

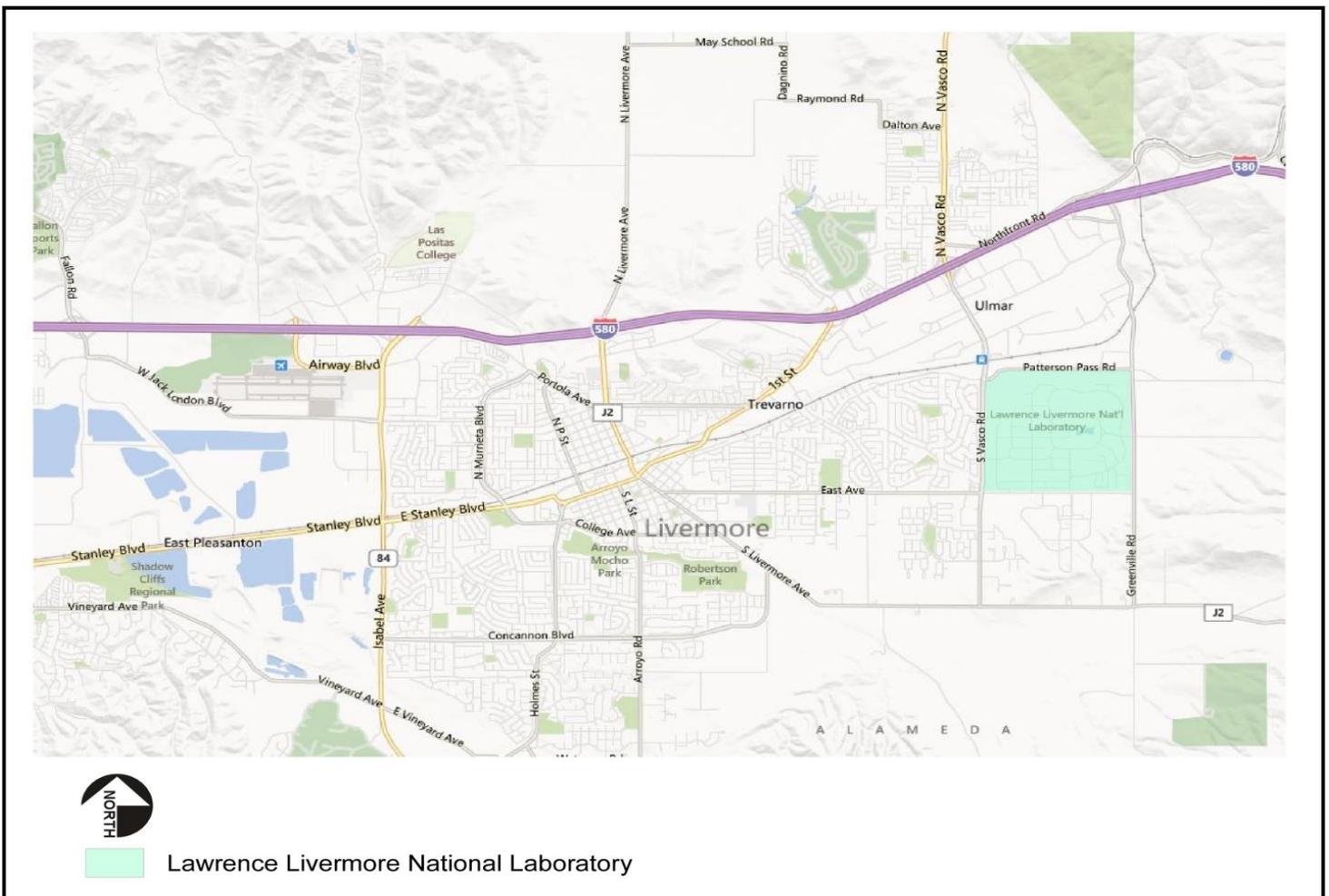


Fact Sheet
Prepared by
California Department of Toxic Substances Control



For
RCRA HAZARDOUS WASTE FACILITY PERMIT RENEWAL
LAWRENCE LIVERMORE NATIONAL LABORATORY
7000 East Avenue
Livermore, California 94550
April 20, 2015

Facility/Unit Type: RCRA Storage and Treatment Facility
Waste Types: RCRA, Non-RCRA, and Mixed Waste
Permit Type: RCRA Hazardous Waste Facility Permit



Document Organization

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1. INTRODUCTION

The Lawrence Livermore National Laboratory (LLNL) submitted an application for a Resource Conservation and Recovery Act (RCRA) hazardous waste facility permit (Application) on April 23, 2009. The Department of Toxic Substances Control (DTSC) conducted an administrative review of the Application and deemed it administratively complete in a letter issued on May 8, 2009. DTSC subsequently conducted a technical review of the Application and issued two formal Notices of Deficiencies (NODs) and one request for clarifying information, to which LLNL responded with revisions to the Application. DTSC deemed the Application Technically Complete in a letter to LLNL dated March 27, 2015.

DTSC has prepared this Statement of Basis in accordance with California Code of Regulations (Cal. Code of Regs.), title 22, section 66271.6.

2. FACILITY DESCRIPTION

When it was established in 1952, LLNL's primary mission was conducting research on nuclear weapons. Since then, other major programs have been added or removed to meet national needs including magnetic fusion energy, laser fusion and laser isotope separation, biomedical and environmental sciences, and applied energy technology. These programs require research in physics, chemistry, materials science, computer science and technology, biological sciences, and engineering. LLNL also conducts a variety of projects for other federal agencies. These programs generate hazardous and mixed waste. LLNL treats and stores these wastes in tanks and containers before sending them for final treatment or disposal at an authorized TSDF.

3 AUTHORIZED VOLUMES, LOCATIONS, AND WASTE STREAMS

The permit will authorize LLNL to continue to store a maximum of 913,270 gallons of liquid and solid hazardous waste in 12 container storage units. The permit will also allow LLNL to store and treat 45,000 gallons per day of hazardous waste in one tank treatment and storage unit, in association with 3 miscellaneous treatment units, and treat from 0.23 short tons (unit equivalent to 2000 pounds) per day to 600 short tons per year in the remaining 6 miscellaneous units. The hazardous waste management units are located in Area 625 and in the Decontamination and Waste Treatment Facility (DWTF). (See Figures 1, 2, and 3) All

waste management units in these areas can also be used to store and treat hazardous wastes which may potentially have a radiological component (mixed waste).

