Group 5B are the Storm Sewer System (G-003), the Utility Trench to the Pit Area (22E), and the Clearwell Line (88).

Class U: Relative inaccessibility for sampling and assessment of these components is the issue which caused these components to be ranked as 2. Each posses a different problem for the development of field sampling.

Class F: Each of these units is currently involved in operations, and are suitable for short term use. The storm sewer system is integral to maintenance of local environmental quality through control of contaminated runoff.

Class S: A ranking of 3 applies due to the potential of these systems to release contaminants without being readily detected.

Generalized Approach for Characterization: Judgmental/Systematic/Random

U,F,S = 3,1,3 Component = 2H

The component with matrix element 3,1,3 for Group 5B is the Conveyor from Plant 1 Ore Silos (2H).

Class U: The conveyor is a unique structure, due to size and location. A uniqueness ranking of 3 also was assigned to highlight the probable difficulties to be encountered in gaining access to the confined space for sampling.

Class F: The facility has not been used and no future use is anticipated.

Class S: Although the facility is believed to never have been used, if it were used for its intended purpose (ore transport) it would potentially contain contaminants of concern.

Generalized Approach for Characterization: Judgmental/Random

U,F,S = 3,2,1 Component = G-006

The component with the matrix element 3,2,1 for Group 5B is the Utility Lines (G-006).

Class U: The grouping of site utility lines is extensive and in many cases relatively inaccessible for assessment, resulting in the 3 ranking.

Class F: Many of the lines are involved with ongoing site efforts. To the extent associated with facilities that will be retained through the remedial phase, utility lines will similarly be retained.

Class S: In many instances, these utilities have exceeded design life with the rest of the associated facilities. In addition the subgrade portions of the utility lines, may have acted as conduits for transport of contaminants of concern.

Generalized Approach for Characterization: Judgmental

GROUP 6 PONDS AND BASINS

U,F,S = 1,2,1 Component = 18E

The component designated with matrix element 1,2,1 for Group 6 is the Storm Water Retention Basin (18E).

Class U: The component is similar in design to the standard for this grouping, utilizing a polymer membrane liner, with underdrain and low permeability clay base liner.

Class F: The component is expected to continue to operate in its present capacity well into the remedial phase, since the function it performs is essential for safeguarding the nearby Paddy's Run Creek watershed from additional contamination by site effluents.

Class S: Although the capacity of the Storm Water Retention Basins is substantial, the contamination levels encountered are minute, therefore a significance ranking of 1 has been designated.

Generalized Approach for Characterization: Systematic

U,F,S = 1,2,2 Components = 18K, 18L

The two components designated with matrix element 1,2,2 for Group 6 are the Low Nitrate Tank (18K) and the High Nitrate Tank (18L).

Class U: Although the tanks are unusual in design, when compared to other site structures, the polymer membrane is similar to the typical surface for components in this category.

Class F: These facilities are currently used as part of the site wastewater treatment system. The tanks are no longer used for their design purpose, however they are

integral to maintaining compliance wastewater treatment and are expected to continue in use until suitable replacements can be incorporated.

Class S: Due to the size of the tanks (lagoons) any level of contamination poses a moderate source term, resulting in a significance ranking of 2.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 1,2,3 Component = 18A

The component designated with matrix element 1,2,3 for Group 6 is the Biodenitrification Surge Lagoon (18A).

Class U: The basin is typical of the norm for this category, with low permeability clay liner, an intermediate drainage system, and an overlying polymer barrier.

Class F: This facility is currently used as part of the site wastewater treatment system. It no longer serves its original intended purpose, however, it functions well as a surge tank ahead of treatment, and therefore will be utilized indefinitely.

Class S: The lagoon rates a 3 ranking for significance since it has been designated as a RCRA Hazardous Waste Management Unit (due to the volumes of solvents unaccounted for in site inventories and assumed processed through the wastewater treatment systems).

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 2,2,2 Component = 18C

The component designated with matrix element 2,2,2 for Group 6 is the Coal Pile Runoff Basin (18C).

Class U: The basin is constructed of compacted clays, atypical for recently constructed storage impoundments, resulting in the rank of 2 for uniqueness.

Class F: The facility is an integral part of the Boiler Plant activities for the production of steam on site. The basin was constructed to prevent coal pile runoff from contaminating the surrounding area and is required by regulatory agreements. The facilities are expected to continue in similar service well into the remedial phase.

Class S: Due to the complex organic chemical makeup of coal, the runoff of the coal pile may contain constituents of moderate concern.

Generalized Approach for Characterization: Judgmental/Systematic

U,F,S = 3,1,3 Component = 73B

The component designated with matrix element 3,1,3 for Group 6 is the Fire Training Pond (73B).

Class U: The component is a one-of-a-kind operation, bearing no real relation to any other facility on site. The unit has been ranked 3 for uniqueness to highlight the physical review of the area necessary for development of an appropriate sampling scheme.

Class F: The facility is no longer in use and has been identified as a RCRA Hazardous Waste Management Unit. A Removal Action or a RCRA closure is probable.

Class S: A review of the past operations at the unit resulted in designation as a RCRA Hazardous Waste Management Unit. A significance ranking of 3 has been assigned to highlight the likelihood of hazardous constituents from burning of oils for fire brigade training exercises.

Generalized Approach for Characterization: Judgmental/Random

U,F,S = 3,2,3 Components = 25F, 25G

The two components designated with matrix element 3,2,3 for Group 6 are the Sludge Drying Beds (25F) and the Primary Settling Basins (25G).

Class U: These facilities have been ranked with a uniqueness of 3 because of the one-of-a-kind nature of the facilities with respect to the other facilities in the category. Due to the constant throughput of these facilities, a representative sample may be difficult to obtain.

Class F: These components are expected to be used throughout the remedial action process for short term use similar or identical to current use. Although the structures may have exceeded design life, minimal replacements will allow the facility to function

indefinitely. Most foreseen site scenarios require these facilities to continue functioning.

Class S: Due to the open nature of the processes, these facilities have a potential to release any contaminants which might find their way to the sewage treatment facility.

Generalized Approach for Characterization: Judgmental/Random

Appendix B

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APPENDIX B

POTENTIALLY APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

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TABLES B.1, B.2, and B.3

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Potential location-specific, contaminant-specific, and action-specific applicable or relevant and appropriate requirements (ARARs) and to-be-considered (TBC) requirements are identified and evaluated in Tables B.1, B.2, and B.3, respectively. The preliminary ARAR and TBC determinations for these requirements are also indicated in the tables.

TABLE B.1 Potential Location-Specific Requirements

Potential ARAR	Location	Requirement	Preliminary Determination	Remarks
Antiquity Act; Historic Sites Act (16 USC 431-433; 16 USC 461-467; 40 CFR 6.301(a))	Land	Cultural resources, such as historic buildings and sites and natural landmarks, must be preserved on federal land to avoid adverse impacts.	Potentially applicable	No adverse impacts to such resources are expected to result from the proposed action; however, if these resources were affected, the requirement would be applicable.
National Historic Preservation Act, as amended (16 USC 470 et seq.; 40 CFR 6.301(b); 36 CFR 800)	Land	The effect of any federally assisted undertaking must be taken into account for any district, site, building, structure, or object included in or eligible for the *National Register of Historic Places.*	Potentially applicable	No adverse impacts to such properties are expected to result from the proposed action; however, if these resources were affected, the requirement would be applicable.
Archeological and Historic Preservation Act (16 USC 469; 40 CFR 6.301(c); PL 93-291; 88 Stat. 174)	Land	Prehistorical, historical, and archeological data that might be destroyed as a result of a federal, federally assisted, or federally licensed activity or program must be preserved.	Potentially applicable	No destruction of such data is expected to result from the proposed action. However, if these data were affected, the requirement would be applicable.
Archeological Resources Protection Act (16 USC 470(a))	Land	A permit must be obtained if an action on public or Indian lands could impact archeological resources.	Potentially applicable	No impacts to archeological resources are expected to result from the proposed action. However, if these resources were affected, the requirement would be applicable.
Protection and Enhancement of the Cultural Environment (Executive Order 11593; 40 CFR 6.301)	Land	Historic, architectural, archeological, and cultural resources must be preserved, restored, and maintained, and must be evaluated for inclusion in the *National Register.*	Potentially applicable	No impacts to such resources are expected to result from the proposed action. However, if these resources were affected, the requirement would be applicable.
Endangered Species Act, as amended (16 USC 1531-1543; 50 CFR Subpart B; 40 CFR 6.302(h)); Migratory Bird Treaty Act (16 USC 703 et seq); Bald & Golden Eagle Protection Act (16 USC 668-668(d))	Any	Federal agencies must ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify any critical habitat.	Potentially applicable	No critical habitat exists in the affected area. No adverse impacts to threatened species are expected to result from the proposed action; however, if such species were affected, the requirement would be applicable.
Fish and Wildlife Coordination Act (16 USC 661-666; 40 CFR 6.302(a))	Any	Adequate protection of fish and wildlife resources is required when any federal department or agency proposes or authorizes any modification (e.g., diversion or channeling) of any stream or other water body or any modification of areas affecting any stream or other water body.	Not an ARAR	No modification of streams or stream areas is planned as part of the proposed action.
Conservation of Natural Resources, Ohio Revised Code, Title 15; Department of Natural Resources Regulations, Chapter 1518:18 - Endangered Species and 1518:31 - Endangered Wildlife	Any	No person may willfully root up, injure, destroy, remove, or carry away on or from public highways, public property, or the waters of the state any endangered or threatened plant listed in the regulations. No person shall take, kill, possess, transport, buy, or sell any wild animal contrary to any order or rule of the Division of Wildlife.	Potentially applicable	If critical habitat or endangered species or wildlife will be affected by any proposed action, these regulations would be applicable.

TABLE B.1 (Cont'd)

Potential ARAR	Location	Requirement	Preliminary Determination	Remarks
Floodplain Management (Executive Order 11988; 10 CFR 1022)	Floodplain	Federal agencies must avoid, to the maximum extent possible, any adverse impacts associated with direct and indirect development of a floodplain.	Potentially applicable	OU3 is not located within the 100-year floodplain. However, if a floodplain were affected by the proposed action, the requirement would be applicable.
Protection of Wetlands (Executive Order 11990; 10 CFR 1022)	Wetland	Federal agencies must avoid, to the extent possible, any adverse impacts associated with the destruction or loss of wetlands and the support of new construction in wetlands if a practicable alternative exists.	Potentially applicable	Wetlands exist in the potentially affected areas.

TABLE B.2 Potential Contaminant-Specific Requirements

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Occupational Safety and Health Administration Standards; Occupational Health and Environmental Control (29 CFR 1910; 1910.96), Subpart G, Ionizing Radiation	Radiation	Any	The dose per calendar quarter resulting from exposure to radiation in a restricted area from sources in that area is limited to the following. Part of Body — Dose (rem) Whole body: head and trunk, active blood-forming organs, lens of eye, or gonads — 1¼ Hands and forearms, feet and ankles — 18¾ Skin of whole body — 7½ The occupational exposure of an individual younger than 18 is restricted to 10% of these limits; the whole-body dose to a worker may not exceed 3 rem in a calendar quarter, and when added to the cumulative occupational dose may not exceed 5(N-18) rem, where N is the age of the exposed individual.	Potentially relevant and appropriate	The provisions of the OSHA do not apply to working conditions of DOE contractor employees working in government-owned, contractor-operated (GOCO) facilities since DOE exercises statutory authority to prescribe and enforce safety and health standards at its facilities. The DOE exercises this authority based upon an agreement between the Secretary of Energy and the Occupational Safety and Health Administration (OSHA).

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection for Occupational Workers (DOE Order 5480.11)	Radiation	Any	The effective dose equivalent received by any member of the public entering a controlled area is limited to 100 mrem/yr. Limiting values for the assessed dose from exposure of workers to radiation are as follows. (These values represent maximum limits; it is DOE policy to maintain radiation exposures as far below these limits as is reasonably achievable.)	To be considered	Although not promulgated standards, these constitute requirements for protection from radionuclide emissions in a controlled area with which the proposed action will comply.

Radiation Effect	Annual Dose Equivalent (rem)
Stochastic effects	5[a]
Nonstochastic effects	
Lens of eye	15
Organ, extremity, or tissue including skin of whole body	50
Unborn child, entire gestation period	0.5

[a] Annual effective dose equivalent.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Standards for Protection Against Radiation, 10 CFR 20, Subpart C - Occupational Dose Limits	Radiation	Any	The annual effective dose equivalent received by any adult is limited to 5 rem or the sum of the deep dose equivalent and the committed dose equivalent to any individual organ or tissue, other than the lens of the eye, is limited to 50 rem. The annual effective dose equivalent to the lens of the eye, to the skin and to the extremities are limited to: Lens of eye — Annual Effective Dose (rem): 15 Shallow dose to skin or any extremity — Annual Effective Dose (rem): 50 In addition, the soluble uranium intake by an individual is limited to 10 milligrams in a week in consideration of chemical toxicity. The annual occupational dose limits for minors are 10% of the annual dose limits specified above. The annual effective dose equivalent for an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman is limited to 0.5 rem.	Potentially relevant and appropriate	These requirements are not applicable since Fernald OU3 is not a NRC licensed facility; however, they may be relevant and appropriate.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Standards for Protection Against Radiation, 10 CFR 20, Subpart C - Occupational Dose Limits	Radiation	Any	The derived air concentration (DAC) and annual limit on intake (ALI) for occupational dose limits are as follows:	Potentially relevant and appropriate	These requirements are not applicable since Fernald OU3 is not a NRC licensed facility; however, they may be relevant and appropriate.

Occupational Values

Radionuclide	Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	Inhalation DAC (µCi/mL)
Cobalt-60 W[a]	5E+2	2E+2	7E-8
Y[a]	2E+2	3E+1	1E-8
Strontium-90 D[a]	3E+1	2E+1	8E-9
	Bone surf[b]	Bone surf	
	(4E+1)	(2E+1)	-
Y	-	4E+0	2E-9
Ruthenium-106 D	2E+2	9E+1	4E-8
	LLI wall[b]		
	(2E+2)	-	-
W	-	5E+1	2E-8
Y	-	1E+1	5E-9
Cesium-137 D	1E+2	2E+2	6E-8

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
			Occupational Values				
				Inhalation			
		Radionuclide	Oral Ingestion ALI (µCi)	ALI (µCi)	DAC (µCi/mL)		
		Actinium-227 D	2E-1 Bone surf (4E-1)	4E-4 Bone surf (8E-4)	2E-13 -		
		W	- -	2E-3 Bone surf (3E-3)	7E-13 -		
		Y	-	4E-3	2E-12		
		Actinium-228 D	2E+3	9E+0 Bone surf (2E+1)	4E-9		
		W	-	4E+1 Bone surf (6E+1)	2E-8		
		Y	-	4E+1	2E-8		
		Americium-241 W	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12		
		Bismuth-210 D	8E+2	2E+2 Kidneys (4E+2)	1E-7		
		W	-	3E+1	1E-8		
		Bismuth-212 D	5E+3	2E+2	1E-7		
		W	-	3E+2	1E-7		
		Bismuth-214 D	2E+4 St.wall (2E+4)	8E+2	3E-7		
		W	-	9E-2	4E-7		
		Europium-152 W	8E+2	2E+1	2E-8		

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
			Occupational Values				
				Inhalation			
			Radionuclide	Oral Ingestion ALI (µCi)	ALI (µCi)	DAC (µCi/mL)	
			Lead-210 D	5E-1 Bone surf (1E+0)	2E-1 Bone surf (4E-1)	1E-10	
			Lead-212 D	8E+1 (Bone surf (1E+2)	3E+1	2E-8	
			Lead-214 D	9E+3	8E+2	3E-7	
			Polonium 210 D	3E+0	6E-1	3E-10	
			W	-	6E-1	3E-10	
			Technetium-99 D	4E+3	5E+3 St. Wall (6E+3)	2E-6	
			W	-	7E+2	3E-7	
			Radon-200 (with daughters removed)	-	2E+4	7E-6	
			Radon-220 (with daughters present)	-	2E+1 (or 12 working level months)	9E-9 (or 1.0 working level)	
			Radon-222 (with daughters removed)	-	1E+4	4E-6	

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
			Occupational Values				
				Inhalation			
			Radionuclide	Oral Ingestion ALI (µCi)	ALI (µCi)	DAC (µCi/mL)	
			Radon-222 (with daughters present)	-	E+2 (or 4 working level months)	3E-8 (or 0.33 working level)	
			Protac-tinium-231 W	2E-1 Bone surf (5E-1)	2E-3 Bone surf (4E-3)	6E-13	
			Protac-tinium-231 Y	-	4E-3 Bone surf (6E-3)	2E-12	
			Protac-tinium-234 W	2E+3	8E+3	3E-6	
			Y	-	7E+3	3E-6	
			Radium-223 W	5E+0 Bone surf (9E+0)	7E-1	3E-10	
					-	-	
			Radium-224 W	8E+0 Bone surf (2E+1)	2E+0	7E-10	
			Radium-226 W	2E+0 Bone surf (5E+0)	6E-1	3E-10	
			Radium-228 W	2E+0 Bone surf (4E+0)	1E+0	5E-10	
			Thorium-227 W	1E+2	3E-1	1E-10	
			Y	-	3E-1	1E-10	

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TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
			Occupational Values					
					Inhalation			
			Radionuclide		Oral Ingestion ALI (µCi)	ALI (µCi)	DAC (µCi/mL)	
			Thorium-228	W	6E+0	1E-2	4E-12	
					Bone surf	Bone surf		
					(1E+1)	(2E-2)	-	
				Y	-	2E-2	7E-12	
			Thorium-230	W	4E+0	6E-3	3E-12	
					Bone surf	Bone surf		
					(9E+0)	(2E-2)	-	
				Y	-	2E-2	6E-12	
						Bone surf		
					-	(2E-2)	-	
			Thorium-232	W	7E-1	1E-3	5E-13	
					Bone surf	Bone surf		
					(2E+0)	(3E-3)	-	
				Y	-	3E-3	1E-12	
						Bone surf		
					-	(4E-3)	-	
			Thorium-234	W	3E+2	2E+2	8E-8	
					LLI wall			
					(4E+2)			
				Y	-	2E+2	6E-8	
			Uranium-233	D	1E+1	1E+0	5E-10	
					Bone surf	Bone surf		
					(2E+1)	(2E+0)	-	
				W	-	7E-1	3E-10	
				Y	-	4E-2	2E-11	
			Uranium-234	D	1E+1	1E+0	5E-10	
					Bone surf	Bone surf		
					(2E+1)	(2E+0)	-	
				W	-	7E-1	3E-10	
				Y	-	4E-2	2E-11	

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
			Occupational Values					
					Inhalation			
			Radionuclide		Oral Ingestion ALI (µCi)	ALI (µCi)	DAC (µCi/mL)	
			Uranium-235	D	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	
				W	-	8E-1	3E-10	
				Y	-	4E-2	2E-11	
			Uranium-236	D	1E+1 Bone surf (2E+1)	1E+8 Bone surf (2E+0)	5E-10 -	
				W	-	8E-1	3E-10	
				Y	-	4E-2	2E-11	
			Uranium-238	D	1E+1 Bone surf (2E+1)	d1E+0 Bone surf (2E+0)	6E-10 -	
				W	-	8E-1	3E-10	
				Y	-	4E-2	2E-11	
			Uranium-natural	D	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	
				W	-	8E-1	3E-10	
				Y	-	5E-2	2E-11	
			Neptunium-237	W	5E-1 Bone surf (1E+0)	4E-3 Bone surf (1E-2)	2E-12 -	
			Plutonium-238	W	9E-1 Bone surf (2E+0)	7E-3 Bone surf (1E-2)	8E-12 -	
				Y	-	2E-2	8E-12	

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
				Occupational Values				
					Inhalation			
			Radionuclide	Oral Ingestion ALI (µCi)	ALI (µCi)	DAC (µCi/mL)		
			Plutonium-239 W	8E-1	6E-3	3E-12		
				Bone surf	Bone surf			
				(1E+0)	(1E-2)	-		
			Y	-	2E-2	7E-12		
					Bone surf			
				-	(2E-2)	-		
			Plutonium-240 W	8E-1	6E-3	3E-12		
				Bone surf	Bone surf			
				(1E+0)	(1E-2)	-		
			Y	-	2E-2	7E-12		
					Bone surf			
				-	(2E-2)	-		
			Plutonium-241 W	4E+1	3E-1	1E-10		
				Bone surf	Bone surf			
				(7E+1)	(6E-1)	-		
			Y	-	8E-1	8E-10		
					Bone surf			
				-	(1E+0)	-		
			Plutonium-242 W	8E-1	7E-3	3E-12		
				Bone surf	Bone surf			
				(1E+0)	(1E-2)	-		
			Y	-	2E-2	7E-12		
					Bone surf			
				-	(2E-2)	-		
			[a] Daily (D), weekly (W) and yearly (Y) lung retention classes. [b] ALI is the stochastic dose limit, when an ALI is determined by the non-stochastic dose limit the organ or tissue designations are LLI wall = lower large intestine wall and Bone surf = bone surface.					
Standards for Protection Against Radiation, 10 CFR 20, Subpart D - Radiation Dose Limits for Individual Members of the Public	Radiation	Any	The total effective dose equivalent to individual members of the public, in an unrestricted or restricted area, is limited to 0.1 rem. The dose in any unrestricted area from external sources is limited to 0.002 rem in any one our.				Potentially relevant and appropriate	These requirements are not applicable since Fernald OU3 is not a NRC licensed facility; however, they may be relevant and appropriate.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
(Cont'd)			The annual average concentrations of radioactive material released in gaseous and liquid effluent at the boundary of the unrestricted area do not exceed:		

Radionuclide	Effluent Concentrations Air (µCi/mL)	Effluent Concentrations Water (µCi/mL)
Cobalt-60 W[a]	2E-10	3E-6
Y[a]	5E-11	-
Strontium-90 D[a]	-	-
	3E-11	5E-7
Y	6E-12	-
Ruthenium-106 D	1E-10	-
	-	3E-6
W	8E-11	-
Y	2E-11	-
Cesium-137 D	2E-10	1E-6
Technetium-99 D	-	6E5
	8E-9	-
W	9E-10	-
Radon-220 (with daughters removed)	2E-8	-
Radon-220 (with daughters present)	3E-11	-
Radon-222 (with daughters removed)	1E-8	-

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
				Effluent Concentrations			
			Radionuclide	Air (µCi/mL)	Water (µCi/mL)		
			Radon-222 (with daughters present)	1E-10	-		
			Radium-223 W	9E-13	-		
			Radium-224 W	2E-12	-		
			Radium-226 W	9E-13	-		
				-	6E-8		
			Radium-228 W	2E-12	-		
				-	6E-8		
			Protactinium-231 W	6E-15	6E-9		
			Y	8E-15	-		
			Protactinium-234 W	1E-8	3E-5		
			Y	9E-9	-		
			Actinium-227 D	-	-		
				1E-15	5E-9		
			W	-	-		
				4E-15	-		
			Y	6E-15	-		
			Actinium-228 D	-	3E-5		
			Y	6E-11	-		
			Bismuth-210 D	-	1E-5		
			W	4E-11	-		
			Bismuth-212 D	3E-10	7E-5		
			W	5E-11	-		
			Bismuth-214 D	1E-9	-		
			W	1E-9	-		
			Europium-152 W	3E-11	1E-5		

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
				Effluent Concentrations			
			Radionuclide	Air (µCi/mL)	Water (µCi/mL)		
			Thorium-227 W	5E-13	2E-6		
			Y	5E-13	1E-4		
			Thorium-228 W	-	-		
				3E-14	2E-7		
			Y	2E-14	-		
			Thorium-230 W	-	-		
				2E-14	1E-7		
			Y	-	-		
				3E-14	-		
			Thorium-232 W	-	-		
				4E-15	3E-8		
			Y	-	-		
				6E-15	-		
			Thorium-234 W	3E-10	-		
			Y	2E-10	-		
			Uranium-233 D	-	-		
				3E-12	3E-7		
			W	1E-12	-		
			Y	5E-14	-		
			Uranium-234 D	-	-		
				3E-12	3E-7		
			W	1E-12	-		
			Y	5E-14	-		
			Uranium-235 D	-	-		
				3E-12	3E-7		
			W	1E-12	-		
			Y	6E-14	-		
			Uranium-236 D	-	-		
				3E-12	3E-7		
			W	1E-12	-		
			Y	6E-14	-		

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement		Preliminary Determination	Remarks
			Effluent Concentrations			
		Radionuclide	Air (µCi/mL)	Water (µCi/mL)		
		Uranium-238 D	-	-		
			3E-12	3E-7		
		W	1E-12	-		
		Y	6E-14	-		
		Uranium-natural D	-	-		
			3E-12	3E-7		
		W	9E-13	-		
		Y	9E-14	-		
		Neptunium-237 W	-	-		
			1E-14	2E-8		
		Polonium-210 D	9E-13	4E-8		
		W	9E-13	-		
		Plutonium-238 W	-	-		
			2E-14	2E-8		
		Y	2E-14			
		Plutonium-239 W	-	-		
			2E-14	2E-8		
		Y	-	-		
			2E-14	-		
		Plutonium-240 W	-	-		
			2E-14	2E-8		
		Y	-	-		
			2E-14	-		
		Plutonium-241 W	-	-		
			8E-13	1E-6		
		Y	-	-		
			1E-12	-		
		Plutonium-242 W	-	-		
			2E-14	2E-8		
		Y	-	-		
			2E-14	-		

[a] Daily (D), weekly (W) and yearly (Y) lung retention classifications.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection Rules, Ohio Administration Code; Chapter 3701-38: General Radiation Protection Standards; Rules 3701-38-13, 3707-38-15 and 3701-38-16	Radiation	Any	No individual in a restricted area shall receive in any one calendar quarter a total occupational dose in excess of: Dose (rem) Whole body; hand and trunk, active blood-forming organs, lens of eyes or gonads: 1-1/4 Hand and forearms, feet and ankles: 18-3/4 Skin of whole body: 7-1/2 Except, exposure to the whole body may exceed the above values provided exposure does not exceed 3 rem/quarter and the dose to the whole body when added to the accumulated dose to the whole body shall not exceed 5(N-18) rem where N = individual's age in years at his last birthday. No person may cause any individual under 18 years of age within a restricted area to receive in any period of one calendar quarter, from all sources of radiation, a dose in excess of 10% of the limits specified above.	Potentially applicable	These requirements may be applicable to the protection of workers at the site during implementation of the corrective action.
			The exposure limit for any member of the public in an unrestricted area is limited to radiation levels which, if an individual were continuously present in the area, could result in his receiving a dose in excess of 2 mrem in any one hour, or in excess of 100 mrem in any 7 consecutive days. Limits in excess of those specified may be approved by the Ohio Department of Health if the limits are not likely to cause any individual to receive a dose to the whole body in any period of one calendar year in excess of 0.5 rem.	Potentially applicable	These requirements would be applicable for the protection of the general public from radionuclide emissions to uncontrolled areas.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
(Cont'd)			Radioactive material may not be released to an unrestricted area such that concentrations exceed:		

Radionuclide	Effluent Concentrations Air (μCi/ml)	Effluent Concentrations Water (μCi/mL)
radium-226 s*	3E-12	3E-8
i	2E-12	3E-5
radium-228 s	2E-12	3E-8
i	1E-12	3E-5
radon-220	1E-8	-
radon-222	3E-9	-
beta and/or gamma emitters not listed with half life < 2 h	3E-8	-
beta and/or gamma emitters not listed with half life > 2 h	1E-10	3E-6
alpha emitters not listed above	2E-14	3E-8

Except higher limits may be allowed upon showing reasonable effort has been made to minimize radioactivity discharged. Concentrations apply at the boundary of the restricted area.