The Permittees are authorized to store the following waste streams:

Form Codes	Form Code Description	Typical Waste Streams	EPA ID Code	CA ID Code
Mixed Media/Debris/Devices - Waste that is a mixture of organic and inorganic wastes, liquid and solids wastes, or devices that are not easily categorized				
W001	Lab packs from any source not containing acute hazardous waste	Lab packed surplus, expired, or damaged packages of laboratory chemicals and discarded aerosol cans received from research and maintenance activities.	All EPA Codes Excluding P-Code Wastes	All California Waste Codes
W002	Contaminated debris; paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids (usually from construction, demolition, cleaning, or remediation)	Lab packed or bulk debris, asbestos materials, empty aerosol cans, batteries, capacitors, and other scrap equipment from research and maintenance activities.	All EPA codes, generally excluding D001 through D003 and F003	All California Waste Codes, primarily 151, 181, 272, 352, 511, 512, 513
W004	Lab packs from any source containing acute hazardous waste	Lab Packed materials containing acute and/or extremely hazardous waste.	All EPA Codes	All California Waste Codes
W301	Contaminated Soil (usually from spill cleanup, demolition, or remediation) See also W512	Soil from cleanup activities, surface spills and subsurface soil investigations. These wastes may include concrete debris, crank case oil, hydraulic fluid, gasoline, diesel and plastic sheeting.	D004 through D011, D039, D040	181, 521, 551, 611

		<p>Soil or sand contaminated with organic compounds generated from drilling operations, research and cleanup operations including floor repair, soil sampling, oil shale distillation, and trash cleanup. Wastes may include concrete and soil contaminated with spent oil shale/oil.</p>		
		<p>Low-level radioactive soil generated from cleanup activities. This soil may be contaminated with uranium, solvents, and metals.</p>		
		<p>Soil cuttings or sand contaminated with inorganics generated from subsurface exploratory investigations. This soil may include concrete debris; soil may be contaminated with low-level radioactivity, lead, and/or mercury.</p>		
		<p>Soil and/or sand contaminated with toxic inorganic compounds generated by bead blasting and subsurface investigations.</p>		
W309	Batteries, battery parts, cores, casings (lead-acid or other types)	Discarded batteries from the battery shop and other locations. Wastes may include lithium, lead-acid, nickel-cadmium, mercury, and alkaline batteries. Most batteries are spent or damaged and may have been drained.	D002, D004 through D011	141, 551
W310	Filters, solid absorbents, ion exchange resins and spent carbon (usually from production,	Spent HEPA filters and absorbents generated by research activities and facility maintenance. Wastes may contain low-level radioactivity, solvents, lead, beryllium, and/or cadmium.	D004 through D011, D039, D040	172, 181, 551, 591

	intermittent processes, or remediation)	Spent filters and absorbents from research activities and facility maintenance, including machine shop and instrument maintenance and cleanup. Waste may include paper, Dryorb, chemical wipes, cleaning pads, rags, silica gel, oil filters, and molecular sieves.		
		Spent filters and absorbents from spill cleanup activities and maintenance operations. Wastes may include rags, chemical wipes, Dryorb, kitty litter, and vermiculite.		
		Discarded expired products or chemicals containing spent carbon generated from dry ink developers and ribbons. Wastes may include graphite powder and carbon black.		
		Spent granular carbon from ground water remediation.		
		Low-level radioactive activated charcoal or carbon from research activities.		
W320	Electrical devices (lamps, fluorescent lamps, or thermostats usually containing mercury, CRTs containing lead; etc.)	Discarded fluorescent lighting tubes and lighting ballasts.	D004 through D011	181
W512	Sediment or lagoon drag out, drilling or other muds (wet or muddy soils); see also W301	Sediment of lagoon drag out contaminated with organics and/or inorganics from maintenance activities. Wastes may contain radioactive constituents.	D004 through D011, D039, D040	521, 551

		Drilling mud from sub-surface investigations. Wastes may include mud, dirt, possible organic and/or inorganic contaminants, and low-level radioactivity.		
W801	Compressed gases of any type	Inorganic gases from research activities. Wastes may include diborane, hydrogen sulfide, fluorine, nitrogen dioxide, sulfur dioxide, and decaborane. Wastes may be reactive.	D001, D003	551
		Organic gases from research activities, including laser experiments, welding, and disposal of excess lab materials. Wastes may include alkanes and alkenes.		
Inorganic Liquids - Waste that is primarily inorganic and highly fluid (e.g. aqueous), with low suspended inorganic solids and low organic content.				
W101	Very dilute aqueous waste containing more than 99% water (land disposal restriction defined wastewater that is not exempt under NPDES or POTW discharge)	Low-level radioactive wastewater with solvents from sludge removal. Wastes may include lead, mercury, silver, benzene, carbon tetrachloride, chloroform, dichloroethane, dichloroethylene, TCEs, and other spent halogenated degreasing solvents.	All EPA codes, generally excluding D001 through D003 and F003	123, 131, 132, 134, 135, 551
		Waste water with low concentrations of ignitable and or halogenated solvents resulting from metal forming processes. Waste may include ethylenes and acetone.		
		Low-level radioactive coolant wash waters with low level concentrations of organic compounds, metals and/or other toxic materials generated from operations such as machining. Wash waters may contain beryllium.		

		<p>Wastewater with low concentrations of organic compounds, metals and/or toxic materials from operations such as machining, electronics fabrication, printing, and silk-screening. Wastes may include paint spray booth rinse water, coolants, antifreeze mixtures, and steam cleaning water.</p>		
		<p>Wastewater with low concentrations of organic compounds, metals and/or other toxic materials generated from research and maintenance activities, cleanup of chemical spills, equipment decontamination, and leaky drums. Wastes may include coolants, peroxide or bleach solutions, antifreeze mixtures, paint spray booth rinse water, and steam cleaning water.</p>		
W103	Spent concentrated acid (5% or more)	<p>Low-level radioactive acidic solutions and rinse waters with metals generated from research activities including electroplating and metal finishing operations. Wastes may include plating baths, chromic acid mixtures and nitric acid solutions from bright dip tanks, with at least one or more of the following metals: chromium, copper, aluminum, nickel, zinc, cadmium, lead or beryllium.</p>	D002, D004 - D011	551, 791, 792
		<p>Acidic solutions and rinse waters with metals generated from research activities including: printed circuit board fabrication, copper vapor laser cleaning, electroplating, etching and metal finishing operations. Wastes may include spent battery acid, plating baths, ferric chloride etching rinse water, chromic acid, plating baths, ferric chloride etching rinse water, chromic acid mixtures and nitric acid solutions from bright dip tanks, with at least one or more of the following metals: chromium, copper, aluminum, nickel, zinc, cadmium, or lead.</p>		