*Soluble (s) and insoluble (i).

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Environmental Radiation Protection Standards for Nuclear Power Operations (40 CFR 190)	Radiation	Any	The annual dose equivalent must not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ of any member of the public as the result of exposures to the planned discharges of radioactive materials, radon and its daughters excepted.	Potentially relevant and appropriate	These regulations are not applicable because Fernald OU3 is not a nuclear power operation associated with the production of electrical power for public use; however, they may be relevant and appropriate to the proposed action.
Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-level and Transuranic Radioactive Wastes (40 CFR 191)	Radiation	Any	The combined annual dose equivalent from the management and storage of spent nuclear fuel or high-level or transuranic radioactive wastes at a disposal facility operated by the Department of Energy and not regulated by the NRC or State of Ohio shall not exceed 25 mrem to the whole body and 75 mrem to any critical organ. Any disposal system shall be designed to not cause the radionuclide concentrations averaged over any year in water withdrawn from any portion of a special source of groundwater to exceed: Radium 226 and -228: 5 pCi/L Alpha-emitting radionuclides: 15 pCi/L or for beta or gamma radiation shall not exceed an annual dose equivalent to the total body or any internal organ of 4 mrem.	Potentially relevant and appropriate	These standards are not applicable because Fernald OU3 is not a DOE high-level or transuranic radioactive waste disposal site nor a NRC licensed disposal site; however, the standards may be relevant and appropriate to the proposed action.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, 40 CFR 192	Radiation	Any	After closure of a uranium byproduct material disposal site, releases of radon-222 to the atmosphere shall not exceed an average release rate of 20 $pCi/m^2/s$.	Potentially relevant and appropriate	These standards are not applicable because Fernald is not a disposal site; however, they may be relevant and appropriate to on-site disposal of radionuclide materials.
Disposal or On-Site Storage of Thorium or Uranium Wastes from Past Operations, NRC Branch Technical Position (46 FR 52061, Oct. 23, 1981)	Thorium and uranium	Any	Applications for burial of low-concentration thorium and uranium contaminated wastes or storage thereof will be approved if these guidelines are met, including dose and pCi/gm limits and prescribed depth and titling conditions. Storage on-site pending appropriate disposal requires that radiation doses not exceed those specified in 10 CFR Part 20.	To be considered	These guidelines are for NRC consideration of applications. Other methods of disposal may be proposed but will be evaluated on their own merit.
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Radiation	Air	The basic dose limit for nonoccupationally exposed individuals is 100 mrem/yr above background, committed effective dose equivalent. Further, all radiation exposures must be reduced to levels as low as reasonably achievable.	To be considered	Although not promulgated standards, these requirements are derived from such standards and they constitute requirements for protection of the public with which the proposed action will comply.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
National Emission Standards for Hazardous Air Pollutants (40 CFR 61), Subpart H, National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities	Radionuclides other than radon-220 and radon-222	Air	Emissions of such radionuclides to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public in any year an effective dose equivalent of 10 mrem/yr.	Potentially applicable	These requirements may be applicable because Fernald OU3 is a DOE facility.
National Emission Standards for Hazardous Air Pollutants (40 CFR 61), Subpart T, National Emission Standards for Radon Emissions from the Disposal of Uranium Mill Tailings	Radon	Air	Radon-222 emissions to ambient air from uranium mill tailings piles that are no longer operational shall not exceed 20 pCi/m^2-s.	Potentially relevant and appropriate	Fernald OU3 is not a mill tailings site, so this requirement is not applicable; however, it may be considered relevant and appropriate.
National Emission Standards for Hazardous Air Pollutants (40 CFR 61), Subpart Q, National Emission Standards for Radon Emissions from DOE Facilities	Radon	Air	No source at a DOE facility shall emit more than 20 pCi/m^2 of radon-222 as an average into the air.	Potentially applicable	These regulations are applicable if storage and disposal facilities for radium-containing material are part of the proposed action.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFR 192)	External gamma radiation	Air	The level of external gamma radiation in any occupied or habitable building must not exceed the background level by more than 20 μR/h.	Potentially relevant and appropriate	Fernald OU3 is not a mill tailings site, so these requirements are not applicable; they may be relevant and appropriate if habitable buildings would be involved in the proposed action.
	Radon	Air	Releases of radon from tailings disposal piles must not exceed an average rate of 20 pCi/m^2-s or increase the annual average concentration in air outside the disposal site by more than 0.5 pCi/L.	Potentially relevant and appropriate	Fernald OU3 is not a mill tailings site, so these requirements are not applicable; however, they may be considered relevant and appropriate.
	Radon decay products	Air	The annual average (or equivalent) radon decay product concentration, including background, in any habitable building must not exceed 0.02 working level (WL) or a maximum of 0.03 WL – where a WL is any combination of short-lived radon decay products in 1 liter of air, without regard to the degree of equilibrium, that will result in the emission of 1.3×10^5 MeV of alpha energy. (For radon-222 in equilibrium with its decay products, 1 WL = 100 pCi/L.)	Potentially relevant and appropriate	Fernald OU3 is not a mill tailings site, so these requirements are not applicable; they may be relevant and appropriate if habitable buildings are involved in the proposed action.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	See Table	Air	Residual concentrations of radionuclides in air in uncontrolled areas are limited to the following. (For known mixtures of radionuclides, the sum of the ratios of the observed concentration of each radionuclide to its corresponding limit must not exceed 1.0.)	To be considered	Although not promulgated standards, these constitute requirements for protection of the public with which the proposed action will comply.

Isotope	Derived Concentration Guide[a] (μCi/mL) D	W	Y
Actinium-227	4×10^{-15}	1×10^{-15}	1×10^{-14}
Actinium-228	4×10^{-11}	1×10^{-10}	1×10^{-10}
Americium-241	-	2×10^{-12}	-
Bismuth-210	9×10^{-10}	6×10^{-11}	-
Bismuth-212	6×10^{-10}	7×10^{-10}	-
Bismuth-214	2×10^{-9}	2×10^{-9}	-
Cesium-137	4×10^{-10}	-[b]	-
Cobalt-60	-	4×10^{-10}	8×10^{-11}
Europium-152	-	5×10^{-11}	-
Lead-210	9×10^{-13}	-	-
Lead-212	8×10^{-11}	-	-
Lead-214	2×10^{-9}	-	-
Neptunium-237	-	2×10^{-14}	-
Plutonium-238[c]	-	3×10^{-14}	4×10^{-14}
Plutonium-239[c]	-	2×10^{-14}	4×10^{-14}
Plutonium-240[c]	-	2×10^{-14}	4×10^{-14}
Plutonium-241[c]	-	1×10^{-14}	2×10^{-12}

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
Radiation Protection of the Public and the Environment (DOE Order 5400.5) (Cont'd)				Derived Concentration Guide[a] (μCi/mL)				
			Isotope	D	W	Y		
			Plutonium-242[c]	-	1×10^{-12}	2×10^{-12}		
			Polonium-210	1×10^{-12}	1×10^{-12}	-		
			Protactinium-231	-	9×10^{-15}	1×10^{-14}		
			Protactinium-234	-	-	-		
			Radium-223	-	2×10^{-12}	-		
			Radium-224	-	4×10^{-12}	-		
			Radium-226	-	1×10^{-12}	-		
			Radium-228	-	3×10^{-12}	-		
			Radon-220[d]	3×10^{-9}	3×10^{-9}	3×10^{-9}		
			Radon-222[d]	3×10^{-9}	3×10^{-9}	3×10^{-9}		
			Technetium-99	1×10^{-8}	2×10^{-9}	-		
			Ruthenium-106	2×10^{-10}	1×10^{-10}	3×10^{-11}		
			Strontium-90[c]	5×10^{-11}	-	9×10^{-12}		
			Thorium-227	-	8×10^{-13}	7×10^{-13}		
			Thorium-228	-	5×10^{-14}	4×10^{-14}		
			Thorium-229	-	6×10^{-15}	7×10^{-15}		
			Thorium-230	-	4×10^{-14}	5×10^{-14}		
			Thorium-232	-	7×10^{-15}	1×10^{-14}		
			Thorium-natural	-	7×10^{-15}	1×10^{-14}		

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection of the Public and the Environment (DOE Order 5400.5) (Cont'd)					

Isotope	Derived Concentration Guide[a] (μCi/mL) D	W	Y
Thorium-234	-	5×10^{-10}	4×10^{-10}
Uranium-231[c]	2×10^{-8}	1×10^{-8}	1×10^{-8}
Uranium-233[c]	4×10^{-12}	2×10^{-12}	9×10^{-14}
Uranium-234[c]	4×10^{-12}	2×10^{-12}	9×10^{-14}
Uranium-235[c]	5×10^{-12}	2×10^{-12}	1×10^{-13}
Uranium-236[c]	5×10^{-12}	2×10^{-12}	1×10^{-13}
Uranium-238[c]	5×10^{-12}	2×10^{-12}	1×10^{-13}
Uranium-Natural[c]	5×10^{-12}	2×10^{-12}	1×10^{-13}

[a]D, W, and Y represent lung retention classes; removal half-times assigned to the compounds with classes D, W, and Y are 0.5, 50, and 500 days, respectively. Exposure conditions assume an inhalation rate of 8,400 m^3 of air per year (based on an exposure over 24 hours per day, 365 days per year).

[b]A hyphen means no limit has been established.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection of the Public and the Environment (DOE Order 5400.5) (Cont'd)			[c]The value shown for yearly DCG is for plutonium radionuclides with an absorption factor (f_1) value of 1×10^{-5}. The value shown for weekly DCG is for plutonium radionuclides with a f_1 value of 1×10^{-3}. The value shown for daily and weekly DCG is for Uranium radionuclides with a f_1 value of 5×10^{-2} and for yearly DCG is for uranium radionuclides with a f_1 value of 2×10^{-3}. The value shown for daily DCG is for strontium radionuclides with a f_1 value of 3×10^{-1}. The value shown for yearly DCG is for strontium radionuclides for a f_1 value of 1×10^{-2}. [d]Still being assessed.		
	Radon-222	Air	The above-background concentration of radon-222 in air above an interim storage facility must not exceed 100 pCi/L at any point, an annual average of 30 pCi/L over the facility, or an annual average of 3 pCi/L at or above any location outside the site. (See also the discussion for DOE Order 5820.2A.)	To be considered	Although not promulgated standards, these constitute requirements for protection of the public with which the proposed action will comply.
	Radon-220 and radon-222	Air	The immersion derived concentration guide for both radon-220 and radon-222 in air in an uncontrolled area is 3 pCi/L.	To be considered	Although not promulgated standards, these constitute requirements for protection of the public with which the proposed action will comply.
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	External gamma radiation	Air	The level of external gamma radiation in any occupied or habitable building must not exceed the background level by more than 20 μR/h.	To be considered	Pertinent to the proposed action if habitable buildings are involved in the proposed action.
	Radon	Air	Releases of radon-222 from residual radioactive material disposal sites should not exceed an annual average release rate of 20 pCi/m^2-s or increase the annual average radon-222 concentration at or above any location outside the boundary of the contaminated area by more than 0.5 pCi/L.	To be considered	Although not promulgated standards, these constitute requirements for protection of the public with which the proposed action will comply.
	Radon decay products	Air	The annual average (or equivalent) radon decay product concentration, including background, in any habitable building must not exceed 0.02 working level (WL) or a maximum of 0.03 WL.	To be considered	Pertinent to the proposed action if habitable buildings are involved in the proposed action.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Occupational Safety and Health Administration Standards; Occupational Health and Environmental Control (29 CFR 1910; 1910.96), Subpart G, Ionizing Radiation	Uranium, thorium, radium, and radon	Air	Within a restricted area, airborne radioactive material (averaged over a 40-hour work week of seven consecutive days) should not exceed the following limits. (For hours of exposure less than or greater than 40, the limits are proportionately increased or decreased, respectively.)	Potentially applicable	The provisions of the OSHA do not apply to working conditions of DOE contractor employees in government-owned, contractor-operated (GOCO) facilities since DOE exercises statutory authority to prescribe and enforce safety and health standards at its facilities. The DOE exercises this authority based upon an agreement between the Secretary of Energy and the Occupational Safety and Health Administration.

Isotope	Solubility Class	Concentration	Concentration for Exposure to Minors
Actinium-227	S	2×10^{-12}	8×10^{-14}
	I	3×10^{-11}	9×10^{-13}
Actinium-228	S	8×10^{-8}	3×10^{-9}
	I	2×10^{-8}	6×10^{-10}
Americium-241	S	6×10^{-12}	2×10^{-13}
	I	1×10^{-10}	4×10^{-12}
Bismuth-210	S	6×10^{-9}	2×10^{-10}
	I	6×10^{-9}	2×10^{-10}
Bismuth-212	S	1×10^{-7}	3×10^{-9}
	I	2×10^{-7}	7×10^{-9}
Europium-152	S	4×10^{-7}	1×10^{-8}
(T/2 = 9.2 hrs)	I	3×10^{-7}	1×10^{-8}
Europium-152	S	1×10^{-8}	4×10^{-10}
(T/2 = 13 yrs)	I	2×10^{-8}	6×10^{-10}
Lead-210	S	1×10^{-10}	4×10^{-12}
	I	2×10^{-10}	8×10^{-12}
Lead-212	S	2×10^{-8}	6×10^{-10}
	I	2×10^{-8}	7×10^{-10}
Protactinium-231	S	1×10^{-12}	4×10^{-14}
	I	1×10^{-10}	4×10^{-12}
Protactinium-234	S		
	I		
Radium-223	S	2×10^{-9}	6×10^{-11}
	I	2×10^{-10}	8×10^{-12}
Radium-224	S	5×10^{-9}	2×10^{-10}
	I	7×10^{-10}	2×10^{-11}
Radium-226	S	3×10^{-11}	3×10^{-12}
	I	5×10^{-11}	2×10^{-12}
Radium-228	S	7×10^{-11}	2×10^{-12}
	I	4×10^{-11}	1×10^{-12}
Radon-220	S	3×10^{-7}	1×10^{-8}
Radon-222[b]	S	3×10^{-8}	3×10^{-9}
Cesium-137	S	6×10^{-8}	2×10^{-9}
	I	1×10^{-8}	5×10^{-10}

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
			Isotope	Solubility Class	Concen-tration	Concentration for Exposure to Minors		
			Cobalt-60	S	3×10^{-7}	1×10^{-8}		
				I	9×10^{-9}	3×10^{-10}		
			Neptunium 237	S	4×10^{-12}	1×10^{-13}		
				I	1×10^{-10}	4×10^{-12}		
			Polonium 210	S	5×10^{-10}	2×10^{-11}		
				I	2×10^{-10}	7×10^{-12}		
			Plutonium-238	S	2×10^{-12}	7×10^{-14}		
				I	3×10^{-11}	1×10^{-12}		
			Plutonium-239	S	2×10^{-12}	6×10^{-14}		
				I	4×10^{-11}	1×10^{-12}		
			Plutonium-240	S	2×10^{-12}	6×10^{-14}		
				I	4×10^{-11}	1×10^{-12}		
			Plutonium-241	S	9×10^{-11}	3×10^{-12}		
				I	4×10^{-8}	1×10^{-9}		
			Plutonium-242	S	2×10^{-12}	6×10^{-14}		
				I	4×10^{-11}	1×10^{-12}		
			Ruthenium-106	S	8×10^{-8}	3×10^{-9}		
				I	6×10^{-9}	2×10^{-10}		
			Strontium-90	S	1×10^{-9}	3×10^{-11}		
				I	5×10^{-9}	2×10^{-10}		
			Technetium-99	S	2×10^{-6}	7×10^{-8}		
				I	6×10^{-8}	2×10^{-9}		
			Thorium-227	S	3×10^{-10}	1×10^{-11}		
				I	2×10^{-10}	6×10^{-12}		
			Thorium-228	S	9×10^{-12}	3×10^{-13}		
				I	6×10^{-12}	2×10^{-13}		
			Thorium-230	S	2×10^{-12}	8×10^{-14}		
				I	1×10^{-11}	3×10^{-13}		
			Thorium-232	S	3×10^{-11}	1×10^{-12}		
				I	3×10^{-11}	1×10^{-12}		
			Thorium - natural	S	6×10^{-11}	2×10^{-12}		
				I	6×10^{-11}	2×10^{-12}		
			Thorium-234	S	6×10^{-8}	6×10^{-10}		
				I	3×10^{-8}	7×10^{-10}		
			Uranium-233	S	5×10^{-10}	2×10^{-11}		
				I	1×10^{-10}	4×10^{-12}		
			Uranium-234	S	6×10^{-10}	2×10^{-11}		
				I	1×10^{-10}	4×10^{-12}		

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
			Isotope	Solubility Class	Concen-tration	Concentration for Exposure to Minors		
			Uranium-235	S	5×10^{-10}	2×10^{-11}		
				I	1×10^{-10}	4×10^{-12}		
			Uranium-236	S	6×10^{-10}	2×10^{-11}		
				I	1×10^{-10}	4×10^{-12}		
			Uranium-238	S	7×10^{-11}	3×10^{-12}		
				I	1×10^{-10}	5×10^{-12}		
			Uranium-Natural	S	1×10^{-10}	5×10^{-12}		
				I	1×10^{-10}	5×10^{-12}		

[b]These radon concentrations are appropriate for protection from radon-222 combined with its short-lived daughters. Alternatively, the value in Column 1 may be replaced by one-third (1/3) "working level" (A "working level" is defined as any combination of short-lived radon-222 daughters, polonium-218, lead-214, bismuth-214 and polonium-214, in one liter of air without regard to the degree of equilibrium that will result in the ultimate emission of 1.3 10 MeV of alpha particle energy. The value for exposure to minors may be replaced by one-thirtieth (1/30) of a "working level". The limit on radon-222 concentrations in restricted areas may be based on an annual average.

For mixtures of radionuclides see 10 CFR 20, NRC Standards for Protection Against Radiation, Appendix B Note.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection for Occupational Workers (DOE Order 5480.11)	Radiation	Air	Occupational exposure limits for specific radionuclides in air are as follows. (Values for radon isotopes assume 100% equilibrium with the short-lived decay products; these values may be replaced by 1 WL for radon-220 and 1/3 WL for radon-222.)	To be considered	Although not promulgated standards, these constitute requirements for worker protection with which the proposed action will comply.

Isotope	Derived Concentration Guide[a] (μCi/mL) D	W	Y
Ru-106	4×10^{-8}	2×10^{-8}	5×10^{-9}
Np-237	-[b]	2×10^{-12}	-
Sr-90	8×10^{-9}	-	2×10^{-9}
Te-99	2×10^{-6}	3×10^{-7}	-
Pa-321	-	7×10^{-13}	2×10^{-12}
Pa-234	-	3×10^{-6}	3×10^{-6}
Po-210	3×10^{-10}	3×10^{-10}	-
Ra-223	-	3×10^{-10}	-
Ra-224	-	7×10^{-10}	-
Ra-226	-	3×10^{-10}	-
Ra-228	-	5×10^{-10}	-
Rn-220[c]	8×10^{-9}	-	-
Rn-222[c]	3×10^{-8}	-	-
Ce-137	7×10^{-8}		
Ac-227	2×10^{-13}	7×10^{-13}	2×10^{-12}
Ac-228	4×10^{-9}	2×10^{-8}	-
Am-241	-	2×10^{-2}	-
Bi-210	1×10^{-7}	1×10^{-8}	-
Bi-212	1×10^{-7}	1×10^{-7}	-
Bi-214	3×10^{-7}	4×10^{-7}	-
Eu-152	-	1×10^{-8}	-
Th-227	-	1×10^{-10}	1×10^{-10}
Th-228	-	4×10^{-12}	7×10^{-12}
Th-230	-	3×10^{-12}	7×10^{-12}
Th-232	-	5×10^{-13}	1×10^{-12}
Th-234	-	9×10^{-8}	6×10^{-8}
U-233	5×10^{-10}	3×10^{-10}	2×10^{-11}
U-234	5×10^{-10}	3×10^{-10}	2×10^{-11}
U-235	6×10^{-10}	3×10^{-10}	2×10^{-11}
U-236	6×10^{-10}	3×10^{-10}	2×10^{-11}
U-237	1×10^{-6}	7×10^{-7}	6×10^{-7}
Pu-238	-	3×10^{-12}	7×10^{-12}
Pu-239	-	2×10^{-12}	6×10^{-12}

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks

Isotope	Derived Concentration Guide[a] (μCi/mL) D	W	Y
Pu-240	-	2×10^{-12}	6×10^{-12}
Pu-241	-	1×10^{-10}	3×10^{-10}
Pu-242	-	2×10^{-12}	6×10^{-12}
Co-60	-	7×10^{-8}	1×10^{-8}

[a]D, W, and Y represent lung retention classes; removal half times assigned to the compounds with classes D, W, and Y are 0.5, 50, and 500 days, respectively. Exposure conditions assume an inhalation rate of 2,400 m^3 of air per year (based on an exposure over 40 hours per week, 50 weeks per year).

[b]A hyphen means no limit has been established.