		Spent acids with less than regulated levels of metals from research and maintenance activities; may contain radioactive constituents.		
		Acidic solutions and waste waters from spill cleanup of spent acid with metals from electroplating processes.		
W105	Acid aqueous wastes less than 5% acid (diluted but pH<2)	Radioactive acidic rinse waters from research activities or research-related production operations, including; laser window cleaning, metal finishing operations, printed circuit board manufacturing, and laboratory glassware cleanup operations. Wastes may include reactive anions (azide, bromate, chlorate, cyanide, fluoride, and sulfide anions).	D002	551, 791
		Acidic aqueous rinse waters from research activities or research related production operations, including: laser window cleaning, metal finishing operations, printed circuit board manufacturing, and laboratory glassware cleanup operations. Wastes may include nitric, acetic, sulfuric, hydrofluoric, hydrochloric, and phosphoric acids.		
		Radioactive corrosive spent acid with less than regulated levels of metals from laboratory research cleanup.		
		Acidic aqueous solutions from spill cleanup of acidic aqueous wastes from laboratory wastes spent stripping and cleaning bath solutions from electroplating operations.		
		Acid aqueous waste including acids, which are unstable at room temperature (i.e. white fuming nitric acid).		

W107	Aqueous waste containing cyanides (generally caustic)	Caustic solutions and rinse wasters with metals and cyanides generated from research activities including: printed circuit board fabrication, printing press operations, electroplating, etching, and other metal finishing operations. Wastes may include spent Oakite, DuPont-brand Riston-2000, and sodium hydroxide with cyanide, gold, silver, aluminum, or potassium hexacyanoferrate.	D002, D003	122, 131, 551
		Caustic solutions with cyanides but no metals from research and maintenance activities. Wastes may contain radioactive constituents.		
W110	Caustic aqueous waste without cyanides (pH>12.5)	Spent caustic waste from research and maintenance activities; may contain radioactive constituents.	D002	122, 551
		Caustic aqueous rinse waters from research activities or research-related production operations including: silk screening, metal finishing, printed circuit board fabrication, photographic processing and blue print operations. Wastes may include Oakite, peroxide-bleach solutions, and soap rinse waters. Waste may contain radioactive constituents.		
		Spent caustic inorganic aqueous waste from laboratory cleanup spill residues. Waste may contain radioactive constituents.		
		Corrosive inorganic aqueous solutions of spent caustic materials from cleaning and degreasing operations.		
W113	Other aqueous waste or wastewater (fluid	Aqueous waste with reactive sulfides from research and maintenance activities.	All EPA codes generally	132, 551

	but not sludge)	Reactive or polymerizable inorganic aqueous liquids generated from research and maintenance activities.	D001, D002		
		Wastewater with high dissolved solids from cleanup of chemical spills and leaky drums. Wastes may include rainwater from the hazardous waste and heavy equipment storage yards, spill cleanup mop water, and retention tank water. These waters may contain acids, Freon, oil, soap, and/or diesel fuel.			
		Low-level radioactive inorganic solutions which may include high dissolved solids from inorganic biomedical solutions, cyanide analysis waste, weak acid and caustics, rinse waters, machine or shop waste coolants and soapy rinse water.			
		Low-level radioactive aqueous waste waters with low dissolved solids generated from research activities including metal finishing, machine coolant replacement and water jet cutting.			
		Aqueous waste waters with low dissolved solids, including rinse waters from the following operations: copper vapor laser operation, metal finishing, machine coolant replacement, water jet cutting, printed circuit board fabrication, and equipment cleaning.			
		Aqueous waste water feed and effluent associated with wastewater treatment through evaporation (including brine rinse waters), filtration, and centrifugation, debris washing, container rinsing.			
		Inorganic scrubber water from air pollution control device.			

		Leachate from wastewater treatment and maintenance activities. Wastes may contain radioactive constituents.		
W117	Waste liquid mercury (metallic)	Decommissioned electrical equipment (containing liquid mercury) used in research activities. Wastes may include ignitrons and thermostats.	D009	551, 725
		Mercury liquid waste from laboratory and shop cleanup, clean out of sink traps, and collection of excess electron tubes and mercury switches.		
		Tritiated liquid mercury from research and maintenance activities.		
W119	Other inorganic liquid	Inorganic liquids containing chromium and/or silver, and inorganic non-aqueous liquids generated from research activities. Waste may be ignitable and/or toxic.	All EPA codes	135, 551
		Inorganic liquids from spill cleanup of listed non-aqueous wastes.		
		Low-level radioactive D-38 turnings, chips, sludge in water.		
Organic Liquids - Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content.				
W200	Still bottoms in liquid from (fluid but not sludge)	Still bottoms of halogenated and/or non-halogenated solvents or other organic liquid from research or maintenance activities.	D001, F002	251, 551
W202	Concentrated halogenated (e.g., chlorinated) solvent	Low-level radioactive waste with PCBs and/or halogenated solvents from laboratory research activities. Wastes may include organic fluids and water.	F002	211, 551
		Halogenated solvents from lab operations such as cleaning, degreasing, and electronic manufacturing. Wastes may include chlorinated and fluorinated solvents such as Freon, TCE, PCE, DCE, and TCA.		

		Spill cleanup of aqueous halogenated solvents.		
		Radioactive halogenated solvents generated from cleaning tanks and equipment and operating research laboratories and machining shops. Wastes may include TCE and TCA, and may contain transuranic activity.		
		Spent halogenated solvents from the decommissioning of degreasing process equipment. Wastes may be ignitable.		
		Spill cleanup from PCB-contaminated equipment.		
W203	Concentrated non-halogenated (e.g., non-chlorinated) solvent	Low-level radioactive non-halogenated solvents generated from laboratory research and machine shop operations. Wastes may include isopropyl alcohol, benzene, tributyl phosphate, and methyl isobutyl ketone.	D001, F003, F004 F005	212, 213, 551
		Non-halogenated solvents from research activities including equipment cleaning and maintenance operations, electroplating and metal finishing, and hydraulic fluid replacement. Wastes may include acetone, ethers, toluene, xylene, other ethylene glycol tetrahydrofuran, MEK and alcohols. Many of these wastes may be characteristically ignitable.		
		Aqueous non-halogenated solvents from remediation activities and discontinued use of process equipment.		
W204	Concentrated halogenated/non-halogenated solvent mixture	Low-level radioactive aqueous solution of halogenated/non-halogenated solvents from research activities including equipment cleaning and maintenance operations. Wastes may include spent halogenated solvents (e.g. TCE and chloroform) and PCBs.	D001, F001 through F005	214, 551