[c]These values are appropriate for protection from radon combined with its short-lived daughters and are based on information given in ICRP Publication 32: Limits for Inhalation of Radon Daughters by Workers and Federal Guidance Report No. 11: Limiting Values of Radionuclide Intake and Air Concentrations, and Dose Conversion Factors for Inhalation, Submersion, and Ingestion (EPA 520/1-88-020). The values given are for 100% equilibrium concentration conditions of the radon daughters with the parent. To allow for an actual measured equilibrium concentration or a demonstrated equilibrium concentration, the values given in this table should be multiplied by the ratio (100% actual %) or 100%/demonstrated %), respectively. Alternatively, the DAC values for Rn-220 and Rn-222 may be replaced by 1 WL* and 1/3 WL,* and 1/3 WL,* respectively, for appropriate limiting of daughter concentrations. Because of the dosimetric considerations for radon, no f_1 or lung clearance values are listed.

*A "Working Level" (WL) is any combination of short-lived radon daughters, in one liter of air without regard to the degree of equilibrium, that will result in the ultimate emission of 1.3 E+0.5 MeV of alpha energy.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection Rules, Ohio Administration Code; Chapter 3701-38: General Radiation Protection Standards; Rules 3701-38-13, 3701-38-15 and 3701-38-16.	Radiation	Air	Individuals in restricted areas may not be exposed to airborne radioactive material in average concentrations in excess of:	Potentially applicable	These requirements may be applicable to the protection of workers at the site during implementation of the remedial action.

Concentration Levels

Radionuclide*	General (µCi/ml) Air	General (µCi/ml) Water	Minors (µCi/ml) Air	Minors (µCi/ml) Water
Radium-226 s	3E-11	4E-7	3E-12	3E-8
i	5E-11	9E-4	2E-12	3E-5
Radium-228 s	7E-11	8E-7	2E-12	3E-8
i	4E-11	7E-4	1E-12	3E-5
Radon-220	3E-7	-	1E-8	-
Radon-222	1E-7	-	3E-9	-
Beta and/or gamma emitters not listed with half life <2 h	1E-6	-	3E-8	-
Beta and/or gamma emitters not listed with half life >2 h	3E-9	9E-5	1E-10	3E-6
Alpha emitters not listed above	6E-13	4E-7	2E-14	3E-8

No allowance shall be made for the use of protective clothing or equipment, or particle size except as authorized by the Ohio Department of Health. Concentrations may be averaged over no longer than one week.

*Soluble (s) and Insoluble (i).

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Occupational Safety and Health Administration Standards (29 CFR 1910; 1910.1000), Subpart Z, Toxic and Hazardous Substances; 1910.1025, Lead; 1910.1028, Benzene; 1910.1101, Asbestos; 1910-1018, Inorganic arsenic	Specific substances	Air	Permissible occupational exposure limits (time weighted average) for various airborne substances have recently been revised to the following final rule limits; they may be achieved by any reasonable combination of engineering controls, work practices, and personal protective equipment.	Not an ARAR	The provisions of OSHA do not apply to working conditions of DOE contractor employees working in government-owned, contractor-operated (GOCO) facilities since DOE exercises statutory authority to prescribe and enforce safety and health standards at its facilities. The DOE exercises this authority based upon an agreement between the Secretary of Energy and the Occupational Safety and Health Administration.

Substance	Limit[a] (mg/m^3)	Condition
Acetone	1800	750 ppm,[c] STEL[b] is 1000 ppm, 2400 mg/m^3
Aluminum		
Total dust	15	
Respirable fraction	5	
Pyro powders	5	
Soluble salts	2	
Alkyls	2	
Aroclor 1254 (PCB)	0.5	Skin notation for potential contribution to overall exposure by cutaneous route (airborne or direct contact)
Lead	0.05	For metallic lead and inorganic compounds, as lead
Asbestos	2 fibers/m^3	Ceiling 10 fibers/m^3
Arsenic, organic compounds	0.5	-
Arsenic, inorganic compounds	0.01	-
Cadmium fumes	0.1	Ceiling is 0.3 mg/m^3
Carbon tetrachloride	12.6	2 ppm
Chlordane	0.5	
Chloroform (Trichloromethane)	9.78	2 ppm
Chromium metal	1.0	
1,1-Dichloroethane	400	100 ppm
1,2-Dichloroethyene	790	200 ppm
Ethyl benzene	435.0	100 ppm, STEL is 125 ppm and 545 mg/m^3
Gasoline	900	300 ppm, STEL is 1500 mg/m^3 or 500 ppm

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
			Substance	Limit[a] (mg/m^3)	Condition		
			Magnesium oxide fume (total particulate)	10.0			
			Mercury (organo) alkyl compounds	0.01	STEL is 0.03 mg/m^3; skin notation for potential contribution to overall exposure by cutaneous route (airborne or direct contact).		
			Mercury vapor	0.05	Skin notation for potential contribution to overall exposure by cutaneous route (airborne or direct contact).		
			Nickel carbonyl (as Ni)	0.007	0.001 ppm		
			Nickel, soluble compounds	0.1			
			Pentachlorophenol	0.5	Skin notation for potential contribution to overall exposure by cutaneous route (airborne or direct contact).		
			Perchloroethylene (Tetrachloroethylene)	170.0	25 ppm		
			Phenol	19.0	5 ppm; Skin notation for potential contribution to overall exposure by cutaneous route (airborne or direct contact).		
			Tetrachloroethylene; see Perchloroethylene				
			Tetrachloromethane (Carbon tetrachloride)	12.6	2 ppm		
			Toluene	375.0	100 ppm; STEL 150 ppm and 560 mg/m^3		
			Tributyl phosphate	2.5	0.2 ppm		
			1,1,1-Trichloroethane	1900	350 ppm; STEL is 2450 mg/m^3 and 450 ppm		

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement			Preliminary Determination	Remarks
			Substance	Limit[a] (mg/m^3)	Condition		
			Xylenes (o-, m-, p-isomers)	435.0	100 ppm; STEL is 150 ppm and 655 mg/m^3		
			Zirconium compounds	5.0	STEL is 10 mg/m^3		
			Barium, soluble compounds	0.5			
			Benzene	1 ppm	5 ppm averaged for 15 min.		
			Cadmium dust	0.2	Ceiling 0.6 mg/m^3		
			Chromium II compounds	0.5			
			Chromium III compounds	0.5			
			Copper				
			Fume (Cu)	0.1			
			Dust (Cu)	1.0			
			Fluorides (F)	2.5			
			Mercury (aryl and inorganic) (Hg)	-	0.1 mg/m^3 ceiling; skin notation for potential contribution to overall exposure by cutaneous maximum duration route (airborne or direct contact)		
			Nickel (metal and insoluble compounds)	1.0			
			Silver, metal and soluble compounds	0.01			
			Trichloroethylene	270.0	50 ppm; for short-term exposure 1080 mg/m^3 or 200 ppm		
			Uranium				
			Soluble compounds	0.05			
			Insoluble compounds	0.2	STEL 0.6 mg/m^3		
			Yttrium	1.0			
			Particulates:				
			Total dust	15	For particulates not otherwise regulated (i.e., nuisance dust)		
			Respirable fraction	5			

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
			[a]Permissible exposure limit expressed as the 8-hour time-weighted average. [b]Short-term exposure limit. [c]Parts of vapor or gas per million parts of contaminated air by volume at 25° and 760 torr.		
Clean Air Act, as amended (42 USC 7401-7642); National Primary and Secondary Ambient Air Quality Standards (40 CFR 50)	Particulate matter	Air	For a majority stationary source (see 40 CFR 52.2(b)(1)(i)(a)) that emits >250 tons/year of any regulated pollutant or >100 tons/year of a regulated pollutant for which the area is designated as nonattainment, particulate matter less than 10 μm in diameter (PM-10) should not exceed a 24-hour average concentration of 150 $\mu g/m^3$ or an annual arithmetic mean of 50 $\mu g/m^3$.	Potentially applicable	These requirements do not apply directly to source-specific emissions; rather, they are national limitations on ambient concentrations. However, they will be addressed in controlling particulate emissions that could result from implementation of the remedial action.
	Lead	Air	As for the above conditions, the standard for lead and its compounds, as elemental lead, is 1.5 $\mu g/m^3$ maximum arithmetic mean averaged over one calendar quarter.	Potentially applicable	These requirements do not apply directly to source-specific emissions; rather, they are national limitations on ambient concentrations. However, they will be addressed in controlling lead emissions that could result from implementation of the remedial action.
Ohio Air Pollution Control Regulations, Ohio Administrative Code, 3745-17-02	Particulate matter	Air	For total suspended particulates, the 24-hour primary and secondary ambient air quality standards are identical and the annual primary and secondary ambient air quality standards are identical. Total suspended particulates shall be measured in the ambient air as particles with an aerodynamic diameter less than or equal to a nominal ten micrometers. The level of 24-hour ambient air quality standards for total suspended particulates is 150 micrograms per cubic meter, 24-hour average concentration. The level of the primary and secondary annual standards for total suspended particulates is 50 micrograms per cubic meter, annual arithmetic mean.	Potentially applicable	These regulations do not apply directly to source-specific emissions, rather they are limits on ambient concentrations in the air. However, they would be applicable to controlling particulate emissions during implementation of the remedial action.
Ohio Air Pollution Regulations, Ohio Administrative Code 3745-20-04 and -05 Demolition and Renovation Procedures for Asbestos Emission Control	Asbestos	Air	Remove friable asbestos materials from a facility being demolished or renovated before any wrecking or dismantling that would break up materials or preclude access to the materials for subsequent removal. Wet and encase friable materials with a suitable leak-tight container.	Potentially Applicable	These regulations are applicable to the demolition or renovation of any building in which asbestos is present.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Ohio Air Pollution Lead Control Regulations Ohio Administrative Code, 5745-71-02, Lead Emissions Limits	Lead	Air	Exposure to lead shall not exceed the arithmetic mean of 1.5 $\mu g/m^3$ during any calendar quarter.	Potentially applicable	These regulations would be applicable to any proposed action which would put lead into the air.
Toxic Substances Control Act, as amended (15 USC 2607-2629; PL 94-469 et seq.); Polychlorinated Biphenyls (PCBs) Manufacturing Processing, Distribution in Commerce and Use Prohibitions (40 CFR 761), Subpart A, General;	PCBs	Air	The release of inadvertently generated PCBs at the vent point for emissions must be <10 ppm.	Potentially relevant and appropriate	This requirement is not applicable because no PCBs would be generated and vented from manufacturing/processing activities as part of the proposed action; however, portions of this requirement may be relevant and appropriate because PCB emissions could occur during implementation.
Occupational Safety and Health Administration Standards; Occupational Health and Environmental Control (29 CFR 1910; 1910.95), Subpart G, Occupational Noise Exposure	Noise	Air	The permissible occupational exposure level for noise is 90 dBA (slow response) for an 8-hour day; with decreasing times of exposure, the levels increase to 115 dBA per 15-minute day.	Not an ARAR	The provisions of the OSHA do not apply to working conditions of DOE contractor employees working in government-owned, contractor-operated (GOCO) facilities since DOE exercises statutory authority to prescribe and enforce safety and health standards at its facilities. The DOE exercises this authority based upon an agreement between the Secretary of Energy and the Occupational Safety and Health Administration.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFR 192)	Radium and thorium	Soil	Average concentrations of residual radioactive materials in soil over an area of 100 m^2 may not exceed background by more than 5 pCi/g in the top 15 cm of soil or 15 pCi/g in each 15-cm layer below the top layer.	Potentially relevant and appropriate	Fernald, OU3 is not a mill tailings site, so these requirements are not applicable; however, they may be considered relevant and appropriate to the proposed action.
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Radium and thorium	Soil	Average concentrations of radium-226, radium-228, thorium-230, and thorium-232 averaged over an area of 100 m^2 may not exceed 5 pCi/g in the top 15 cm of soil and 15 pCi/g in each 15-cm layer below the top layer. These guidelines taken into account ingrowth of radium-226 from thorium-230 and of radium-228 from thorium-230, and assume secular equilibrium. If both thorium-230 and radium-226 or both thorium-232 and radium-228 are present and not in secular equilibrium, the appropriate guideline is applied as a limit for the radionuclide with the higher concentration.	To be considered	Although not promulgated standards, these constitute requirements for protection of the public with which the proposed action will comply.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Toxic Substances Control Act, as amended (15 USC 2607-2629; PL 94-469 et seq.); Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761), Subpart G, PCB Spill Cleanup Policy.	PCBs	Soil	For spills of materials contaminated with >50 ppm PCBs in unrestricted access areas (e.g., residential areas), soil within the spill area must be excavated and backfilled with soil containing <1 ppm PCBs. Contaminated soil may be decontaminated to 10 ppm by weight by excavating a minimum of 10 inches and backfilling with soil containing <1 ppm PCBs. For spills at outdoor electrical substations, the soil must be cleaned to 25 ppm by weight (as for other restricted access areas) or to 50 ppm by weight with posting of a visible notice.	Potentially applicable	If a spill of materials contaminated with PCBs should occur during implementation of the remedial action, these regulations would be applicable.
Safe Drinking Water Act (42 USC 300G; PL 93-523); National Primary Drinking Water Regulations (40 CFR 141), Subpart B, Maximum Contaminant Levels; Subpart G, National Revised Primary Drinking Water Regulations; Maximum Contaminant Levels; National Secondary Drinking Water Regulations (40 CFR 143), Secondary Maximum Contaminant Levels.	See table	Water	Maximum contaminant levels (MCLs) and secondary maximum contaminant levels (SMCLs) for drinking water delivered directly to the ultimate user of a public water system are as follows:	Potentially relevant and appropriate	These requirements are not applicable because OU3 is not a public water system, however, if water supplies would be impacted by actions at the site, these requirements would be relevant and appropriate to protect drinking water sources from the contamination due to the remedial action.

Parameter	Unit	MCL	SMCL
Aluminum	mg/L	-	0.05 to 0.2
Asbestos	million fibers/L	7.0	-
Arsenic	mg/L	0.05	-
Barium	mg/L	1	-
Lead	µg/L	50	-
Cadmium	mg/L	0.005	
Chromium	mg/L	0.05	
Fluoride	mg/L	4.0	2.0
Mercury	mg/L	0.002	
Silver	mg/L	0.05	0.1
Benzene	mg/L	0.005	-
Trichloroethylene	mg/L	0.005	-
Copper	mg/L	-	1
Manganese	mg/L	-	0.05
Nitrate	mg/L	10	-
Chloroform	mg/L	0.1	-
Ethyl-benzene	mg/L	0.7	-

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement				Preliminary Determination	Remarks
			Parameter	Unit	MCL	SMCL		
			Selenium	mg/L	0.05	-		
			Iron	mg/L	-	0.3		
			Carbon tetrachloride	mg/L	0.005	-		
			1,2-Dichloroethane	mg/L	0.005	-		
			1,1-Dichloroethylene	mg/L	0.007	-		
			1,1,1-Trichloroethane	mg/L	0.2			
			Pentachlorophenol	mg/L	0.2	-		
			PCBs	mg/L	0.0005	-		
			Toluene	mg/L	1.0	-		
			Tetrachloroethylene	mg/L	0.005	-		
			Xylene (total)	mg/L	10.0	-		
			Radionuclides:					
			Gross alpha[a]	pCi/L	15	-		
			Gross beta[b]	mrem/yr		4		
						-		
			Radium-226 and radium-228	pCi/L	5	-		
			Others:					
			pH	units	-	6.5-8.5		
			TDS	mg/L	-	500		

[a]Including radium but excluding radon and uranium.

[b]As mrem/yr, annual dose equivalent; if gross beta activity exceeds 50 pCi/L, isotopic analysis and organ-specific dose calculations should be made to insure that this total dose limit is met. Also, for Strontium-90 the average annual concentration assumed to produce a total body or organ dose of 4 mrem/yr for bone marrow is 8 pCi/L.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
National Primary and Secondary Drinking Water Regulations (54 FR 97, May 22, 1989, Proposed Rule); Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper (53 FR 150, August 18, 1988, Proposed Rule); National Primary Water Regulations (56 FR 33050, July 18, 1991, Proposed Rule)	See table	Water	Proposed maximum contaminant levels (PMCLs) and proposed secondary maximum contaminant levels (PSMCLs) for drinking water delivered directly to the ultimate user of a public water system are as follows.	To be considered	These requirements are not promulgated standards however may be considered if water impacted by the site would be directly used as a drinking water supply.

Parameter	Unit	PMCL	PSMCL
Metals:			
Lead	µg/L	5	-
Radionuclides:			
Radon-222	pCi/L	300	-
Radium-226	pCi/L	20	-
Radium-228	pCi/L	20	-
Uranium	µg/L	20	-
Adjusted gross Alpha	pCi/L	15	-
Beta particle and photon emitters	ede/yr	4	-
Others:			
PCBs	µg/L	0.5	-

NOTE: 20 µg/L uranium is approximately equal to 30 pCi/L using an activity-to-mass conversion of 1.3 pCi/µg. The activity-to-mass ratio can vary depending on the relative amounts of uranium-234, -235, and -238 that are present in a sample. The MCL applies to the total mass of uranium in the sample. The unit mrem ede/yr refers to the dose committed over a period of 50 years to reference man (ICRP 1975) from an annual intake at the rate of 2 liters of drinking water per day.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
National Primary Drinking Water Regulations; Maximum Contaminant Level Goals, Subpart F (40 CFR 141.50-141.52)	See table	Water	Maximum contaminant level goals are the maximum level of contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur. Contaminant / Limit Ethylbenzene: 0.7 mg/L Xylenes (totals): 10.0 mg/L Toluene: 1.0 mg/L Asbestos: 7 million fibers/L Cadmium: 0.005 mg/L Chromium: 0.1 mg/L Mercury: 0.002 mg/L Nitrate: 10 (as Nitrogen) mg/L PCBs: 0 mg/L Benzene: 0 mg/L Trichloroethylene: 0 mg/L Fluoride: 4 mg/L Copper: 1.3 mg/L Fluoride: 4.0 mg/L Lead: 0 mg/L Barium: 2 mg/L	Potentially relevant and appropriate	These regulations are not applicable because OU3 is not a public water system, however, if drinking water supplies would be impacted by actions at the site, these requirements could be relevant and appropriate. MCLGs may be relevant and appropriate where they meet all the standards set forth in 40 CFR 300.400(g). However, MCLGs of zero are not considered ARARs under CERCLA.
Ore Mining and Dressing Point Source Category (40 CFR 440), Subpart C, Uranium, Radium, and Vanadium Ores Subcategory	Radium and uranium	Water	Limits for surface-water discharges from mines that produce uranium ore are as follows: uranium, 2 mg/L as a 30-day average and 4 mg/L as a 24-hour maximum; radium-226 (dissolved and total), 3 and 10 pCi/L as a 30-day average and 10 and 30 pCi/L as a 24-hour maximum, respectively.	Potentially relevant and appropriate	These requirements are neither applicable nor relevant and appropriate because surface water discharged from the site is not mine drainage. However, they may be considered relevant and appropriate in establishing remediation goals.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFR 192)	Uranium	Water	Surface impoundments for the disposal of uranium byproduct wastes shall conform to the groundwater protection standards of 40 CFR 264.92 and in addition concentration limits for combined radium-226 and radium-228 shall not exceed 5 pCi/L and gross alpha-particle activity (excluding radon and uranium) shall not exceed 15 pCi/L.	Potentially applicable	These requirements may be applicable if water impacted by the site would be directly used as a drinking water supply.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Federal Water Pollution Control Act, Clean Water Act (33 USC 1251-1376); Water Quality Criteria (40 CFR 122)	See table	Water	The concentration of contaminants in surface water should be limited to the following for the protection of human health and aquatic life.	To be considered	Federal WQC are non-enforceable guidelines used by States to set water quality standards for surface water; however, they may be considered if the waters concerned are a public water supply or if fishing is also included in the State's designated use of the waters concerned. If a State has promulgated a numerical water quality standard for a given contaminant, the State standard would be relevant and appropriate rather than a federal WQC.

Water Quality Criteria for Protection of Human Health

Contaminant	Unit	Water and Fish Ingestion	Fish Consumption
Metals:			
Lead	µg/L	50	-
PCB	µg/L	7.9E-05[b]	7.9E-05[b]

Ambient Water Quality Criteria for Protection of Aquatic Life

Contaminant	Unit	Freshwater Acute	Freshwater Chronic
Metals:			
Lead	µg/L	82[a]	3.2[a]
Others:			
PCBs	µg/L	2.0	0.014

[a] Water-hardness dependent criterion (based on 100 mg/L).

[b] Human health criteria reported for three risk levels; reported value is for the 1×10^{-6} level.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Ohio Water Quality Standards, Ohio Administrative Code 3745-1-01, 3745-1-07; Ohio NPDES Permits, Ohio Administrative Code 3745-33	Any	Water	All surface waters shall be free of: suspended solids or other substances that will settle and form putrescent or otherwise objectionable sludge deposits or that will adversely affect aquatic life; free of floating debris, oil, scum or other floating materials in amounts sufficient to be unsightly or cause degradation; free from materials producing color, odor or other conditions in such a degree as to create a nuisance; free of substances in concentrations that are toxic or harmful to human, animal or aquatic life and/or are rapidly lethal in the mixing zone, and free from nutrients in concentrations that create nuisance growths of aquatic weeds and algae. Water use designations and chemical specific criteria are presented in Tables 7-1 through 7-16 of the Ohio Water Quality Standard regulations. Such criteria apply as outside mixing zone or inside mixing zone maximums for the designated use of the affected body of water.	Potentially applicable	It is not anticipated the actions at OU3 will result in discharges directly from a point source into any waters of the State of Ohio so these regulations would not be applicable. However, if wastewater may be indirectly discharged to a POTW, applicable pretreatment standards and requirements apply. Fernald holds a NPDES permit for its treatment works and any discharge of waste water must comply with such permit. All such discharges would have to meet the pretreatment standards and requirements and not cause any violation of the NPDES permit conditions.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Ohio Drinking Water Regulations, Ohio Administrative Code, Title 3745, Chapter 81-Public Water System Primary Contaminant Control	See table	Water	Maximum contaminant levels for inorganic chemicals are:	Potentially relevant and appropriate	These requirements may be relevant and appropriate if water impacted by the site would be used directly as a drinking water supply.

Contaminant	mg/L
Arsenic	0.05
Cadmium	0.010
Chromium	0.05
Fluoride	4.0
Lead	0.05
Mercury	0.002
Nitrate	10.0
Silver	0.05
Selenium	0.01

Maximum contaminant levels for organic chemicals are:

Contaminant	mg/L
Trihalo-methanes	0.10
Benzene	0.005
Carbon tetrachloride	0.005
Trichloroethylene	0.005
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.20

Maximum contaminant levels for radionuclides:

Isotope	pCi/L
Radium-226 and -228 combined	5.0
Gross alpha particle activity (including radium-226, but excluding radon and uranium	15.0

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
			Maximum contaminant levels for beta particle and photon radioactivity from man-made radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 mrem/yr, based on two liter per day drinking water intake using the 168-hour data listed in NBS Handbook 69, as amended August 1963, U.S. Department of Commerce. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 mrem/yr. Also, for strontium-90 the average annual concentration assumed to produce a total body or organ dose of 4 mrem/yr for bone marrow is 8 pCi/L.		
Ohio Drinking Water Regulations Ohio Administrative Code, Title 3745, Chapter 82 - Public Water System Secondary Contaminant Control	See chart	Water	Secondary Maximum Contaminant levels are: Contaminant — mg/L Copper — 1.0 Fluoride — 2.0 Iron — 0.3	Potentially relevant and appropriate	These regulations may be relevant and appropriate if water impacted by the site would be used directly as a drinking water supply.

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Radiation	Water	Residual concentrations of radionuclides in water in uncontrolled areas are limited to the following. (For known mixtures of radionuclides, the sum of the ratios of the observed concentration of each radionuclide to its corresponding limit must not exceed 1.0.)	To be considered	Although not promulgated standards, these constitute requirements for protection of the public with which the proposed action will comply.

Isotope	Concentration
Actinium-227	1×10^{-8}
Actinium-228	6×10^{-5}
Americium-241	3×10^{-8}
Bismuth-210	2×10^{-5}
Bismuth-212	1×10^{-4}
Bismuth-214	6×10^{-4}
Europium-152	2×10^{-5}
Lead-210	3×10^{-8}
Lead-212	3×10^{-6}
Lead-214	2×10^{-4}
Protactinium-231	1×10^{-8}
Protactinium-234	7×10^{-5}
Thorium-228	4×10^{-7}
Thorium-230	3×10^{-7}
Thorium-232	5×10^{-8}
Thorium-227	4×10^{-6}
Thorium-234	1×10^{-5}
Radium-223	3×10^{-7}
Radium-224	4×10^{-7}
Radium-226	1×10^{-7}
Radium-228	1×10^{-7}
Radon-220[c]	3×10^{-9}
Radon-222[c]	3×10^{-9}
Technetium-99	1×10^{-4}
Neptunium-237	3×10^{-8}
Ruthenium-106	6×10^{-6}
Cesium-137	3×10^{-6}
Cobalt-60[b]	1×10^{-5}
	5×10^{-6}
Polonium-210	8×10^{-8}
Plutonium-238[b]	4×10^{-8}
	3×10^{-6}
Plutonium-239[b]	3×10^{-8}
	2×10^{-6}
Plutonium-240[b]	3×10^{-8}
	2×10^{-6}

TABLE B.2 (Cont'd)

Potential ARAR	Contaminant	Medium	Requirement	Preliminary Determination	Remarks
			Isotope — Concentration		
			Plutonium-241[b] — 1×10^{-6}, 1×10^{-4}		
			Plutonium-242[b] — 3×10^{-8}, 2×10^{-6}		
			Strontium-90[b] — 1×10^{-6}, 1×10^{-5}		
			Uranium-233[b] — 5×10^{-7}, 5×10^{-6}		
			Uranium-234[b] — 5×10^{-7}, 5×10^{-6}		
			Uranium-235[b] — 6×10^{-7}, 5×10^{-6}		
			Uranium-236[b] — 5×10^{-7}, 6×10^{-6}		
			Uranium-238[b] — 6×10^{-7}, 6×10^{-6}		
			U-natural[b] — 6×10^{-7}, 6×10^{-6}		
			[a]Exposure conditions assume an ingestion rate of 730 L/yr of water (based on exposure during 365 d/yr).		
			[b]All other concentration levels are for plutonium radionuclides with a f^1 value of 1×10^{-3}. For uranium radionuclides with a f^1 value of 2×10^{-3}. All other concentration levels are for uranium radionuclides with a f^1 value of 5×10^{-2}. For cobalt radionuclides the f_1 values are 5×10^{-2} and 3×10^{-1} consecutively. For strontium radionuclides the f_1 values are 3×10^{-0} and 1×10^{-2} consecutively.		
			[c]Still being assessed.		

TABLE B.3 Potential Action-Specific Requirements

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Hazardous Material Transportation Act, as amended (49 USC 1801-1812); Solid Wastes (40 CFR 263), Standards Applicable to Transportation of Hazardous Waste	Transportation	Generic requirements are established for minimizing the environmental impacts of spills or releases of hazardous materials, as are procedures for transporting hazardous waste.	Potentially applicable	These requirements are not part of an environmental law and hence are not subject to evaluation for attainment or waiver as part of the ARAR process. However, they could be pertinent to the proposed action if hazardous waste is transported off-site. In this case, the pertinent requirements (e.g., for spill response) would be addressed during implementation.
Hazardous Materials Regulations; Shippers – General Requirements for Shipments and Packagings (49 CFR 173), Subpart I, Radioactive Materials	Transportation	Low-specific-activity radioactivity materials must be packaged in strong, tight containers to prevent leakage of radioactivity under conditions normally incident to transportation, and the vehicles must be placarded. In exclusive-use vehicles, external radiation levels on packages must be <200 mrem/h, or <1,000 mrem/h if secured in a closed transport vehicle with no intermediate loading or unloading; external radiation levels on the outer surface of the vehicle are limited to <200 mrem/h at any point and <10 mrem/h at 2 m from the surface of the vehicle; and levels in any normally occupied space are limited to <2 mrem/h.	Potentially applicable	These requirements are not part of an environmental law and hence are not subject to evaluation for attainment or waiver as part of the ARAR process. However, they could be pertinent to the proposed action if the waste is transported off-site because the average concentration of radionuclides in certain waste could meet the criteria for classification as low-specific-activity material.
Noise Control Act, as Amended; Noise Pollution and Abatement Act	Decontamination	The public must be protected from noises (e.g., that could result from remedial action activities) that jeopardize health or welfare.	Potentially applicable	Because equipment and vehicles would be involved in certain aspects of the proposed action, all pertinent requirements of the act would be followed.
Termination of Operating Licenses for Nuclear Reactors (U.S. Nuclear Regulatory Commission Regulatory Guide 1.86)	Decontamination	Structural debris associated with licensed reactors that is released for reuse without radiological restrictions shall be decontaminated to the specified levels.	Potentially relevant and appropriate	These requirements are not applicable because Fernald, OU3 is not a nuclear reactor licensed by the U.S. Nuclear Regulatory Commission. Furthermore, they have been incorporated into DOE Order 5400.5, with which the proposed action will comply; however, this order does not include the requirements shown here. These requirements may be relevant and appropriate to the release of structural material for reuse without radiological restrictions.
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Decontamination	Structural debris that is released from DOE facilities for reuse without radiological restrictions shall be decontaminated to specified levels.	To be considered	These requirements may be pertinent if structural debris decontamination is part of a proposed action.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Occupational Safety and Health Administration Standards for Hazardous Waste Operations and Emergency Response (29 CFR 1910)	Waste management	General worker protection requirements are established, as are requirements for worker training and the development of an emergency response plan and a safety and health program for employees. In addition, procedures are established for hazardous waste operations -- including decontamination and drum/container handling (e.g., for radioactive waste, asbestos, and PCBs).	Not an ARAR	The provisions of the OSHA do not apply to working conditions of DOE contractor employees working in government-owned, contractor-operated (GOCO) facilities since DOE exercises statutory authority to prescribe and enforce safety and health standards at its facilities. The DOE exercises this authority based upon an agreement between the Secretary of Energy and the Occupational Safety and Health Administration.
Radioactive Waste Management (DOE Order 5820.2A)	Waste management	External exposure to radioactive waste (including releases) should not result in an effective dose equivalent of >25 mrem/yr to any member of the public; releases to the atmosphere are to meet the requirements of 40 CFR 61 (see related discussion above for contaminant-specific requirements); and an environmental monitoring program must be implemented to address compliance with performance standards.	To be considered	Although not promulgated standards, these constitute requirements with which the proposed action will comply.
Radiation Protection of the Public and the Environment (DOE Order 5400.5)	Interim waste storage and management	The control and stabilization features of a storage facility for waste containing uranium, thorium, and their decay products should be designed to ensure an effective life of 50 years, with a minimum life of at least 25 years, to the extent reasonably achievable; site access controls should be designed to ensure an effective life of at least 25 years, to the extent reasonable; and periodic monitoring, shielding, access restrictions, and safety measures must be implemented to control the migration of radioactive material, as appropriate.	To be considered	Although not promulgated standards, these constitute requirements for storage and management of wastes with which this action will comply.
Licensing Requirements for Disposal of Radioactive Waste, 10 CFR 61, Subpart C and D	Radioactive waste disposal	Land disposal facilities must be sited, designed, operated, closed, and controlled after closure so that reasonable assurance exists that exposures to humans are less than an annual dose equivalent of 25 mrem to the whole body, 75 mrem to the thyroid, 25 mrem to any other organ of any member of the public. Also, operations of such facilities must comply with 10 CFR 20 radiation protection standards.	Potentially relevant and appropriate	These regulations are not applicable if the radioactive waste is disposed of at disposal facilities operated by DOE except to the extent DOE is required to obtain a license from the NRC. These regulations may be relevant and appropriate if there will be permanent disposal of radioactive materials.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Domestic Licensing of Source Material, 10 CFR 40, Appendix A	Radioactive Waste Disposal	The siting and design of uranium mill tailings disposal sites must meet certain technical criteria including geology, topography, hydrology, and meteorology, and monitoring capability including maximum values for ground-water protection as follows: Constituent — Concentration Arsenic — 0.05 mg/L Barium — 1.0 mg/L Cadmium — 0.01 mg/L Chromium — 0.05 mg/L Lead — 0.05 mg/L Mercury — 0.002 mg/L Silver — 0.05 mg/L Combined Radium-226 and Radium-228 — 5 pCi/L Gross alpha-particle activity — 15 pCi/L	Potentially relevant and appropriate	These regulations are not applicable if the radioactive waste is disposed of at disposal facilities operated by DOE except to the extent DOE is required to obtain a license from the NRC. These regulations may be relevant and appropriate if there will be disposal of radioactive materials.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFR 192)	Radioactive Waste disposal	Uranium mill tailings shall be disposed of in a manner to ensure effective control for up to 1,000 years to the extent reasonably achievable, and in any case for up to 200 years; controls must provide that radon-222 releases from disposal facilities to the atmosphere will not exceed an annual release rate of 20 pCi/m^2-s or increase the annual average concentration of radon-222 in air at or above any location outside the disposal site by more than 0.5 pCi/L.	Potentially relevant and appropriate	Fernald, OU3 is not a mill tailings site, so these requirements are not applicable, however, they may be relevant and appropriate if a disposal facility is part of the proposed action.
Atomic Energy Act, as amended (42 USC 2112)	Radioactive Waste disposal	The DOE can distribute byproduct material only to individuals or organizations who are licensed by the U.S. Nuclear Regulatory Commission to receive such material.	Potentially applicable	These requirements may be applicable to the disposal of radioactively contaminated material (which is byproduct material) from Fernald OU3 site at commercial facilities.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Radioactive Waste Management (DOE Order 5820.2A)	Waste disposal	Large quantities of 11e(2) byproduct material waste shall be managed according to the requirements of 40 CFR 192 and disposed of at specially designated DOE sites. These disposal sites should be identified and developed as needed to support DOE remedial action, and should normally be located in the state in which the wastes are generated. Control and stabilization features for long-term management facilities should provide, to the extent reasonably achievable, an effective life of 1,000 years with a minimum life of at least 200 years. Emanation of radon-222 should be limited to an annual average release rate of 20 pCi/m^2-s, and the annual average concentration of radon-222 outside the site boundary should not be increased by more than 0.5 pCi/L. Potentially biodegradable wastes should be conditioned to limit biogenic gas generation; groundwater should be protected; and access should be controlled, with controls designed to be effective to the extent reasonable for at least 200 years.	To be considered	Although not promulgated standards, these constitute requirements with which the proposed action will comply.
Toxic Substances Control Act, as amended (15 USC 2607-2629; PL 94-469 et seq.); Poly-chlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761), Subpart A, General	PCB testing	Inspection and testing are required for material contaminated with PCBs.	Potentially applicable	This requirement may be applicable to characterization of site waste for PCBs.
Toxic Substances Control Act, as amended (15 USC 2607-2629; PL 94-499, et seq.); Poly-chlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761), Subpart D, Storage and Disposal	PCB storage	Material contaminated with PCBs >50 ppm must be stored for disposal (within one year) in a facility that is marked for storage and is not located in a 100-year floodplain. The facility should have a roof and walls to prevent rain from reaching the stored PCBs and an impervious floor with 6-inch curbing to provide a double containment volume. Stored articles or containers should be checked monthly for leaks.	Potentially applicable	Storage of articles or containers with PCB concentrations in excess of 50 ppm is expected to be part of the remedial action.
Toxic Substances Control Act, as amended (15 USC 2607-2629; PL 94-499, et seq.); Poly-chlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761), Subpart D, Storage and Disposal	PCB incineration	Liquid PCBs should be incinerated in an EPA-approved facility either for 2 seconds at 1200°C with 3% excess oxygen in the stack gas or for 3 seconds at 1600°C with 2% excess oxygen; the combustion efficiency should be 99.9%, and water scrubbers should be used to control hydrochloric acid (HCl). Nonliquid PCBs should be incinerated in an EPA-approved facility with the same combustion efficiency, and mass emissions should not exceed 0.001 g/kg PCB introduced.	Potentially applicable	Should the proposed action include the treatment of material that is contaminated with PCBs these requirements would be applicable.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Toxic Substances Control Act, as amended (15 USC 26070-2629; PL 94-499, et seq.); Poly-chlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761), Subpart D, Storage and Disposal	PCB disposal	Material contaminated with PCBs >50 ppm must be incinerated or disposed of in a chemical waste landfill. PCB containers for PCBs <500 ppm may be disposed of as municipal solid waste after draining the free liquids; liquids containing <500 ppm PCB can be disposed of in a chemical waste landfill if it is not an ignitable waste. PCB articles with ≥500 ppm PCBs and nonliquid material with >50 ppm PCBs (e.g., contaminated soil, rags, or other debris) should be disposed of by incinerating (or using an alternative treatment) or landfilling. The chemical waste landfill should be located in an area with an in-place soil thickness of 4 ft or compacted thickness of 3 ft and a soil permeability of $\leq 10^{-7}$ cm/s, >30% passing through a No. 200 sieve, a liquid limit >30, and a plasticity index >15; a synthetic liner can be used to achieve an equivalent permeability. The landfill should also contain a leachate collection system, which can be a simple gravity-flow drainfield, a compound system (where a double liner is present), or a suction lysimeter network. The bottom of the landfill should be ≥50 ft above the historical high groundwater table, and the site should not be hydrologically connected to standing or flowing water. Structures should be in place to divert runoff from a 24-hour, 25-year storm. If located below the 100-year floodwater elevation, 2-ft surface water diversion dikes should surround the landfill. The landfill should be located in an area of low to moderate relief to minimize erosion, landslides, and slumping. Surface water and the leachate collection system should be monitored (monthly during operations, then twice a year for surface water), as should groundwater.	Potentially applicable	If such material is disposed of on-site, the requirement may be applicable.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Solid Wastes (40 CFR 261), Subpart C, Characteristics of Hazardous Waste; Subpart D, List of Hazardous Wastes; Ohio Hazardous Waste Management Regulations; Ohio Administrative Code 3745-51.	Waste characterization and management	A waste must be evaluated to determine if it is a hazardous waste, i.e., either a waste listed in this requirement or a characteristic waste. A characteristic waste is determined by its (1) ignitability (defined by flash point, oxidizer, and other); (2) corrosivity (defined by pH ≤2 or ≥12.5, rate of steel corrosion, and other); (3) reactivity (defined by instability, violent reaction with water, explosivity, cyanide- or sulfide-bearing nature and vapor generation potential, and other); or (4) leachability, as defined by an established toxic characteristic leaching procedure (TCLP); the following are maximum contaminant concentrations in leachate for this factor.	Potentially applicable	These requirements are applicable to the characterization and management of site waste; this waste has been evaluated to determine whether the prerequisites for definition as hazardous waste are met.

Contaminant	Concentration (mg/L)
Arsenic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Silver	5.0

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Solid Wastes (40 CFR 264), Subpart B, General Facility Standards, Subpart C, Preparedness and Prevention; Subpart D, Contingency Plan and Emergency Procedures; Subpart E, Manifest System, Recordkeeping and Reporting; Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-52.	Waste treatment, storage, and disposal	General requirements are established for storage, treatment and disposal facility location, design and inspection, waste compatibility determination, emergency contingency plans, preparedness plans, recordkeeping, reporting and worker training. Location requirements include (1) facilities must not be located within 61 m (200 ft) of a fault in which displacement has occurred in Holocene time (i.e., since the end of the Pleistocene) and (2) facilities located in a 100-year floodplain must be constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood.	Potentially applicable	These requirements would be applicable if the storage, treatment or disposal of hazardous waste on-site will be within the scope of the proposed action, i.e., if RCRA waste is "placed" on-site and capped for the purpose of leaving it in place without remediation.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities (40 CFR 265) Subpart P - Thermal Treatment and Subpart Q - Chemical, Physical, and Biological Treatment; Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-69.	Waste treatment and disposal.	A waste analysis must be performed prior to thermal treatment. Monitoring and inspection of temperature and emission controls must be performed. At closure, all hazardous waste residues must be removed. Chemical, physical or biological treatment must comply with the requirements for ignitable, reactive or incompatible wastes (40 CFR 264.17). A waste analysis must be performed prior to treatment. Inspection of all discharge controls and safety and monitoring equipment must be performed. At closure, all hazardous waste residues must be removed.	Potentially applicable	If thermal, chemical, physical, or biological treatment is part of the proposed action these regulations would be applicable.
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Solid Wastes (40 CFR 264), Subpart F, Releases from Solid Waste Management Units; Ohio Hazardous Waste Management Regulations, 3745-55-92.	Waste disposal	A groundwater monitoring system must be maintained for a solid waste management unit such as a surface impoundment, waste pile, land treatment unit, or landfill. An exemption to continued maintenance of this system during the post-closure period of the unit may be appropriate if the unit is an engineered structure; does not receive or contain liquid waste or waste containing free liquid; is designed and operated to exclude liquid, precipitation, and other runon and runoff; has both an inner and outer containment layer with a leak detection system; is maintained to disallow migration beyond the outer containment layer before the post-closure care period; and monitoring results do not identify a statistically significant increase in hazardous constituents in the upper aquifer during the operational life of the impoundment. Where multiple regulated units are present at a facility, the point of compliance for this monitoring can be taken as the circumscription of all of these units. The concentration of a hazardous constituent in the uppermost aquifer beneath a regulated unit is not to exceed the existing background concentration or the maximum concentration listed in the following table if higher than the background level, or an alternate concentration limit, unless an exemption is granted. Constituent — Concentration (µg/L) Metals: Arsenic — 50 Barium — 1,000 Cadmium — 10 Chromium — 50 Lead — 50 Mercury — 2 Silver — 50	Potentially applicable	These requirements would be applicable to the proposed action if the remedial action results in new on-site disposal sites.

TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Solid Wastes (40 CFR 264), Subpart I, Use and Management of Containers; Subpart J, Tank Systems; Subpart K, Surface Impoundments; Subpart L, Waste Piles; Subpart M, Land Treatment; Subpart N, Landfills: Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-55-70, 3745-55-90, 3745-56, 3745-57, 3745-59, 3745-66, 3745-67 and 3745-68.	Waste storage and disposal	Containers used to store hazardous waste must be closed and in good condition. Tank systems must be adequately designed and have sufficient structural strength and compatibility with the wastes to be stored or treated to ensure that it will not collapse, rupture, or fail, including secondary containment. Each new surface impoundment must have two or more liners and a leachate collection system between such liners, and must be designed, constructed, maintained and operated to prevent overtopping, overfilling, wind and wave action, rainfall, run-on, malfunctions of detection equipment and human error. Waste piles must have a liner designed, constructed and installed to prevent any migration of wastes out of the pile into adjacent subsurface soil or groundwater or surface water at any time during its active life. No ignitable or reactive waste may be placed in a waste pile unless it has been treated or is managed in such a way that it's protected from conditions which may cause it to ignite or react. Land treatment facilities must be designed to ensure that the hazardous constituents to be placed therein can be degraded, transformed or immobilized within the treatment zone, and must have an unsaturated zone monitoring system that includes soil monitoring using soil cores and soil pore liquid monitoring devices such as lysimeters. Each new landfill must have two or more liners and a leachate collection system above and between the liners, to protect human health and the environment. The landfill must be designed, constructed, operated and maintained to prevent run-off, run-on, and wind dispersal of particulate matter. Placement of liquid waste or waste containing free liquids in a landfill is prohibited.	Potentially applicable	These requirements may be applicable to the proposed action, if there will be on-site storage or disposal of site waste that meets the prerequisites for definition as hazardous waste are a part of the proposed action.
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Land Disposal Restrictions (40 CFR 268), Subpart C, Prohibition on Land Disposal; Obtaining a Soil and Debris Treatability Variance for Remedial Actions, Superfund LDR Guide #6A, OSWER 9347.3-06FS; Ohio Hazardous Waste Management Regulations; Ohio Administrative Code, 3745-59.	Waste disposal	The land disposal of certain hazardous waste (e.g., contaminated soil and debris) without proper treatment is restricted, unless a treatability variance is appropriate. Such treatment must attain levels achievable by the best demonstrated available technologies (BDAT) for each hazardous constituent in the listed waste. For most types of debris (e.g., concrete, steel pipes), which generally cannot be treated, site manager should use best management practices, including decontamination or destruction. Once it is determined that the debris must comply with LDR (i.e., placement will occur), site managers must request a variance, setting forth the specific treatment level range to be achieved (see, Highlight 2, LDR Guide #6A).	Potentially applicable	These requirements would be applicable to the proposed action if permanent, permitted disposal sites are a part of the proposed remedial action. These requirements would be applicable if there will be land disposal of contaminated soil or debris or the consolidation of site wastes into a disposal or storage area which would trigger RCRA land disposal requirements.

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TABLE B.3 (Cont'd)

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Standards for Hazardous Waste Generators (40 CFR 262) and Standards for Hazardous Waste Transporters (40 CFR 263); Ohio Solid Waste Management Regulations, Ohio Administrative Code 3745-52 and 53.	Waste generation and transportation	General requirements for packaging, labeling, and marking hazardous wastes for temporary storage and transportation.	Potentially applicable	These requirements would be applicable to the proposed remedial action if any site waste meets the prerequisites for definition as characteristic or listed hazardous waste.
Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities (40 CFR 264), Subpart G, Closure and Post-Closure; Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-55.	Waste disposal	These regulations set forth general requirements for closure of hazardous waste disposal facilities, waste piles, surface impoundments and tank systems.	Potentially applicable	Should hazardous waste disposal facilities, waste piles, surface impoundments and tank systems be closed as a part of the proposed action, these requirements would be applicable.
Ohio Administrative Code, Chapter 119; Rule 1301:7-7 Article 39: Corrective Actions and Cost Recovery Standards for Petroleum Underground Storage Tank Releases.	Removal of Underground Storage Tanks	When there is evidence of the presence of free product, the owner must remove free floating product to the maximum extent practicable while continuing corrective action steps, including conducting investigations to determine the full extent and location of any contamination.	Potentially applicable	These regulations would be applicable if contamination remained after removal of underground storage tanks.

TABLE B.3 Potential Action-Specific Requirements

Potential ARAR	Action	Requirement	Preliminary Determination	Remarks
Criteria for Classification of Solid Waste Disposal Facilities and Practices, 40 CFR 257; Solid Waste Disposal Facilities, Ohio Administrative Code, 3745-27.	Solid Waste Disposal	Solid wastes shall be disposed of by sanitary landfill, incineration or composting. No open dumping shall be allowed. The Ohio Environmental Protection Agency must approve all plans and specifications. Plans shall not be approved for siting a sanitary landfill in a regulatory floodplain outside of a floodway, in a sand or gravel pit, in a limestone or sandstone quarry, within 1,000 ft of a water well, within 200 ft of a stream or lake, so that the seasonal high ground water table and the lowest level of waste materials will be separated by less than 5 ft of soil or low permeability; in an area surrounding a public water supply well, above a designated sole source aquifer, or so that the seasonal high ground water table will be less than 5 ft below the surface of the site. Operation of the site shall prevent erosion and dust, scavenging and salvaging, litter, noise, odors, insects, rodents and other vectors. No sewage solids, semi-solids or liquids, other semi-solids or liquids or hazardous waste shall be accepted. All wastes will be covered within 24 hours. Monitoring wells shall be installed to measure any effect upon the quality of the ground water. Within 60 days of closure, the landfill shall be covered and seeded, land surface shall be graded, gas migration shall be controlled by ventilation. Monitoring wells shall be maintained for three years and leachate shall be inspected for at least three years.	Potentially applicable	If the proposed action includes siting a new solid waste facility these regulations would be applicable.