		<p>Halogenated/non-halogenated solvent mixture from cleaning and degreasing operations. Wastes may include tetrachloroethylene, methylene chloride, chlorobenzene, acetone, and isobutanol.</p>		
		<p>Aqueous solution of halogenated/non-halogenated solvent mixture waste from laboratory cleaning and degreasing activities. Wastes may include spent halogenated wastes and oxygenated and hydrocarbon solvents. Wastes may be ignitable.</p>		
		<p>Halogenated/non-halogenated solvent mixture from cleaning and degreasing operations. Wastes may include tetrachloroethylene, methylene chloride, chlorobenzene, acetone, and isobutanol. Wastes may be ignitable.</p>		
W205	Oil-water emulsion of mixture (fluid but not sludge)	<p>Oil-water emulsion or mixture from flush rinsing wastes and cleanup of oil spills.</p>	F001 through F005	221, 222, 551
		<p>Oil-water emulsion or mixture from separation processes such as centrifugation.</p>		
		<p>Rinse and surface runoff waters that are potentially contaminated with oil. Wastes may include steam-cleaning water from washing of vehicles and machine parts, motor oil, hydraulic oil, and soaps.</p>		
		<p>Aqueous oil-water emulsion. Wastes may also include barium, chromium, lead, benzene, dichloroethylene, tetrachloroethylene, and trichloroethylene. Wastes may be ignitable.</p>		
		<p>Low-level radioactive D-38 turnings, chips, sludge in aqueous-based solution (e.g., Trim-Sol)</p>		

W206	Waste Oil	Low-level radioactive waste oils generated from laboratory research and machine shop operations. Wastes may include hydraulic and vacuum pump oils, uranium, beryllium, mercury, and/or solvents.	F001 through F005	221, 551
		Waste oils from oil changes, drainage of transformers and non-PCB capacitors, and disposal of excess or expired products. Wastes may include transformer oil, motor oil, vacuum pump oil, and waste oils from non-PCB capacitors.		
		Low-level radioactive waste oil from cleanup of oil spills. Wastes may include cadmium, lead, silver, halogenated and non-halogenated solvents.		
		Oil from separation processes such as centrifugation		
		Oil drained from decommissioned electrical transformers. Wastes may include cadmium, lead, silver, and halogenated and non-halogenated solvents. Wastes may be ignitable.		
W209	Paint, ink, lacquer, or varnish (fluid - not dried out or sludge)	Organic paint, ink, lacquer, or varnish waste generated from activities including equipment cleanup; the disposal of excess and waste paint; and laser printer, copier and graphic production.	D001	291, 343, 551
		Organic paint, ink, lacquer, or varnish wastes which may include lacquer thinner. Waste may be ignitable.		
W210	Reactive or polymerizable organic liquids and adhesives (fluid but not sludge)	Adhesives or epoxies generated by general carpentry, floor tile installation, and other craft activities. Wastes may include empty containers with adhesive or epoxy residues and excess product collected during cleanup.	D001, D003	271, 272, 281, 551
		Aqueous waste of adhesives or epoxies from routine cleanup of spills.		

		Adhesives or epoxies, polymeric resin wastes from aged or surplus ignitable organics contaminated with low-level radioactivity.		
		Reactive or polymerizable organic liquids generated from research activities. Wastes may include peroxides, polymeric hardeners, catalysts, and uncured monomers.		
		Wastes generated from spill cleanup or reactive or polymerizable organic liquids.		
W211	Paint thinner or petroleum distillates	Organic paint thinner or petroleum distillates from activities including the cleanup of painting equipment and machine parts found in laboratories and shops. Wastes may include paint thinner, kerosene, mineral spirits, lacquer thinner, Stoddard solvent, gasoline and diesel fuel.	D001, F003, F004, F005	211, 212, 213, 214, 331, 343
		Wastes generated from the cleanup of underground storage tanks containing ignitable petroleum distillates.		
W219	Other organic liquid	Low-level radioactive concentrated aqueous solution of other organics, including spent process liquid, ignitable wastes, and spent halogenated solvents.	D001, F001 through F005, but includes U001-U411 residues	343, 551
		Concentrated aqueous solution of other (non-solvent) organics including spent process liquids, ignitable wastes, and spent halogenated materials from research activities and surface preparation operations.		
		Concentrated aqueous solution of other (non-solvent) organics from surface preparation activities. Waste may be ignitable.		

		Low-level radioactive waste (containing H-3, C-14, P-32, S-35, and/or uranium) from laboratory and machine shop operations. Wastes may include oil, alcohols, kerosene, acetic acid, benzene, and scintillation gels and cocktails from tritium analysis.		
		Organic liquids received from document reproduction and print shop activities. Wastes may include activators, photocopier toners, and dispersants. Most items in this category are excess or out-of-date copy machine, printer, and print shop chemicals.		
		Wastes generated from spill cleanup or decommissioned document production equipment containing organic liquids, which may be ignitable and/or reactive.		

Inorganic Solids - Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; not pumpable.

W303	Ash (from any type of burning of hazardous waste)	Ash from any type of burning of hazardous waste.	D004 through D011	551, 571
W304	Slags, drosses, and other solid thermal residues	Dry ashes, slag, or thermal residue generated from laboratory research and gun testing activities. Wastes may include debris from target tanks, gun soot, solidified ash, and coal ash.	D004 through D011	171, 172
		Residue from explosive waste treatment.		
W307	Metal scale, filings and scrap (including metal drums)	Low-level (potentially) radioactive inorganic scrap metal generated from remodeling, laboratory cleanup, and machine shop operations, including metal shavings, source material, and old equipment (scrap metal/pipes/lead bricks and uranium beds).	D004 through D011	172, 181, 511, 512, 513, 551

		Scrap metal from research and maintenance including metal finishing, cleanup, equipment, construction, electroplating, and demolition (pipes, tanks, pumps, tools, fuses, stainless steel vessel, duct work, hardware, lead bricks and oil drained transformers).		
		Low-level radioactive lead pieces and bricks contaminated with depleted uranium and/or beryllium during off-site explosion and/or projective research activities.		
		Empty or crushed metal drums or containers from research activities, including packaging, print processing, and shop wastes. Wastes may include empty cans, drums, bottles, boxes, and other containers. Most containers are empty, but may contain chemical residues or residue from biodegradable steam cleaning soap. Waste may contain radioactive constituents.		
		Removal of discontinued process equipment, e.g., retention tanks.		
W312	Cyanide or metal cyanide bearing solids, salts or chemicals	Metal-cyanide salts and/or chemical waste from research and maintenance activities. Wastes may contain radioactive constituents.	D003, D004 through D011	181, 551
		Reactive-cyanide salts and/or chemical waste from research and maintenance activities. Wastes may contain radioactive constituents.		
W316	Metal salts or chemicals not containing cyanides	Reactive salts/chemicals that are from waste operations including unused/excess chemicals from printing and metal finishing and reactive laboratory chemicals (e.g., phosphorous, titanium tetrachloride, sodium, and lithium hydride).	D004 through D011	181, 551
		Inorganic reactive metals and salts from the decommissioning of process equipment.		

		<p>Salt brine from evaporation process equipment.</p>		
		<p>Inorganic metal and salts from research activities, including machine shop operations, laboratory cleanup, collection of out-of-date or excess products, laser operations, and tooling replacement. Wastes may include ferric salts and alloys, oxide powders, and other salts and alloys.</p>		
		<p>Depleted uranium hydride powder generated by research activities. This waste contains low-level radioactivity and is potentially ignitable and reactive.</p>		
W319	Other inorganic solids	<p>Asbestos and asbestos-contaminated material generated from abatement activities.</p>	D004 through D011, but includes U001 through U411 residues	181, 551
		<p>Wastes from laboratory cleanups and building renovation including pipe logging, floor tiles, rock and tar paper, transit siding and pipe, blackboards and fiberglass.</p>		
		<p>Reactive sulfide salts and/or chemical waste from research and maintenance activities. Wastes may contain radioactive constituents.</p>		
		<p>Low-level radioactive inorganic trash generated by research and laboratory cleanup activities. Wastes may include pipettes, funnels, beakers, gloves, paper, filters, plastics, sponges, floor dry, and other lab trash. Wastes may be contaminated with beryllium, lead, and/or low-level radioactive materials.</p>		

		Waste inorganic trash from research and cleanup activities, including printing press, laser, battery shop, and building maintenance operations. Wastes may include metal, glass, filters, paper, work clothes, rubber materials, and other laboratory wastes.		
		Waste inorganic solids from equipment decommissioning and spill cleanup activities. Wastes may include gloves, wipes, plastic sheeting, rags, Dryorb, soot, acids, mercury (broken thermometers), antifreeze, and debris from gun tank experiments.		
		Filter cake and stabilized waste, which may contain low-level radioactivity, generated from rotary drum vacuum filtration or solidification processes, which may contain non-halogenated and halogenated solvents and metals (arsenic, cadmium, barium, lead, chromium, mercury, and silver).		

Organic Solids - Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; not pumpable

W401	Pesticide solids (used or discarded - not contaminated soils - W301)	Discarded out-of-date halogenated and/or non-halogenated pesticide solids.	D012 through D016	232, 551
W403	Solid resins, plastics or polymerized organics	Waste solid resins or polymerized organics from research activities, which may be contaminated with low-level radioactivity. Wastes may be corrosive and/or reactive.	D039, D040	272, 551
		Waste solid resins or polymerized organics from document reproduction and print shop activities. Waste may include curing agents, toner, and dry film photopolymers.		

W405	Explosives and reactive organic solids	Reactive organic solids generated from laboratory research and maintenance activities including the collection of excess products. Wastes may include RTV (room temperature vulcanizing) catalysts.	Not Accepted	352, 551
W406	Dried paint (paint chips, filters, air filters, other)	Waste solids that contain construction debris that have dried paint, paint chips from surface preparation (e.g., for repainting), space heater furnace filters, and paint spray booth filters.	D004 through D011, F001 through F005	291, 331, 551
W409	Other organic solids	Halogenated and/or non-halogenated organic solids, which may contain metals, non-halogenated solvents, halogenated solvents, and/or low-level radioactivity generated from the following activities: laboratory waste removal, decommissioning of laboratory process equipment, filter replacement, battery replacement, and sludge removal. Waste may include barium, cadmium, lead, selenium, chloroform, non-halogenated solvents, and spent halogenated solvents. Wastes may be ignitable and corrosive.	D001 through D011, F001 through F005, but includes U001 through U411 residues	352, 551
		Halogenated and/or non-halogenated solids from laboratory waste and disposal of clothing and personal protective equipment. Wastes may be contaminated with low-level radioactivity and non-halogenated solvents. Wastes may be ignitable.		
		Electrical, vacuum and machining equipment from research and maintenance operations which may contain low-level radioactivity and PCB-laden oils. Wastes may include decommissioned transformers, capacitors, power supplies, voltage regulators, and milling machines.		

Inorganic Sludge - Waste that is primarily inorganic, with moderate-to-high water content and low organic content; mostly pumpable.

W501	Lime and/or metal hydroxide sludge and solids with not cyanides (not contaminated muds - W512)	Lime sludge with or without metals generated from plant maintenance activities	D002	411, 421, 551
		Low-level radioactive lime sludge with or without metals generated from plant maintenance activities.		
W503	Gypsum sludge from wastewater treatment or air pollution control	Low-level radioactive wastewater treatment sludge with toxic organics, from sludge removal processes. Wastes include spent halogenated and non-halogenated solvents.	D002, D004 through D011	411, 581
		Air pollution control device sludge from waste treatment and maintenance activities. Waste may contain radioactive constituents.		
W504	Other sludge from wastewater treatment or air pollution control	Waste sludge that may contain low-level radioactivity, from the cleanup of basins and sumps. Wastes may contain oils, solvents, lead, mercury, chromium, and/or traces of cyanide.	D004 through D011, D039, D040	491, 551, 581
		Chlorine or other brine sludge from waste treatment or maintenance activities.		
		Other air pollution control device sludge from waste treatment and maintenance activities. Wastes may contain radioactive constituents.		
W505	Metal bearing sludge (including plating sludge) not containing cyanides	Untreated plating sludge without cyanides from research and maintenance activities. Wastes may contain radioactive constituents.	D004 through D011, D039, D040, F006	491, 551
		Degreasing sludge with metal scale or filings from sludge removal process. Waste may include spent halogenated solvents and low-level radioactivity.		