Appendix C

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APPENDIX C

SITE MAPS

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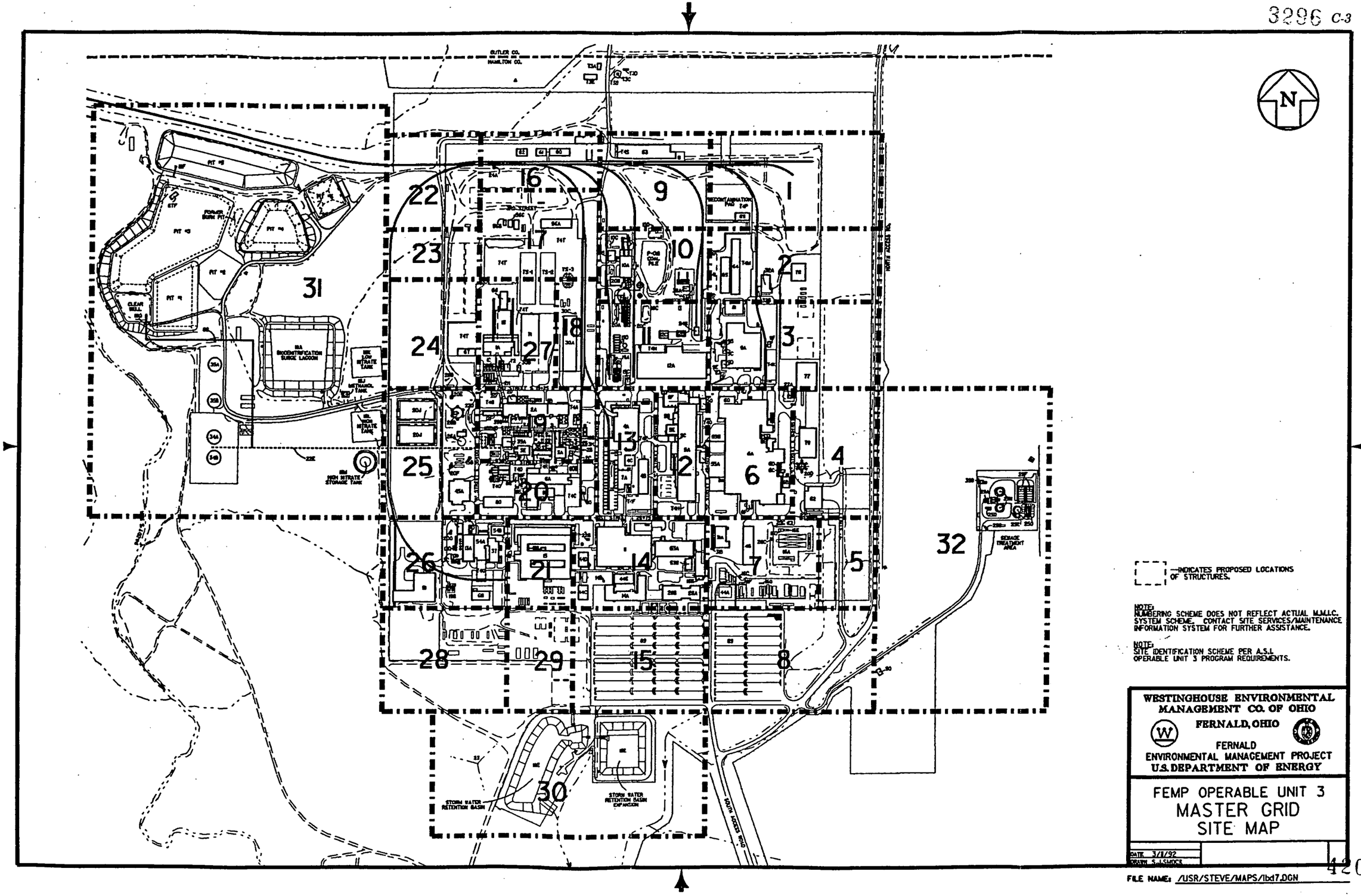
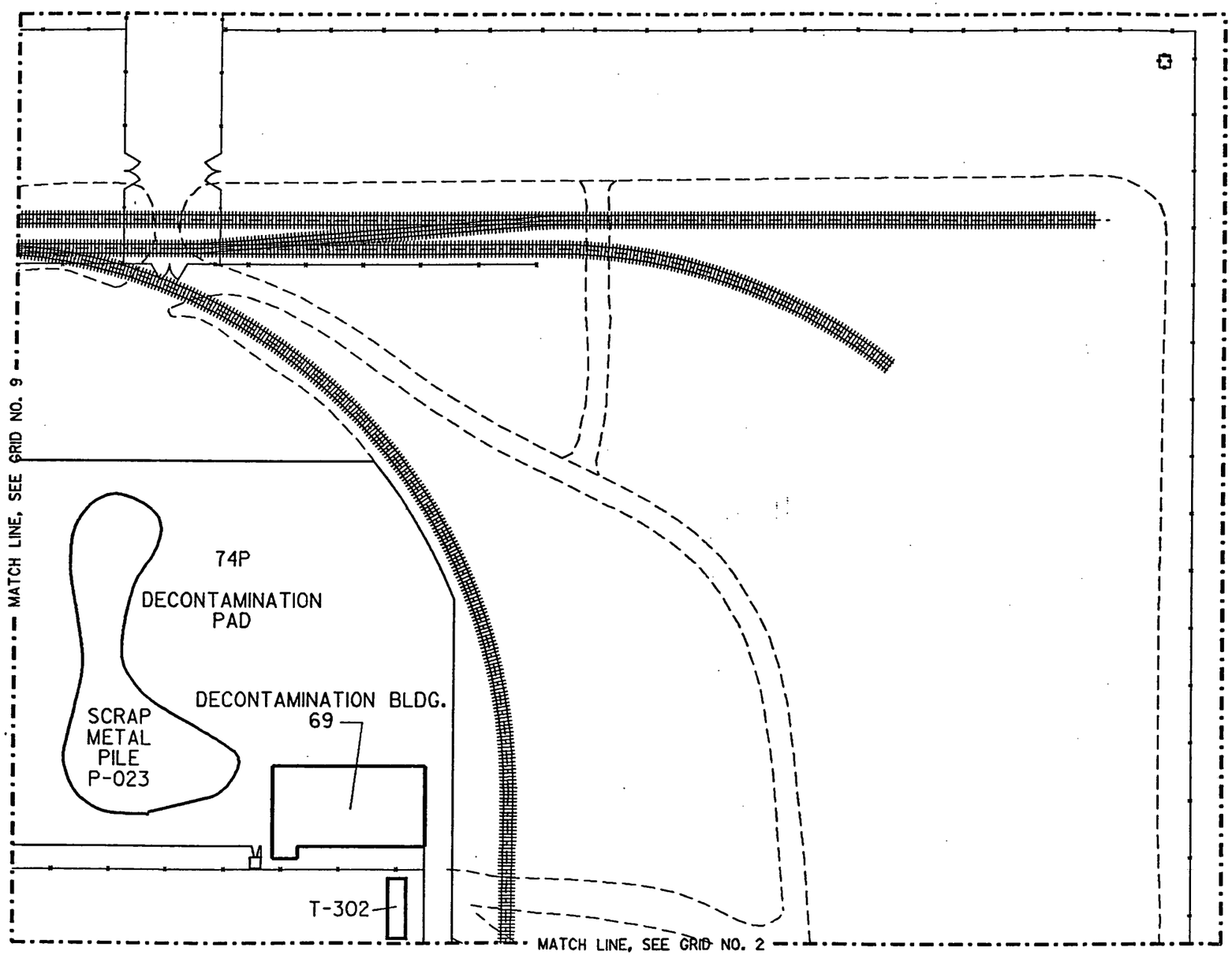


FIGURE C.1 Master Site Grid Map



N

0' 60' 120'
SCALE: 1" = 60'-0"

—INDICATES PROPOSED LOCATIONS OF STRUCTURES.

NOTE:
NUMBERING SCHEME DOES NOT REFLECT ACTUAL M.M.I.C. SYSTEM SCHEME. CONTACT SITE SERVICES/MAINTENANCE INFORMATION SYSTEM FOR FURTHER ASSISTANCE.

NOTE:
SITE IDENTIFICATION SCHEME PER A.S.I. OPERABLE UNIT 3 PROGRAM REQUIREMENTS.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD
ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

FEMP OPERABLE UNIT 3
SITE GRID MAP
GRID NO. 1

DATE 3/3/92
DRAWN S.J.SMOCK

FILE NAME: /USR/STEVE/MAPS/GD1.DGN

FIGURE C.2 Grid No. 1

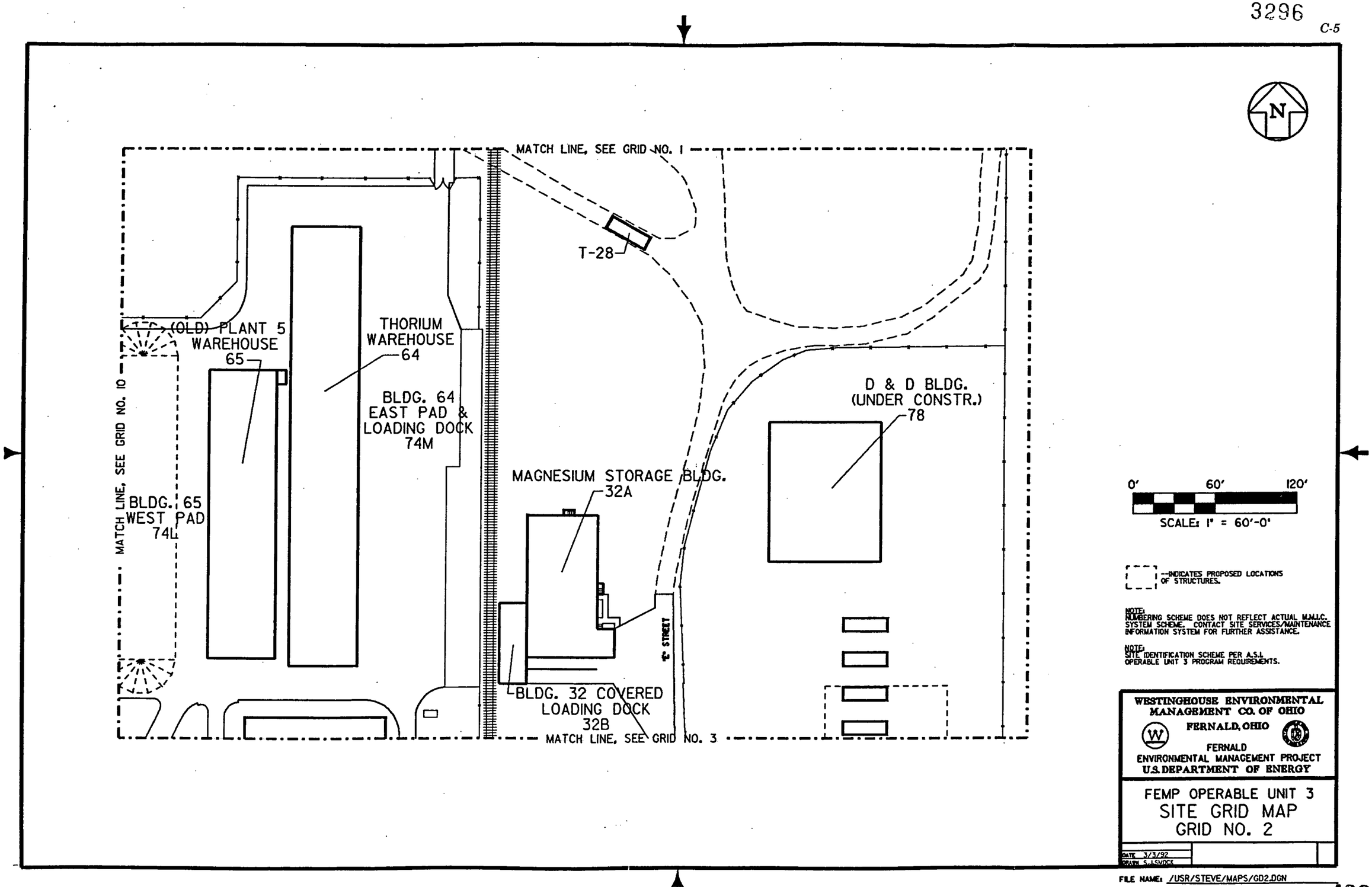


FIGURE C.3 Grid No. 2

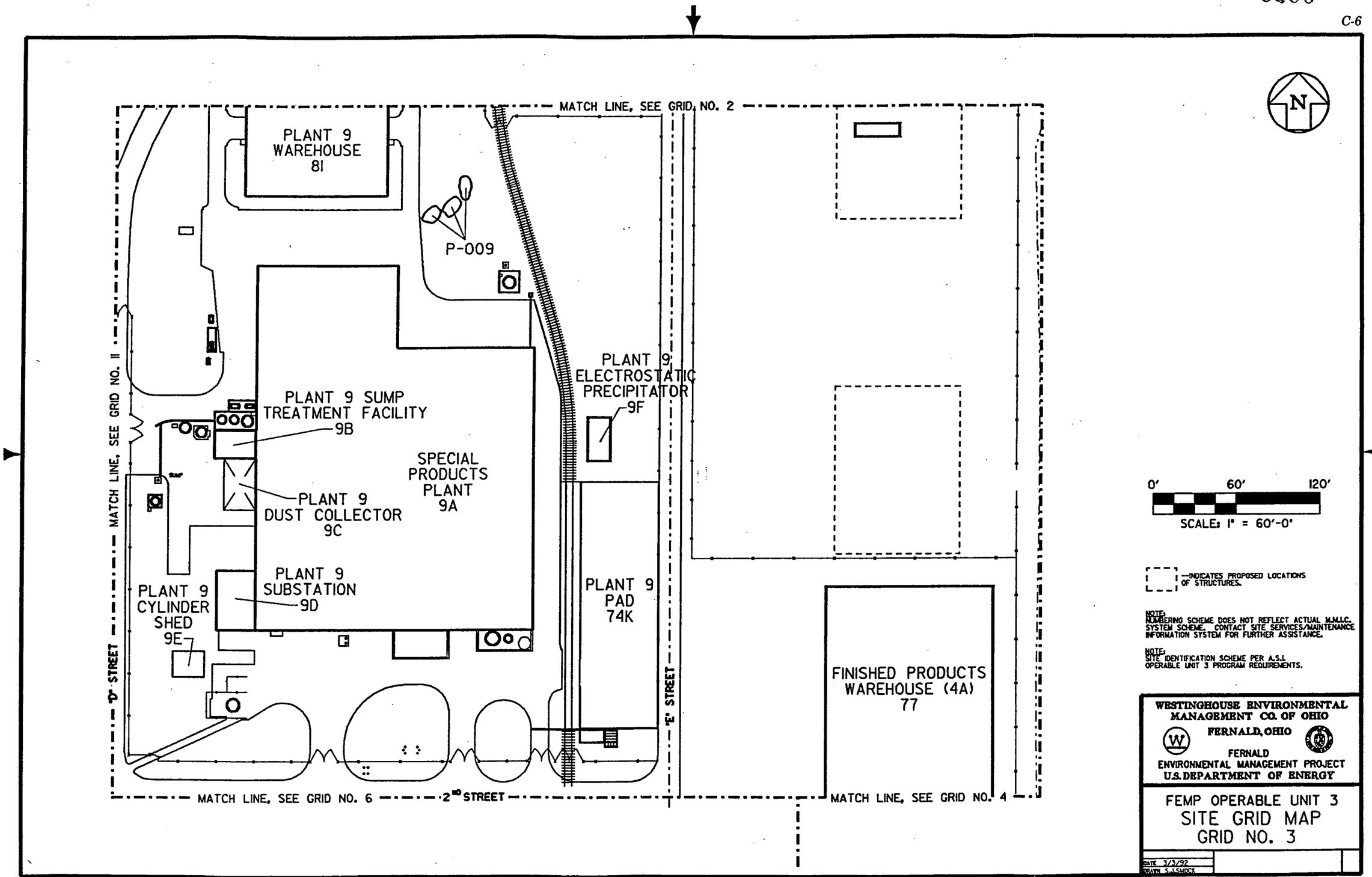


FIGURE C.4 Grid No. 3

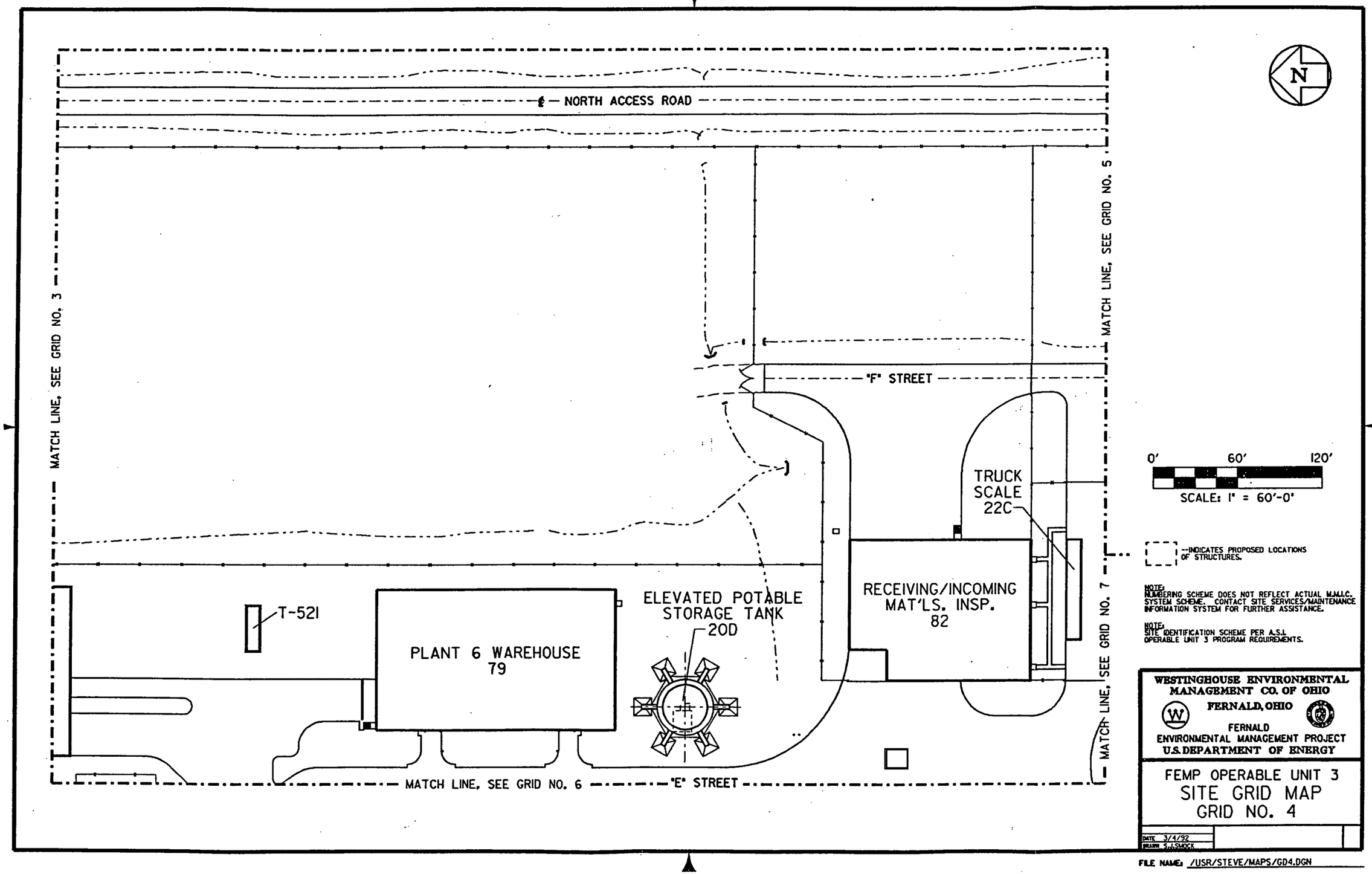


FIGURE C.5 Grid No. 4

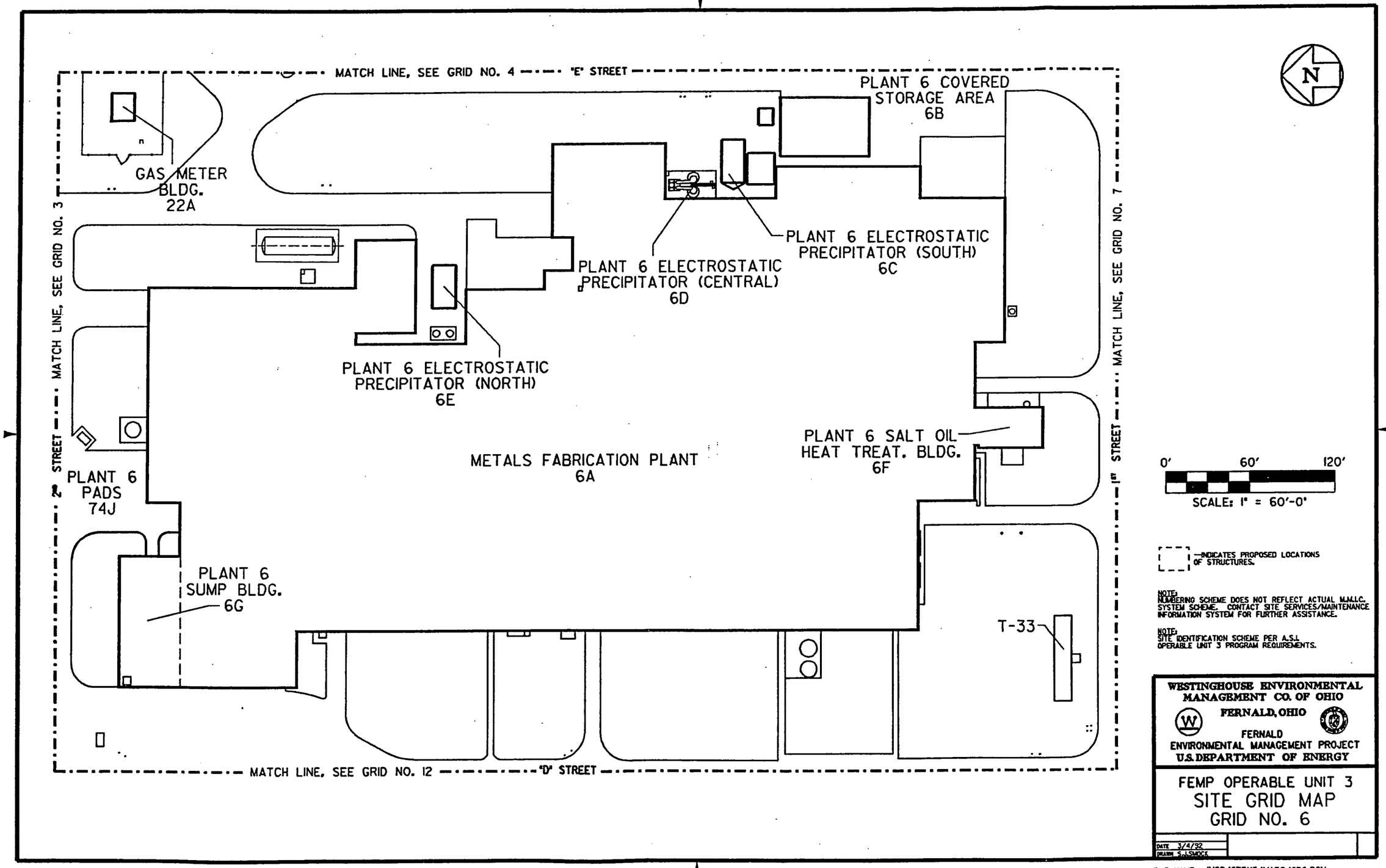
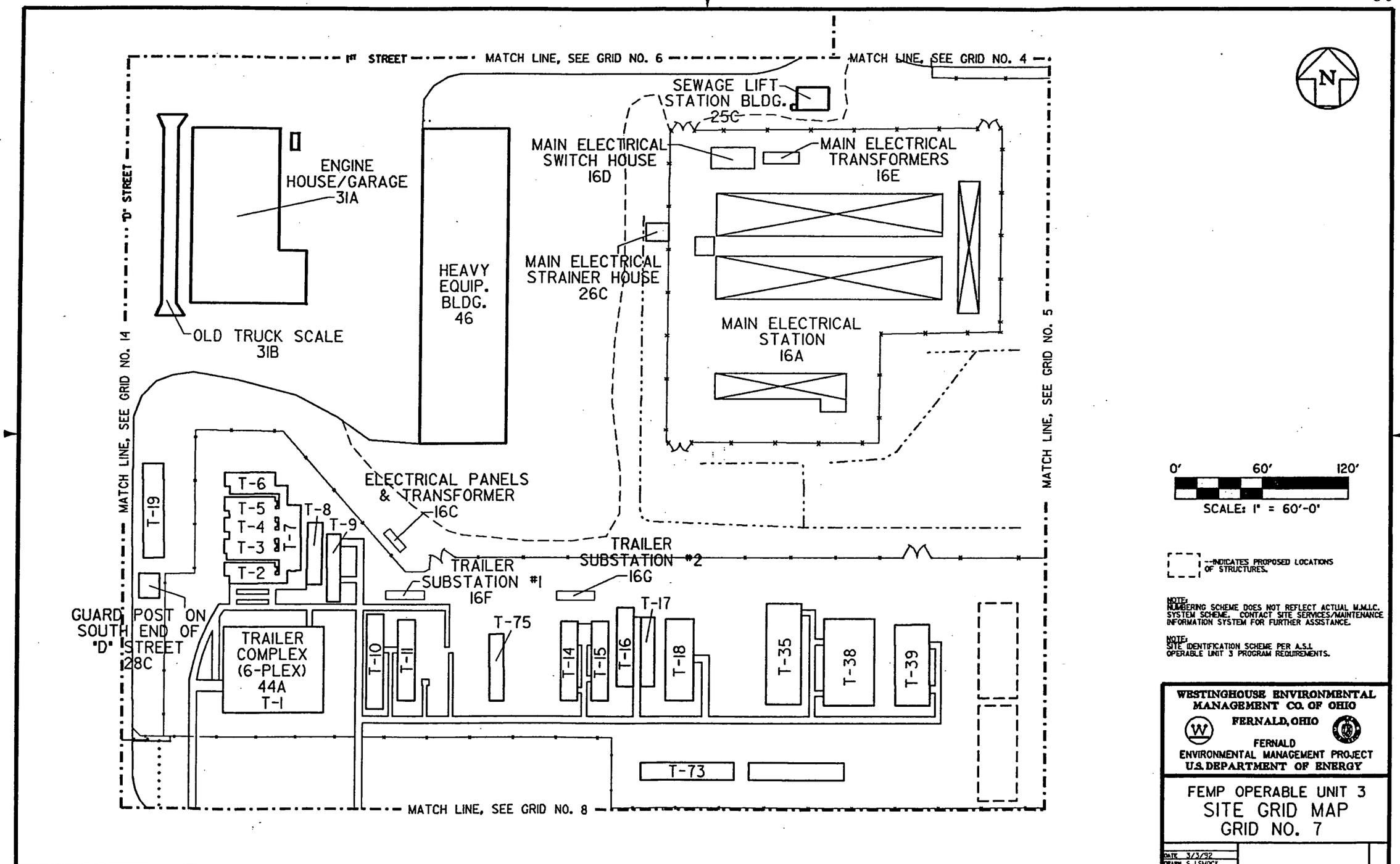