W506	Cyanide-bearing sludge (not contaminated soils - W512)	Untreated plating sludge with cyanides from laboratory waste water treatments. Wastes may include cyanide and lead.	D003, D004 through D011, F006	491, 551
		Other sludge with cyanides from research and maintenance activities. Wastes may contain radioactive constituents.		
W519	Other inorganic sludge (not contaminated muds - W512)	Wastewater treatment sludge with reactive sulfides from research activities.	D004 through D011, D039, D040, but includes U001 through U411 residues	491, 551
		Sludge with other reactives from research and maintenance activities. Wastes may contain radioactive constituents.		
		Low-level radioactive inorganic sludge from cleaning out bulking tanks and from water jet cuttings. Wastes may include aqua-sorb, kerosene, abrasive garnet, metals, chloro-solvents, and biowaste.		
		Other inorganic sludge from sludge removal and separation processes, cleaning and degreasing operations, surface coating/preparation or other surface processes. Wastes may include halogenated solvents, non-halogenated solvents, and metals (barium, cadmium, chromium, lead, mercury, silver).		
		Waste inorganic sludge from spill cleanup activities. Wastes may include pigs, wipes, and Dryorb.		
Organic Sludge - Waste that is primarily organic with low-to-moderate inorganic solids content and water content; pumpable				
W603	Oily sludge (not contaminated muds - W512)	Oily sludge from maintenance operations including steam cleaning, roofing, car washing and cleanup of processing equipment. Wastes may include oil, asphalt, and other sump wastes.	F001 through F005	223, 551
		Oil sludge from separation processes such as centrifugation.		
		Wastes from spill cleanup of oily sludge		

W604	Paint or ink sludge, still bottoms in sludge form (not contaminated muds - W512)	Organic paint/ink sludge from cleanup or research activities including silk screening, product cleanup, cold vaporization, and Xerox copying. Wastes may include paint solids with Dryorb, sludge from spent photo-fixers, Xerox waste sludge, and film development evaporator bottoms.	D001	461, 551
W606	Resins, tars, polymer or tarry sludge (not contaminated muds - W512)	Resins, tars or tarry sludge. Wastes may be ignitable.	D001	272, 551
		Tarry residues or sludge from surplus, off-specification organics. Wastes may be ignitable.		
		Reactive or polymerizable organics from research or maintenance activities.		
W609	Other organic sludge	Treated biological sludge from research or maintenance activities.	D001, but includes U001 through U411 residues	491, 551
		Sewage or other untreated biological sludge from research or maintenance activities.		
		Sludge containing metal fines and heavy dense organic material from separation processes such as centrifugation.		
		Other organic sludge, from sludge removal and sludge dewatering. Wastes may include lead, spent halogenated solvents and low-level radioactivity.		

Waste streams above will be stored in the following units implementing compatibility requirement:

Unit	Form Codes
Area 625 Tank Trailer Storage Unit	W101, W103, W105, W107, W110, W113, W119, W200, W202, W203, W204, W205, W206, W209, W210, W211, W219, W312, W316, W503, W504, W505, W506, W512, W519, W603, W604, W606, W609
Area 625 Container Storage Unit	W002, W301, W303, W304, W307, W309, W310, W319, W320, W403, W406, W409
Building 625 Container Storage Unit	All form codes in Table 3
Building 693 Container Storage Unit	All form codes in Table 3
Building 693 Freezer Unit	All form codes in Table 3
DWTF Roll-Off Bin Storage Unit	W002, W301, W303, W304, W307, W309, W310, W319, W320, W403, W406, W409
Building 695 Airlock Container Storage Unit	All form codes in Table 3
Building 695 Reactive Waste Storage Unit	All form codes in Table 3
Building 696 – Rooms 1010 and 1011 Storage Unit	All form codes in Table 3
Building 696 – Rooms 1001, 1007, 1008, and 1009 Storage Unit	All form codes in Table 3
DWTF Portable Tank Storage Pad	W101, W103, W105, W107, W110, W113, W119, W200, W202, W203, W204, W205, W206, W209, W210, W211, W219, W312, W316, W503, W504, W505, W506, W512, W519, W603, W604, W606, W609
DWTF Container Storage Unit	W002, W301, W303, W304, W307, W309, W310, W319, W320, W403, W406, W409
Building 695 Tank Farm	W101, W103, W105, W107, W110, W113, W119, W200, W202, W203, W204, W205, W206, W209, W210, W211, W219, W312, W316, W503, W504, W505, W506, W512, W519, W603, W604, W606, W609
Building 695 Evaporation Unit	W113

Building 695 Centrifuge Unit	W113
Building 695 Solidification Unit	All form codes in Table 3, excluding W801
Building 695 Shredding Unit	W002, W307, W319, W409
Building 695 Drum Rinsing Unit	All form codes in table 3 excluding 801
Building 695 Debris Washer Unit	W002, W307, W319, W409
Building 695 Small Scale Treatment Unit	All form codes in table 3
Building 695 Wastewater Filtration Unit	W113
Building 696 Drum/Container Crushing Unit	W002, W307, W319, W409

4. BASIS FOR DRAFT PERMIT CONDITIONS

DTSC included special conditions on specific units and on the facility as a whole in order to protect human health and the environment. The permit special conditions are as follows:

UNIT #5: Building 693 Freezer Unit

Condition: *The Permittees shall place all containers holding liquid hazardous waste in the secondary containment pan.*

Basis: In accordance with title 22, section 66264.175(a) when storing hazardous or mixed waste that contain free liquids in containers a containment system shall be provided. In this case the freezer unit has a containment pan that complies with 66264.175(a) and (b) and therefore is the only location within this unit where the permittee is authorized to place containers that store hazardous and mixed waste that contain free liquids.

UNIT #6: DWTF Roll-Off Bin Storage Unit

Condition: *The Permittees shall not store hazardous waste that contains free liquids in this Unit.*

Basis: In accordance with title 22, section 66264.175(d) the permittee is authorized to store hazardous waste without the requirements of 66264.175(b) as long as the hazardous waste to be stored does not contain free liquids and the containers

are elevated or protected from contact with accumulated liquid. Since this unit is not design to comply with the requirements of the California Code of Regulations, title 22, section 66264.175(b) the permittee is prohibited from storing hazardous waste that contain free liquids.

UNIT #8: Building 695 Reactive Waste Storage Unit

Condition: *The Permittees shall store incompatible wastes in separate rooms.*

Basis: In accordance to the California Code of Regulations, title 22, section 66264.177 the Permittees must store containers with incompatible waste streams in separate rooms.

UNIT #12: DWTF Container Storage Unit

Condition: *The Permittees shall not store hazardous or mixed waste that contains free liquids in this Unit.*

Basis: In accordance with title 22, section 66264.175(d) the Permittees are authorized to store hazardous waste without the requirements of 66264.175(b) as long as the hazardous waste to be stored does not contain free liquids and the containers are elevated or protected from contact with accumulated liquid. Since this unit is not designed to comply with the requirements of the California Code of Regulations, title 22, section 66264.175(b) the Permittees are prohibited from storing hazardous wastes that contain free liquids in this unit.

Condition: *Within 30 days after the effective date of this Permit, the Permittees shall mark the boundary of this Unit.*

Basis: In order to carry out the correct storage and management within this unit, as explained in the operations plan, the Permittees need to physically define the unit by demarcating it.