FIGURE C.6 Grid No. 6



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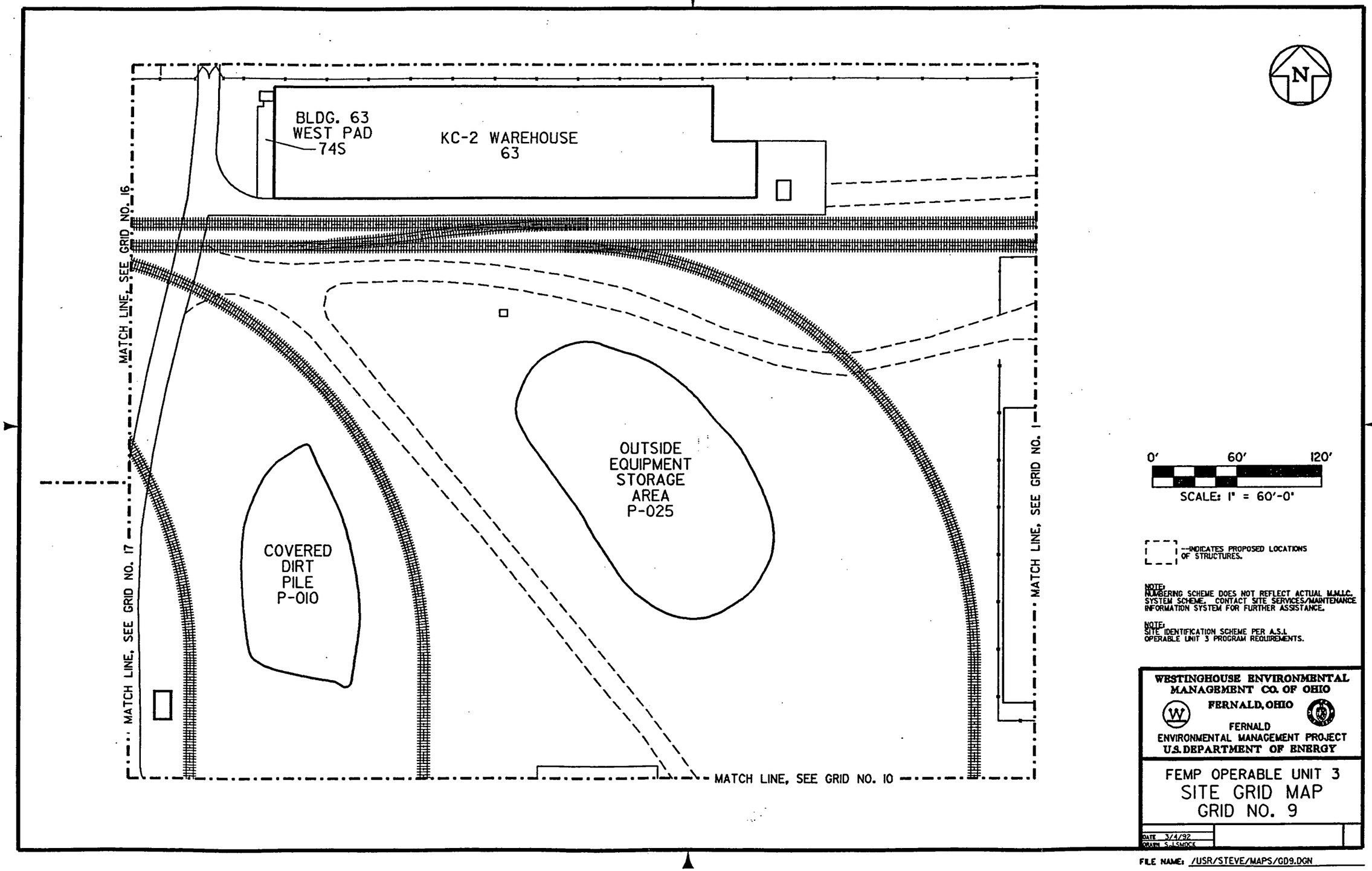
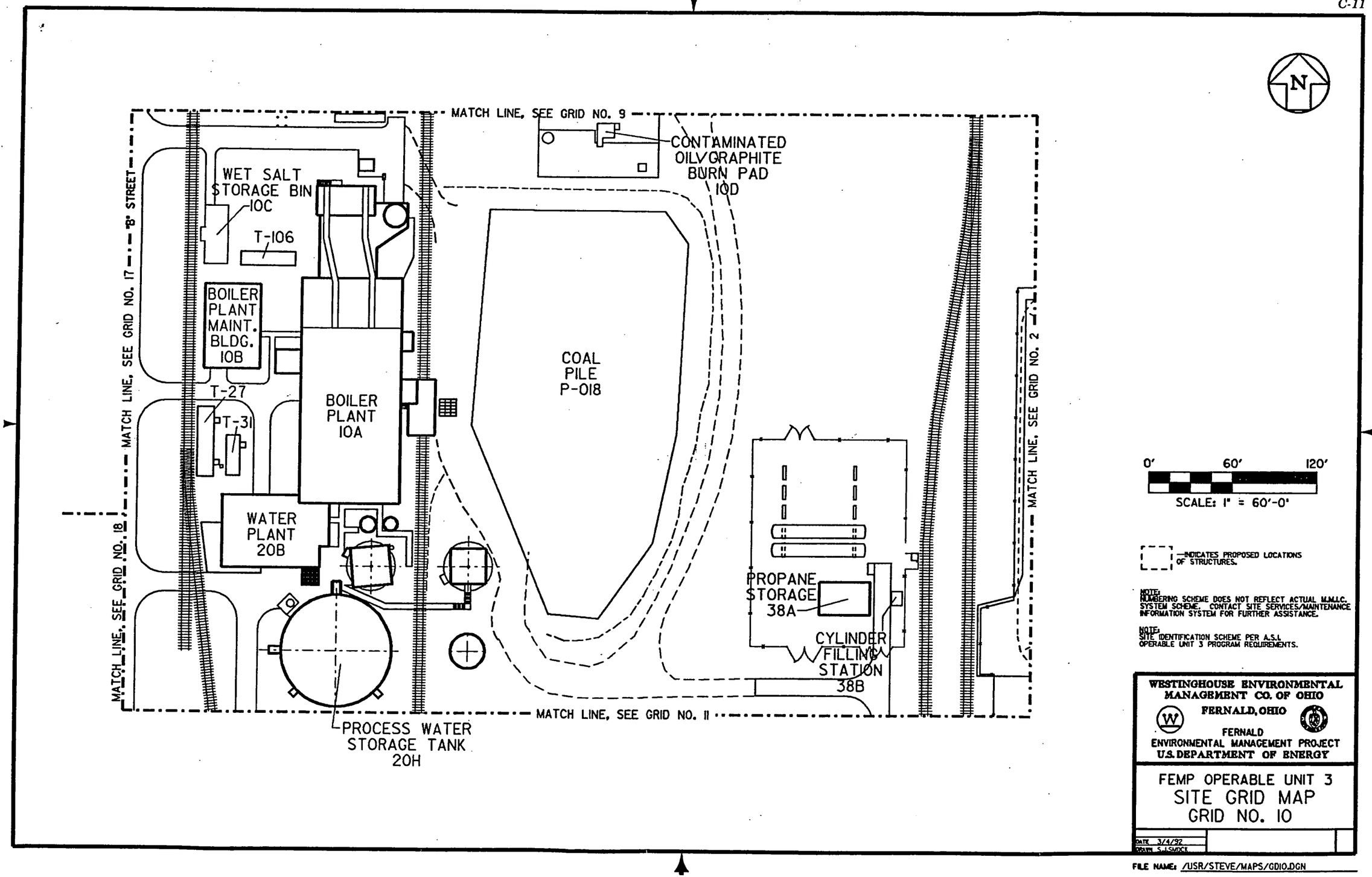


FIGURE C.8 Grid No. 9



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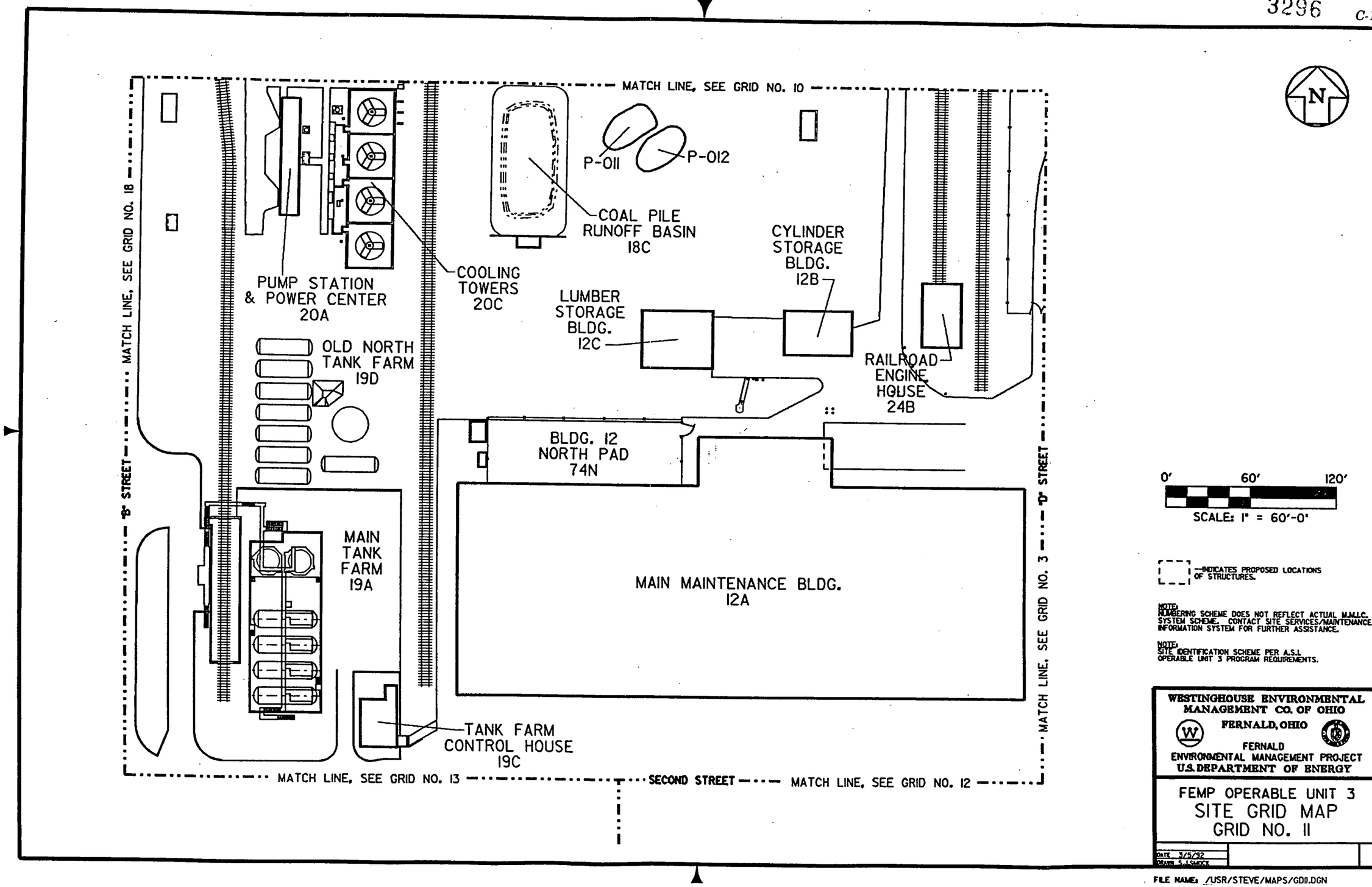


FIGURE C.10 Grid No. 11

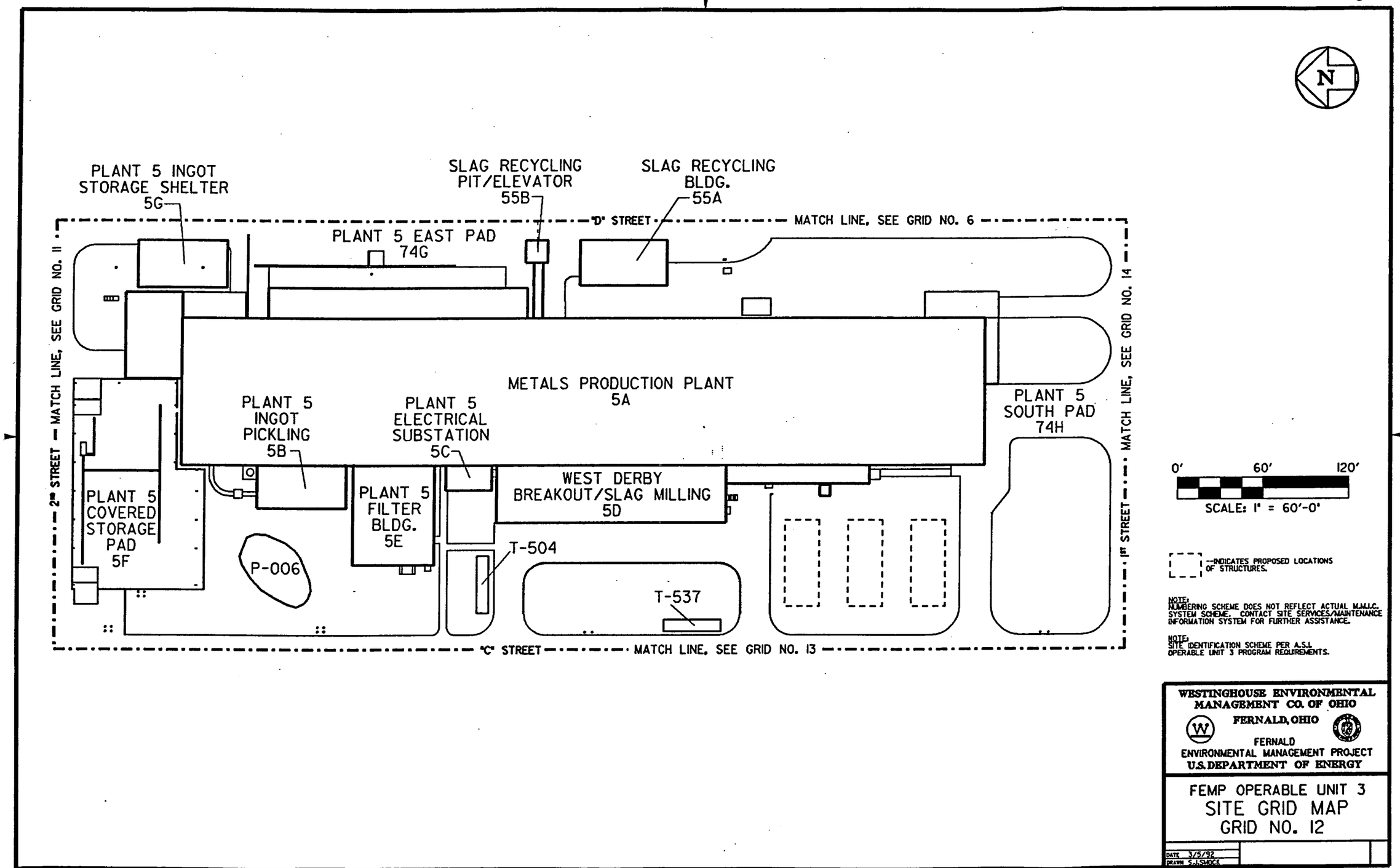
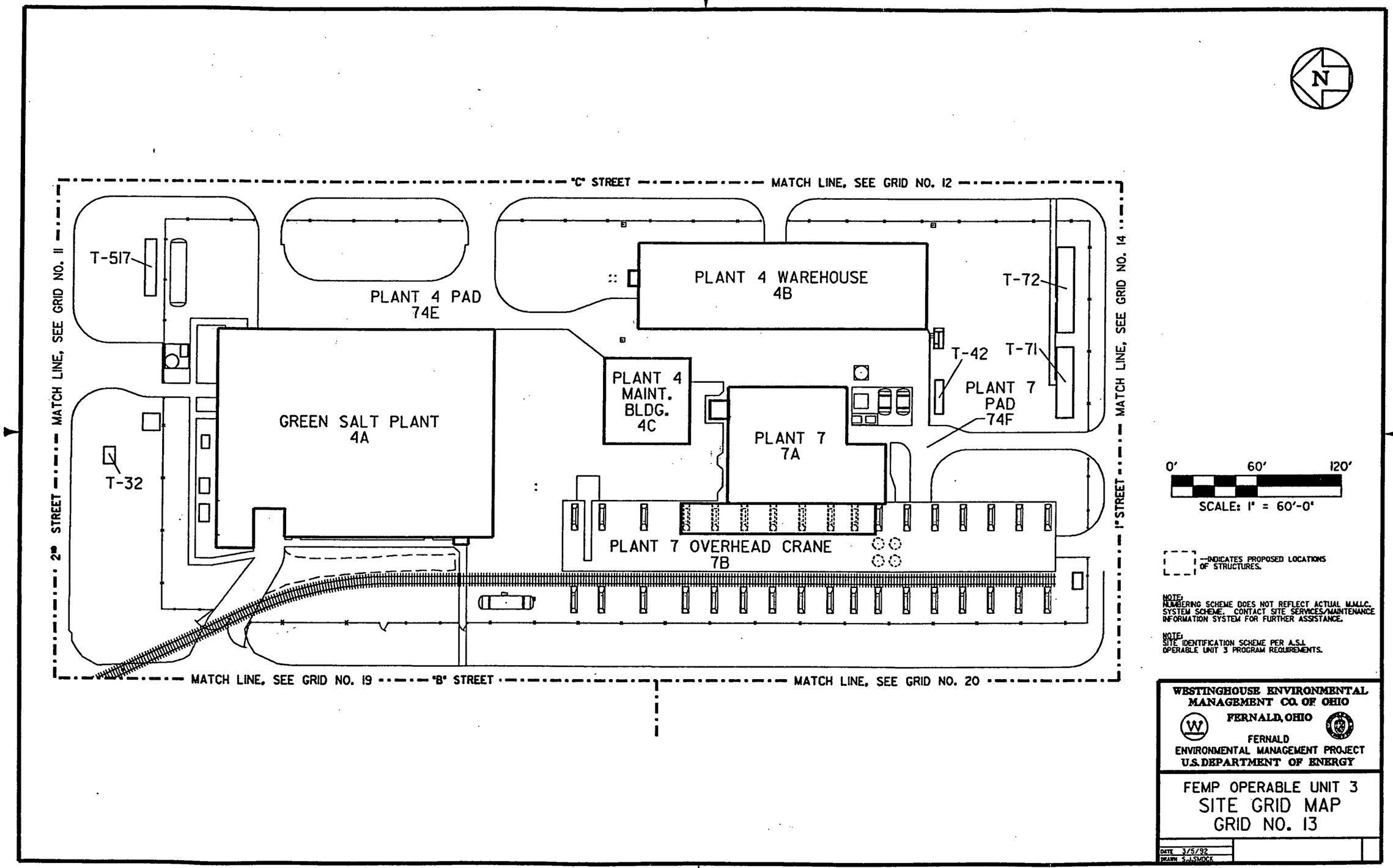


FIGURE C.11 Grid No. 12



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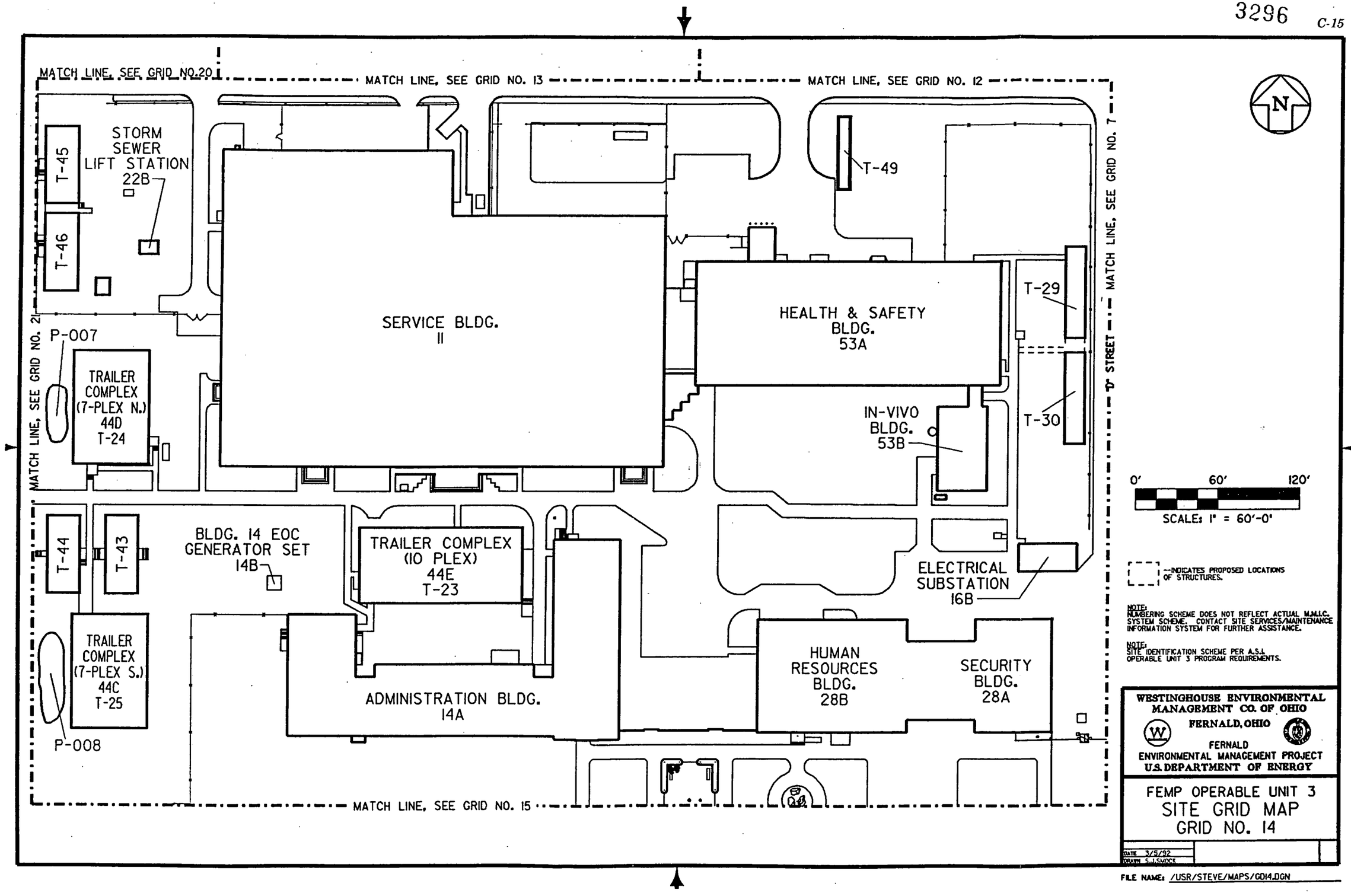

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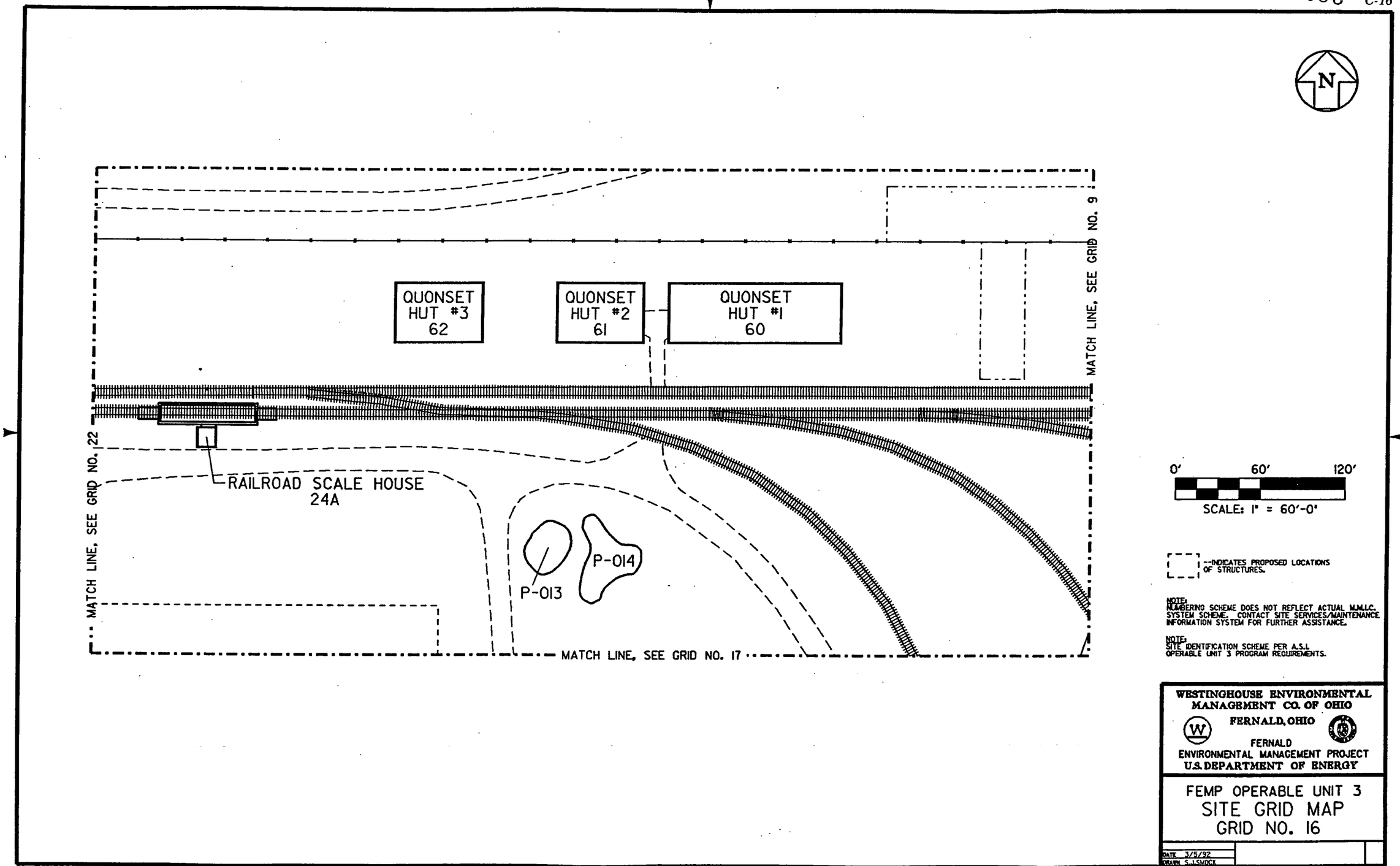


FIGURE C.14 Grid No. 16

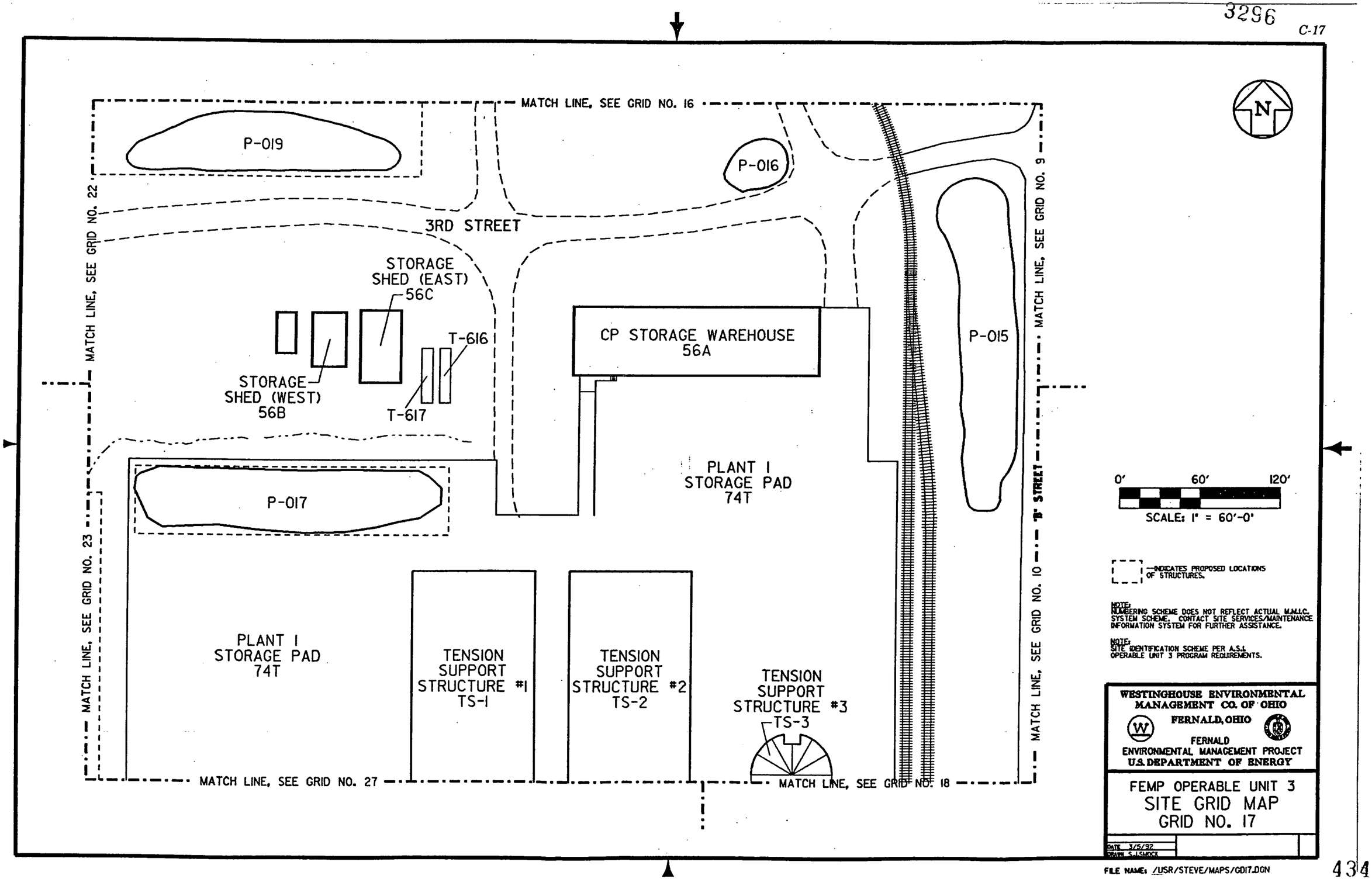
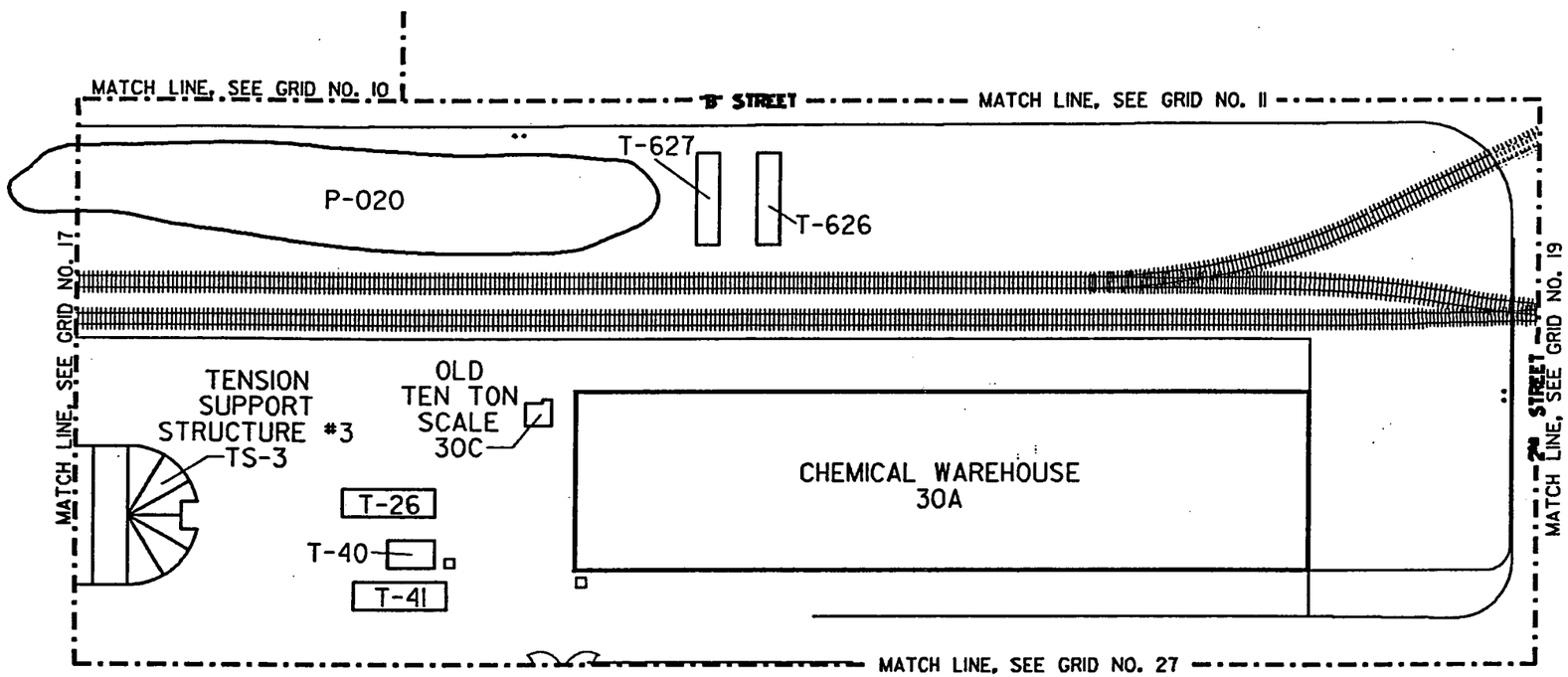
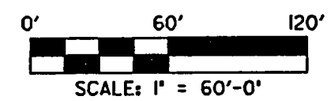


FIGURE C.15 Grid No. 17





—INDICATES PROPOSED LOCATIONS OF STRUCTURES.

NOTE:
NUMBERING SCHEME DOES NOT REFLECT ACTUAL M.M.L.C. SYSTEM SCHEME. CONTACT SITE SERVICES/MAINTENANCE INFORMATION SYSTEM FOR FURTHER ASSISTANCE.

NOTE:
SITE IDENTIFICATION SCHEME PER A.S.I. OPERABLE UNIT 3 PROGRAM REQUIREMENTS.

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U.S. DEPARTMENT OF ENERGY

FEMP OPERABLE UNIT 3
SITE GRID MAP
GRID NO. 18

DATE 3/5/92
DRAWN S.J. SMOCK

FILE NAME: /USR/STEVE/MAPS/GD18.DGN

FIGURE C.16 Grid No. 18

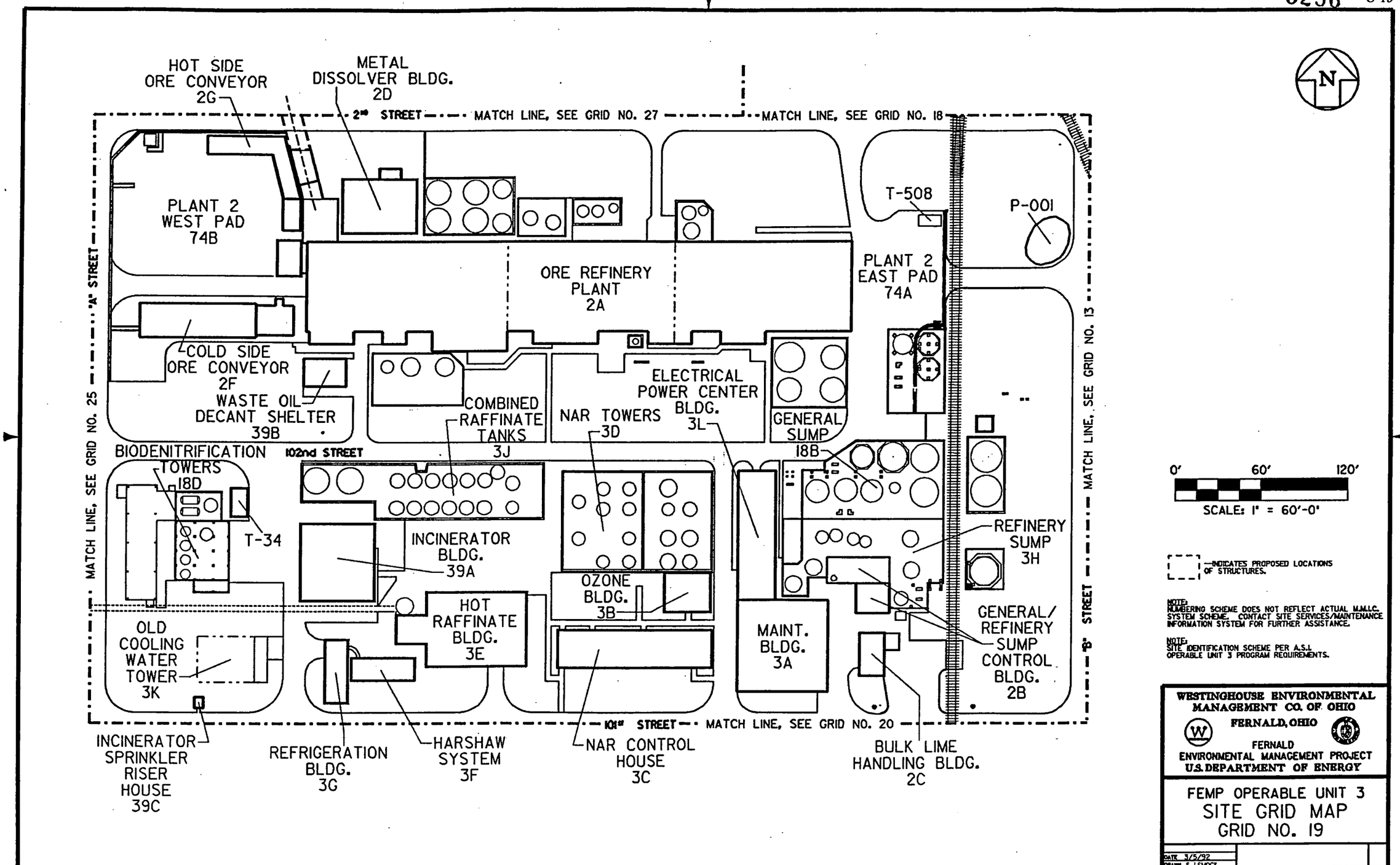
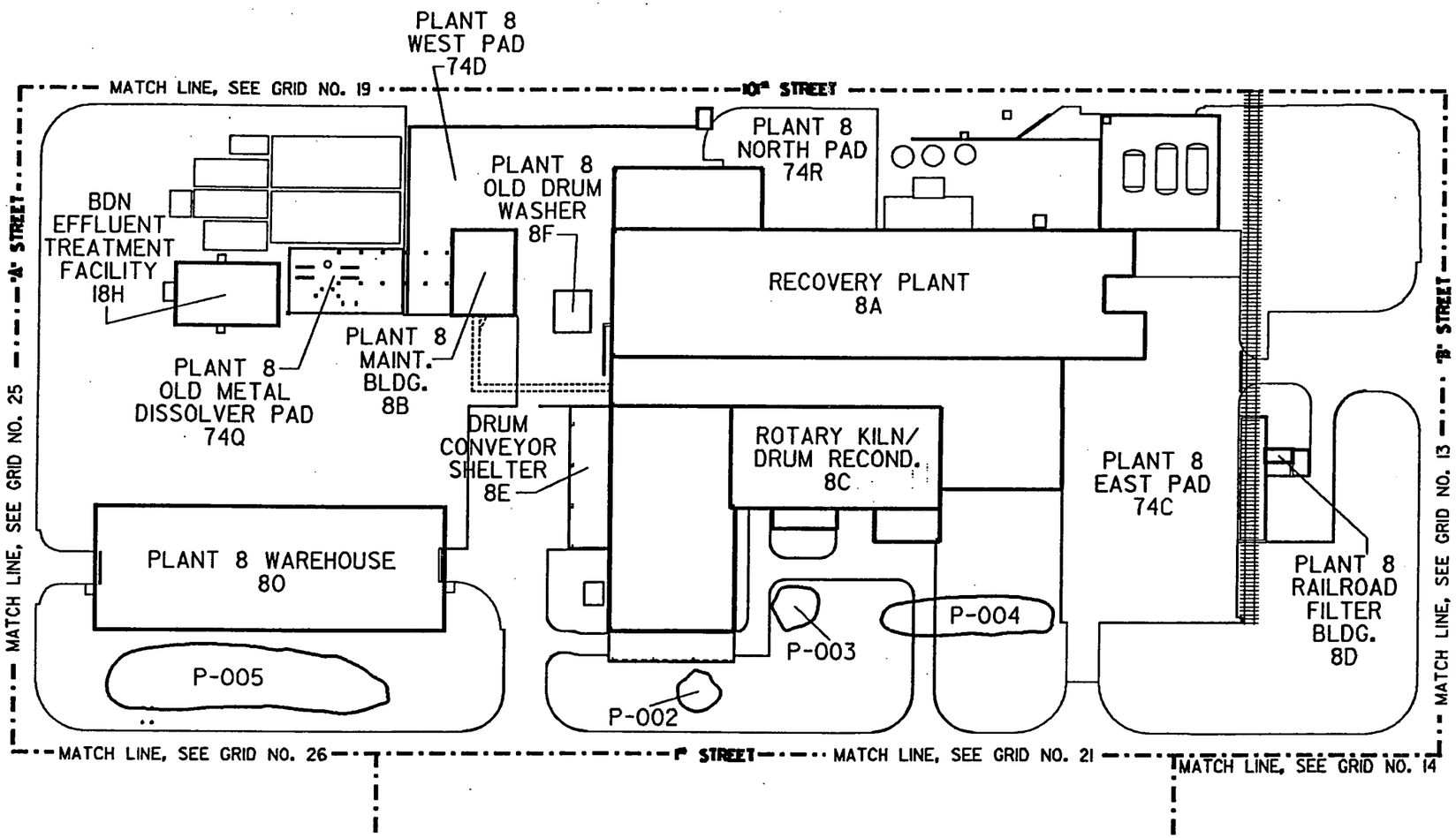


FIGURE C.17 Grid No. 19



0' 60' 120'

SCALE: 1" = 60'-0"

—INDICATES PROPOSED LOCATIONS OF STRUCTURES.

NOTE:
NUMBERING SCHEME DOES NOT REFLECT ACTUAL M.M.I.C. SYSTEM SCHEME. CONTACT SITE SERVICES/MAINTENANCE INFORMATION SYSTEM FOR FURTHER ASSISTANCE.

NOTE:
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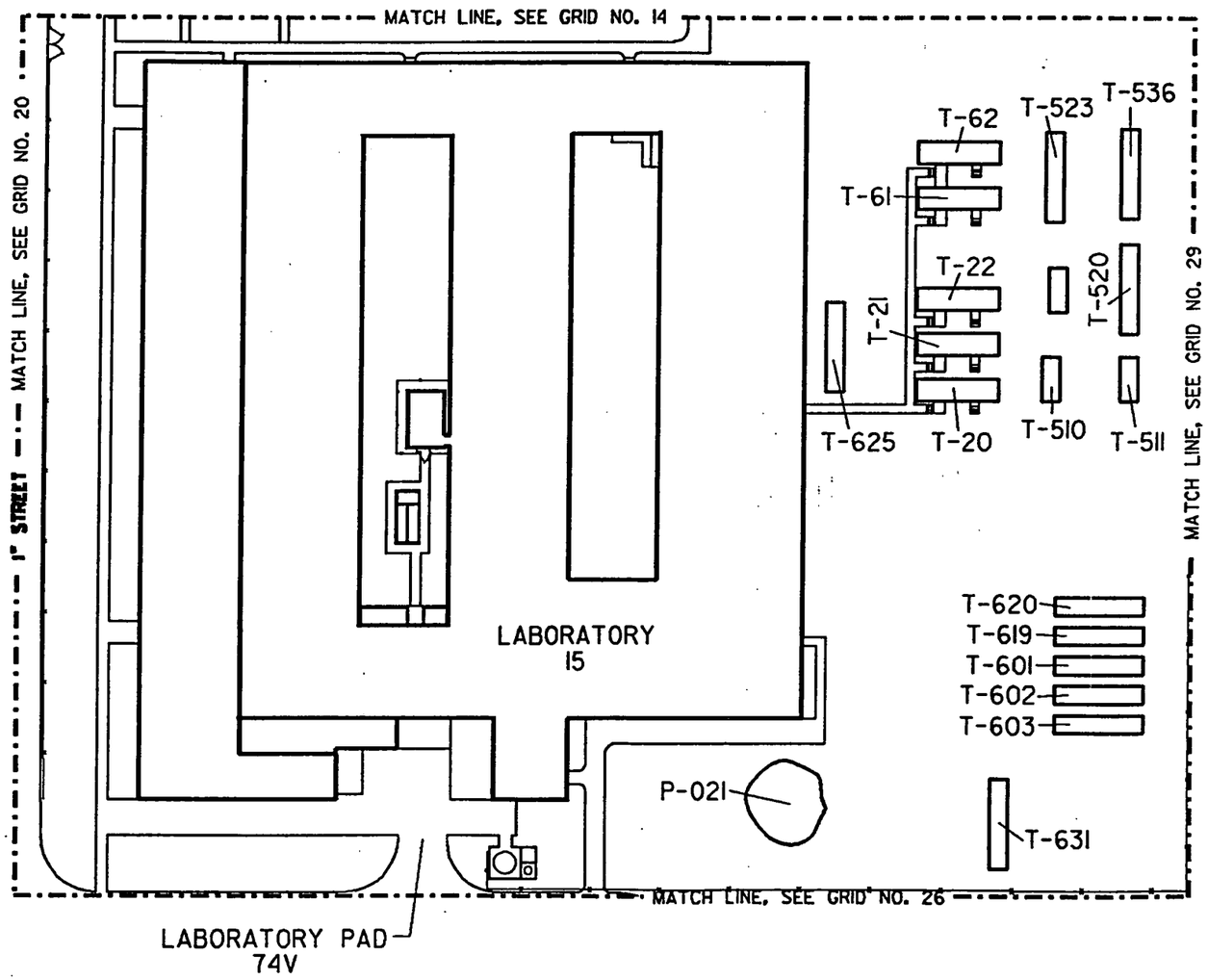
FEMP OPERABLE UNIT 3
SITE GRID MAP
GRID NO. 20

DATE 3/6/92
DRAWN S.J. SMOCK

FILE NAME: /USR/STEVE/MAPS/GD20.DGN

FIGURE C.18 Grid No. 20



N

0' 60' 120'

SCALE: 1" = 60'-0"

—INDICATES PROPOSED LOCATIONS OF STRUCTURES.

NOTE:
NUMBERING SCHEME DOES NOT REFLECT ACTUAL M.M.I.C. SYSTEM SCHEME. CONTACT SITE SERVICES/MAINTENANCE INFORMATION SYSTEM FOR FURTHER ASSISTANCE.

NOTE:
SITE IDENTIFICATION SCHEME PER A.S.I. OPERABLE UNIT 3 PROGRAM REQUIREMENTS.