UNIT#13 Building 695 Tank Farm

Condition: *After storing or treating mixed waste, radiologic decontamination shall be performed before storing or treating hazardous waste in accordance with the contamination procedures specified in section 6.2 of the Operation Plan..*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur from treating the hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #14: Building 695 Evaporators Unit

Condition: *The Permittees shall operate this Unit within the boundaries of Unit #7.*

Basis: In accordance with California Code of Regulations , title 22, section 66264.601, this unit requires secondary containment because it treats hazardous waste that contain free liquids. To prevent a release to the environment, the Permittees are only authorized to operate the unit within Unit #7 which is designed with the appropriate secondary containment.

Condition: *The Unit shall be decontaminated between treatments of incompatible waste streams.*

Basis: This unit needs to be decontaminated between treatment of incompatible waste streams to prevent incompatible waste streams from coming into contact the therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After treating mixed waste, radiologic decontamination shall be performed before treating hazardous waste in accordance with the contamination procedures specified in Section 6.2 of the Operation Plan..*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur from treating the hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #15: Building 695 Centrifuge Unit

Condition: *The Permittees shall operate this Unit within the boundaries of Unit #7.*

Basis: In accordance with the California Code of Regulations, title 22, section 66264.601, this unit requires secondary containment because the unit treats hazardous waste streams that contain free liquids. To prevent a release to the environment the Permittees are only authorized to operate the unit within Unit #7 which is designed with the necessary secondary containment.

Condition: *When not in use and prior to storing, the Permittees shall decontaminate this Unit.*

Basis: This unit needs to be decontaminated when not in use to prevent any accidental contact or exposure to facility personnel. It also needs to be decontaminated between treatments of incompatible waste streams to prevent incompatible waste streams from coming into contact with each other when restarting treatment activities using a unit that has not been properly decontaminated.

Condition: *The Unit shall be decontaminated between treatments of incompatible waste streams.*

Basis: This unit needs to be decontaminated between treatment of incompatible waste streams to prevent incompatible waste streams from coming into contact the therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After treating mixed waste, radiologic decontamination shall be performed before treating hazardous waste in accordance with the contamination procedures specified in Section 6.2 of the Operation Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur from treating the hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #16: Building 695 Solidification Unit

Condition: *Prior to solidifying a waste stream that is incompatible with the one previously solidified, the Permittees shall decontaminate the parts of the unit that will come in contact with the hazardous waste.*

Basis: Parts of this unit that come into direct contact with hazardous waste during the solidification treatment process need to be decontaminated between treatments of incompatible waste streams to prevent incompatible waste streams from coming into contact and could therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After solidifying mixed waste, radiological decontamination shall be performed on the parts of the unit that came into contact with the mixed waste before solidifying hazardous waste in accordance with the decontamination procedures specified in Section 6.2 of the Operations Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination on the parts of the unit that came into contact with the waste to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur from treating the hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #17: Building 695 Shredding Unit

Condition: *The Permittees shall manage all residues from processing non-hazardous waste or material as hazardous waste unless this Unit is decontaminated prior to treatment of such waste.*

Basis: As the unit can be used for the shredding of mixed, hazardous, and non-hazardous waste, the Permittees must decontaminate the unit prior to the shredding of non-hazardous waste or if not decontaminated, the outcome of such operation shall be managed as a hazardous and/or mixed waste rather than a non-hazardous waste.

Condition: *After shredding mixed waste, radiologic decontamination shall be performed before shredding hazardous waste in accordance with the contamination procedures specified in section 6.2 of the Operations Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous and/or non-hazardous waste and mixed waste that may occur from treating the hazardous and/or non-hazardous in a treatment unit that is not properly decontaminated.

UNIT #18: Building 695 Drum Rinsing Unit

Condition: *The Permittee shall operate this Unit within the boundaries of Unit #7.*

Basis: In accordance with the California Code of Regulations, title 22, section 66264.601, this unit requires secondary containment because it contains free liquids as part of the treatment process. To prevent a release to the environment, the Permittees are only authorized to operate the unit within Unit #7 which is designed with the appropriate secondary containment.

Condition: *When not in use and prior to storing, the Permittee shall decontaminate this Unit*

Basis: This unit needs to be decontaminated when not in use to prevent any accidental contact or exposure to facility personnel. It also needs to be decontaminated between treatments of incompatible waste streams to prevent incompatible waste streams from coming into contact with each other when restarting treatment activities using a unit that has not been properly decontaminated.

Condition: *The Unit shall be decontaminated between treatments of incompatible waste streams.*

Basis: This unit needs to be decontaminated between treatment of incompatible waste streams to prevent incompatible waste streams from coming into contact and therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After treating mixed waste, radiologic decontamination shall be performed before treating hazardous waste in accordance with the contamination procedures specified in Section 6.2 of the Operation Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste from treating hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #19: Building 695 Debris Washer Unit

Condition: *The Unit shall be operated with adequate secondary containment in compliance with the California Code of Regulations, title 22, section 66264.175.*

Basis: The California Code of Regulations, title 22 Section 66264.601 requires that permits for miscellaneous treatment units contain terms and provisions as necessary to protect human health and the environment, including operating requirements. Since the debris washer could handle hazardous and/or mixed waste the unit requires containment in order to prevent any releases to the environment.

Condition: *The Permittees shall decontaminate this Unit if the next waste stream to be treated is incompatible with the previous waste stream in compliance with 66264.172 and 66264.177 of the California Code of Regulations, title 22.*

Basis: This unit needs to be decontaminated between treatment of incompatible waste streams to prevent incompatible waste streams from coming into contact and therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After treating mixed waste, radiologic decontamination shall be performed before treating hazardous waste in accordance with the contamination procedures specified in section 6.2 of the Operation Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, The Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur

from treating the hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #20: Building 695 Small Scale Treatment Unit

Condition: *The Permittee shall only treat compatible hazardous waste.*

Basis: In the small scale treatment unit, the waste streams to be treated at the same time need to be compatible in order to prevent a negative reaction from occurring by treating incompatible waste streams within the same treatment unit.

Condition: *The Permittee shall decontaminate this Unit if the waste to be treated is incompatible with the previously waste treated.*

Basis: This unit needs to be decontaminated between treatment of incompatible waste streams to prevent incompatible waste streams from coming into contact and therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After treating mixed waste, radiologic decontamination shall be performed before treating hazardous waste in accordance with the contamination procedures specified in section 6.2 of the Operation Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, The Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur from treating the hazardous waste in a treatment unit that is not properly decontaminated.

UNIT #21: Building 695 Wastewater Filtration Unit

Condition: *The Permittees shall only operate this Unit within the boundaries of Unit # 7.*

Basis: In accordance with the California Code of Regulations, title 22, section 66264.601, this unit requires secondary containment because it treats hazardous waste that contain free liquids. To prevent a release to the environment, the Permittees are only authorized to operate the unit within Unit #7 which has the appropriate secondary containment.