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FEMP OPERABLE UNIT 3
SITE GRID MAP
GRID NO. 21

DATE 3/6/92
DRAWN S.J.SMOCK

FILE NAME: /USR/STEVE/MAPS/GD2LDGN

FIGURE C.19 Grid No. 21

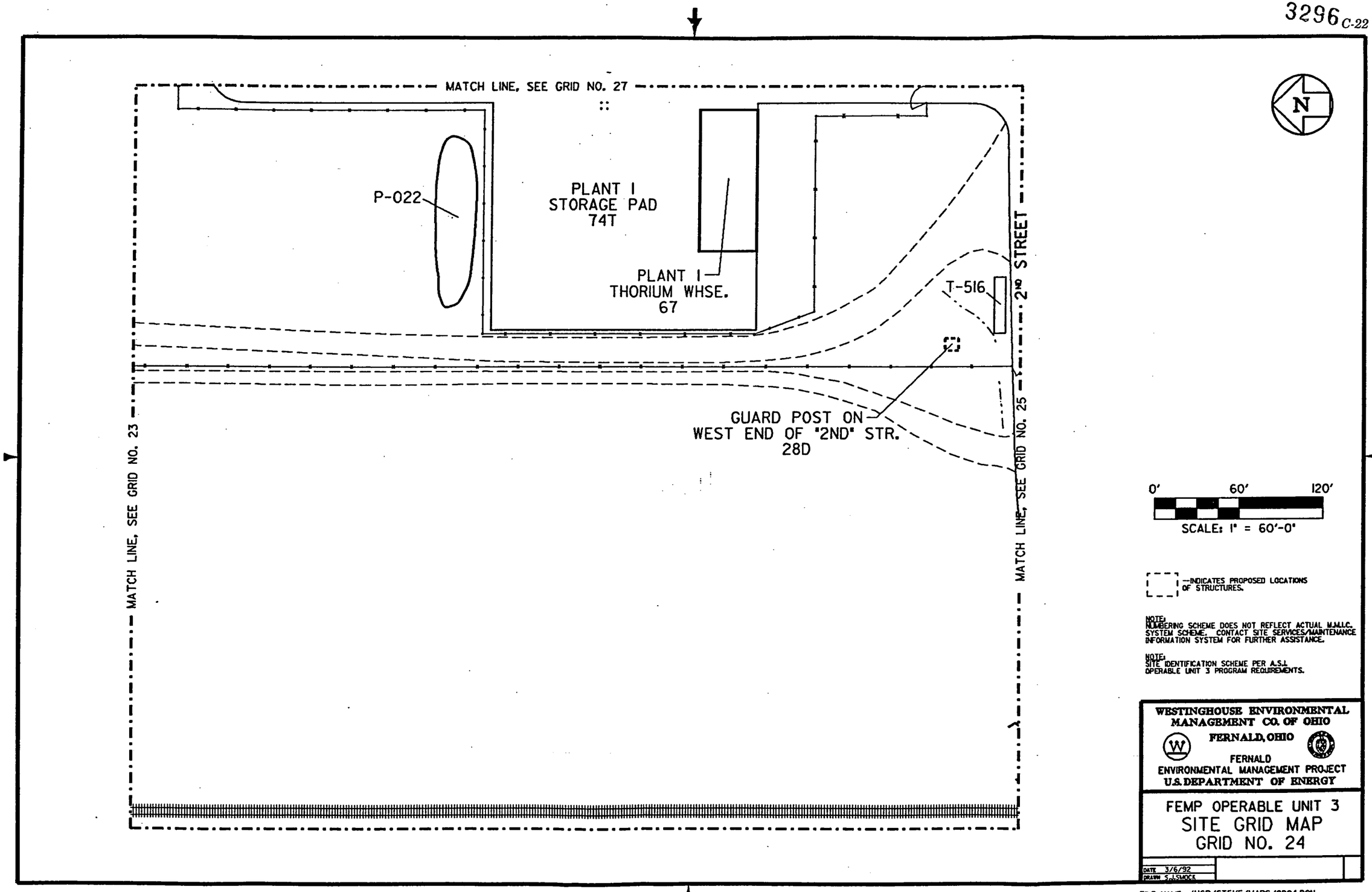
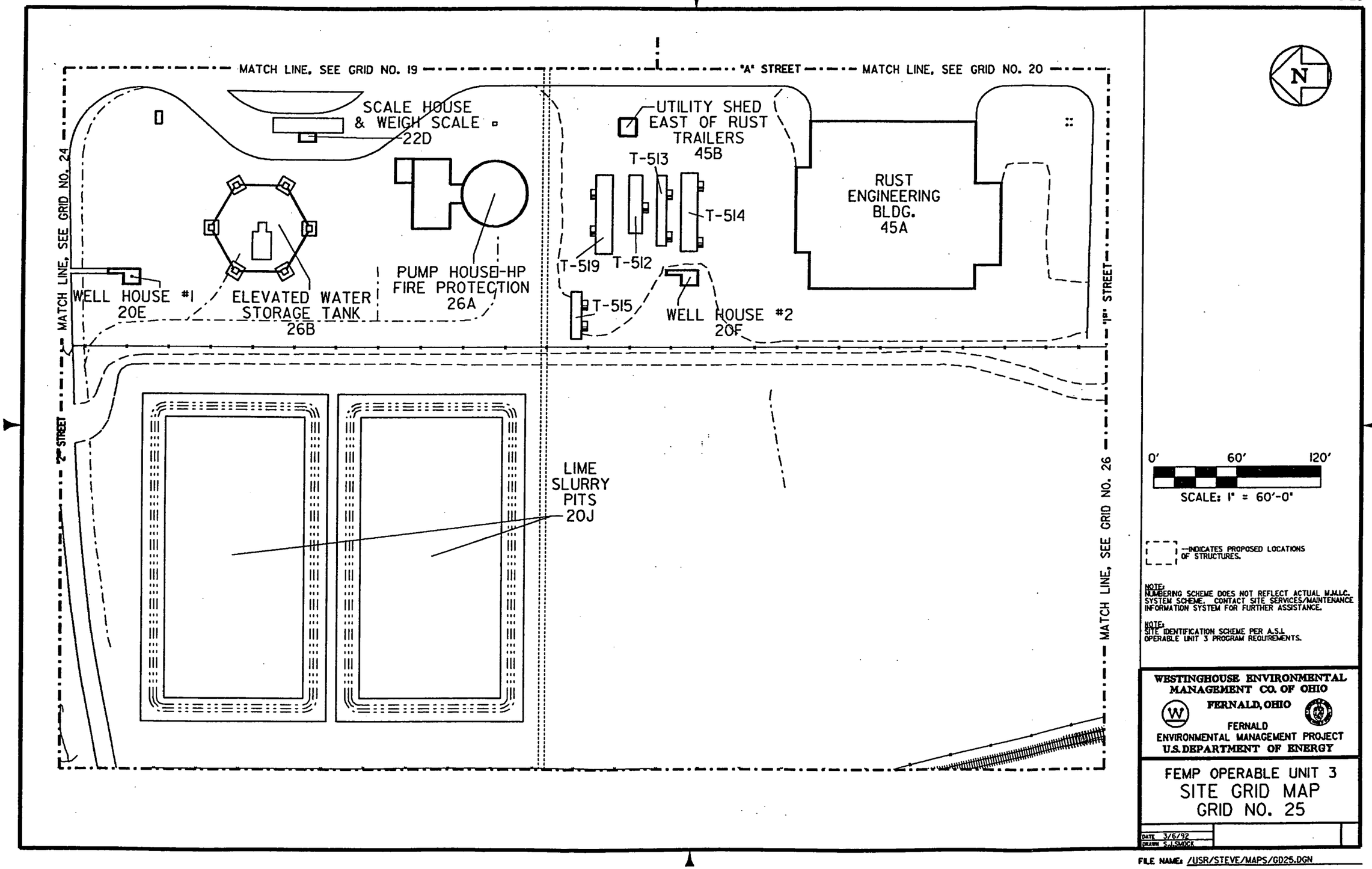


FIGURE C.20 Grid No. 24



440

FIGURE C.21 Grid No. 25

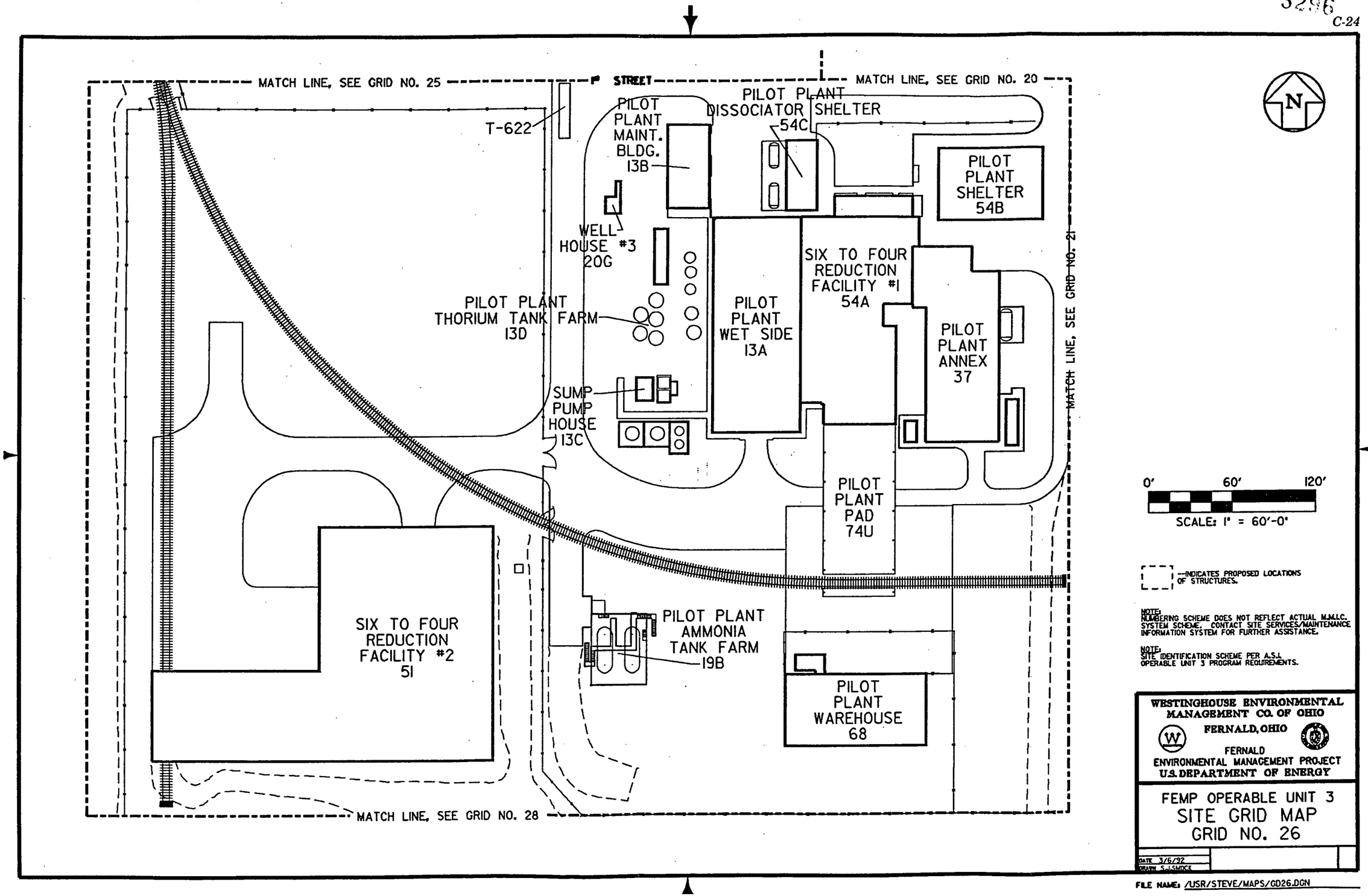
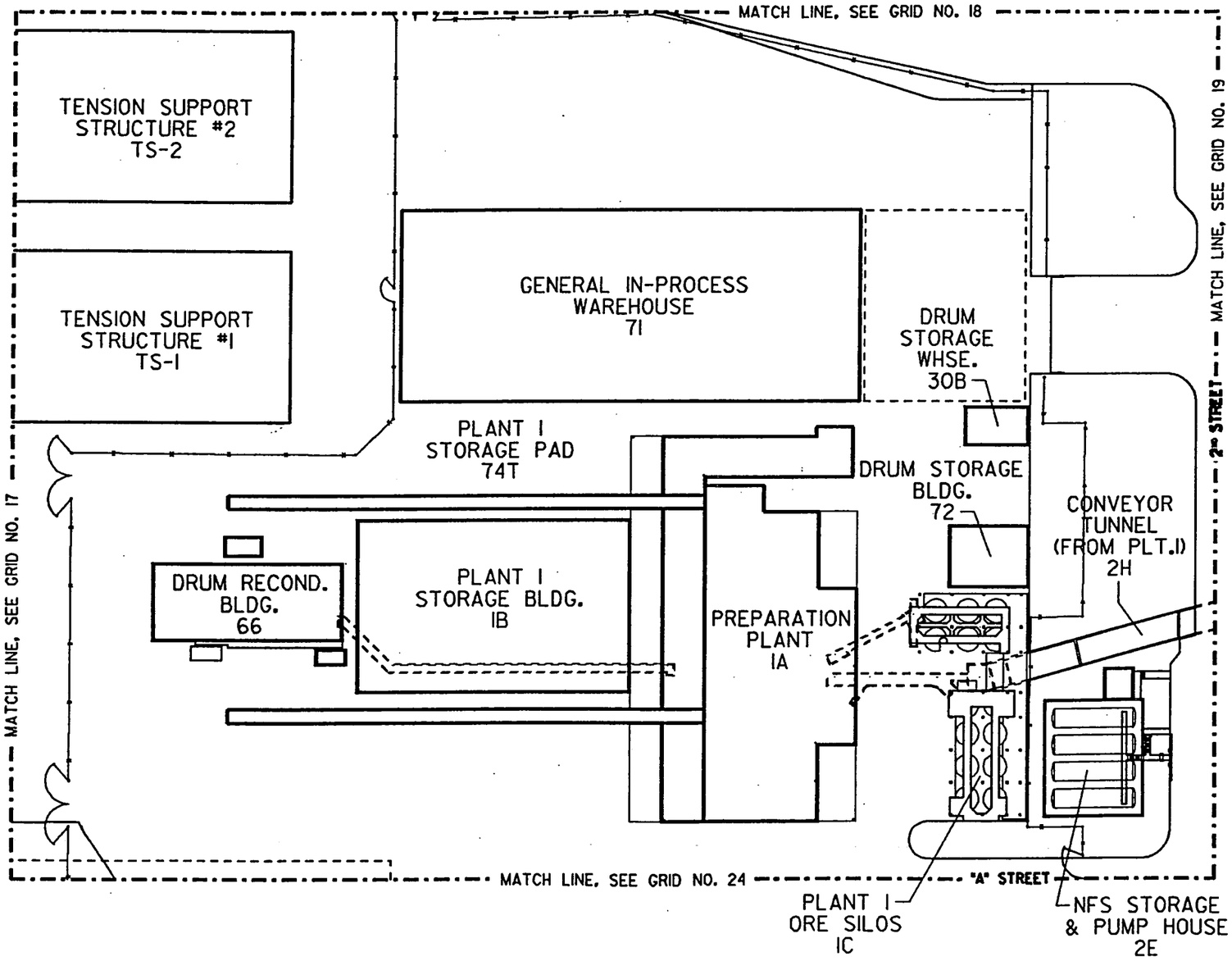


FIGURE C.22 Grid No. 26



N

0' 60' 120'

SCALE: 1" = 60'-0"

--INDICATES PROPOSED LOCATIONS OF STRUCTURES.

NOTE:
NUMBERING SCHEME DOES NOT REFLECT ACTUAL M.M.L.C. SYSTEM SCHEME. CONTACT SITE SERVICES/MAINTENANCE INFORMATION SYSTEM FOR FURTHER ASSISTANCE.

NOTE:
SITE IDENTIFICATION SCHEME PER A.S.L. OPERABLE UNIT 3 PROGRAM REQUIREMENTS.

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U.S. DEPARTMENT OF ENERGY

FEMP OPERABLE UNIT 3
SITE GRID MAP
GRID NO. 27

DATE 3/3/92
DRAWN S.J.SMOCK

FILE NAME: /USR/STEVE/MAPS/GD27.DGN

FIGURE C.23 Grid No. 27

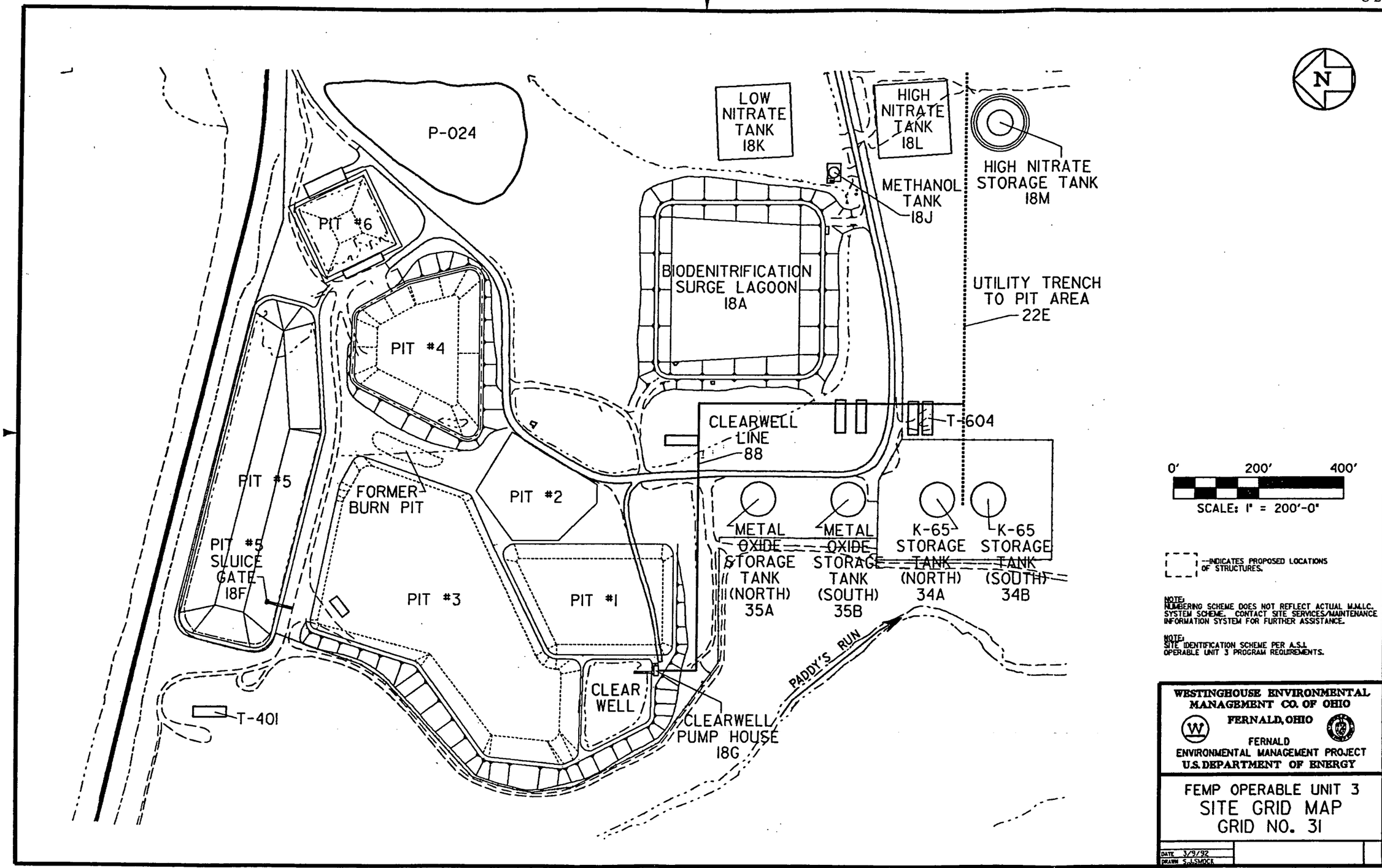
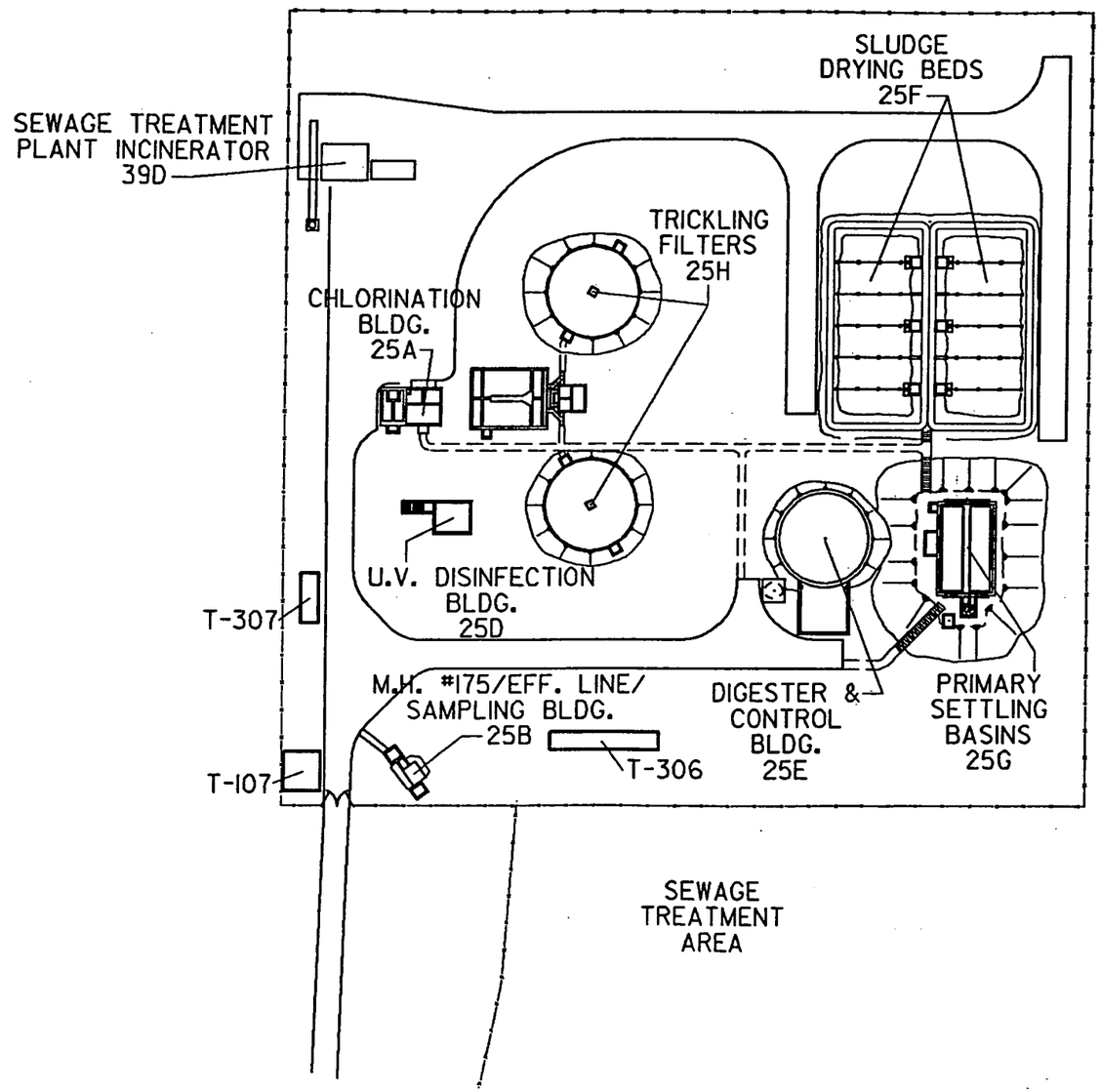


FIGURE C.24 Grid No. 31



N

0' 60' 120'

SCALE: 1" = 60'-0"

—INDICATES PROPOSED LOCATIONS OF STRUCTURES.

NOTE:
NUMBERING SCHEME DOES NOT REFLECT ACTUAL M.M.I.C. SYSTEM SCHEME. CONTACT SITE SERVICES/MAINTENANCE INFORMATION SYSTEM FOR FURTHER ASSISTANCE.

NOTE:
SITE IDENTIFICATION SCHEME PER A.S.L OPERABLE UNIT 3 PROGRAM REQUIREMENTS.

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FEMP OPERABLE UNIT 3
SITE GRID MAP
GRID NO. 32

DATE 3/9/92
DRAWN S.J.SMOCK

FILE NAME: /USR/STEVE/MAPS/GD32.DGN

FIGURE C.25 Grid No. 32