Condition: *The Unit shall be decontaminated between treatments of incompatible waste streams.*

Basis: This unit needs to be decontaminated between treatment of incompatible waste streams to prevent incompatible waste streams from coming into contact and therefore generate an accidental reaction that could cause harm to human health and the environment by operating a unit that has not been properly decontaminated.

Condition: *After treating mixed waste, radiological decontamination shall be performed before treating hazardous waste in accordance with the contamination procedures specified in section 6.2 of the Operation Plan.*

Basis: In accordance with Section 6.2 of the Operations Plan, the Permittees must perform decontamination to ensure that mixed waste is not generated from the accidental contact between a hazardous waste and mixed waste that may occur from treating hazardous waste in a treatment unit that is not properly decontaminated.

GENERAL FACILITY SPECIAL CONDITIONS

1. **Condition:** PERMITTED UNITS AUTHORIZED FOR DELAYED CLOSURE

The following units are located in Area 612 (See Figure 3 and Figure 4) and have been converted to 90-day generator accumulation areas. Once the units stop receiving hazardous waste or non-hazardous waste, as applicable, the Permittees shall close these units in accordance with closure requirements for permitted units in the California Code of Regulations, title 22, Chapter 14, Article 7 or request a Class 3 modification to include such areas as permitted units to the permit.

Unit Name	Envirostor Sequence No. (Internal Use Only)
Area 612 Portable Tanks Storage Unit	4
Building 612 Container Storage Unit	25
Building 612 Lab Packing Unit	58
Building 612 Size Reduction Unit	42
Area 612-2 Container Storage Unit	39
Area 612-4 Receiving, Segregation, and Container Storage Unit	59
Area 612-5 Container Storage Unit	40
Building 614 East Cells Container Storage Unit	28
Building 614 West Cells Container Storage Unit	29

Basis: This condition will ensure that more stringent requirements are followed at the time of closure in accordance with permitted requirement closure under

the California Code of Regulations, title 22, Chapter 14 since the units, although not currently permitted, were at one point under permit requirements. At the moment and in accordance with the California Code of Regulations, section 66264.113(b) the Permittees shall complete partial and final closure activities in accordance with the approved closure plan and within 180 after receiving the final volume of hazardous waste. However, since the units will continue to accumulate hazardous waste under the California Code of Regulations, title 22, section 66262.34 the Permittees are not required to close the unit under 66264.113(b) but can operate the units without a permit as long as the applicable requirements of the California Code of Regulations, title 22, Chapter 12 are met.

2. Condition: *The Permittee shall not accept any off-site hazardous or mixed wastes generated by commercial or government facilities other than Lawrence Livermore National Laboratory Site 300, EPA ID No. CA2890090002.*

Basis: Under the California Environmental Quality Act, the environmental analysis for the facility was based on the current operations which include acceptance of off-site hazardous and mixed waste from LLNL Site 300 only. With this permit condition, DTSC is keeping the limit on acceptance of off-site waste as previously permitted.

3. Condition: *All containers used for the management of hazardous waste shall not be stacked more than two containers high.*

Basis: The special condition was included to specify how Lawrence Livermore National Laboratory will comply with the California Code of Regulations, title 22 Section, 66264.173(b).

4. Condition: *The Permittees may manage wastes and materials not regulated by DTSC in the permitted hazardous waste management units, including radioactive materials, provided that the Permittees ensure that the storage and treatment of such wastes and materials does not interfere with the storage and treatment activities of the hazardous waste streams permitted hereunder or result in their radiologic contamination, and that the management of such non-regulated wastes and materials is in full compliance with all applicable Federal and State laws and regulations. Additionally, any such non-regulated wastes and materials that is stored in a permitted hazardous waste storage unit shall be subject to any condition of this Permit for which application of the condition to the non-regulated wastes*

or materials is necessary to protect human health or safety or the environment (e.g., unit capacity limitations, aisle space requirements, container stacking requirements and waste compatibility requirements).

Basis: This allows the Permittees the flexibility to store other type of materials within the permitted units, ensuring that the management of the permitted hazardous waste is not hinder by such activities.

5. **Condition:** *For the purpose of compliance with the permitted maximum capacity limitations, all containers in the permitted units are assumed to be full, and all hazardous waste that is stored or located in an authorized unit shall be included in the calculation for that unit, including any hazardous waste that is subject to generator accumulation time limits pursuant to California Code of Regulations, title 22, section 66262.34.*

Basis: Each permitted unit has a storage/treatment capacity based on engineering design and, therefore, it is necessary to specify how the volume will be calculated by DTSC.

6. **Condition:** *Reactive liquid waste (i.e., waste identified as D003) that is incompatible shall be stored in separate secondary containment areas according to the general compatibility guidance provided in the California Code of Regulations, title 22, Chapter 15, Appendix V.*

Basis: According to the California Code of Regulations, title 22 section 66264.17 incompatible hazardous waste needs to be separated in order to avoid any accidental ignition or reaction of ignitable or reactive waste as well as take the necessary precautions to prevent reaction which generate extreme heat, produce a gaseous material that is toxic when inhaled, produce uncontrolled flames, damage structural integrity, and threaten human health and the environment. Therefore, this condition specifies how to comply with the regulatory requirements for reactive liquid hazardous waste.

7. **Condition** *Incompatible hazardous waste that does not contain free liquids may be stored in the same containment area if kept separate by a distance of at least 2.5 feet.*

Basis: According to the California Code of Regulations, title 22 section 66264.17 incompatible hazardous waste needs to be separated in order to avoid any accidental ignition or reaction of ignitable or reactive waste as well as take

the necessary precautions to prevent reaction which generate extreme heat, produce a gaseous material that is toxic when inhaled, produce uncontrolled flames, damage structural integrity, and threaten human health and the environment. Therefore, this conditions specifies how Lawrence Livermore National Laboratory will comply with the regulatory requirements for incompatible hazardous waste that do not contain free liquids.

8. Condition: *Upon receipt and acceptance of a container of hazardous or mixed waste at a hazardous waste management unit, the Permittee shall mark its date of acceptance on the container and maintain its original generator information until such time as new information becomes available as a result of waste analysis or the waste is treated onsite or shipped from the Permittee's hazardous waste management unit to an off-site treatment and/or disposal facility.*

Basis: Hazardous waste and mixed waste needs to be managed and tracked in accordance with regulations as part of the management of hazardous waste. This condition was included to re-iterate the importance of tracking the waste received from LLNL Site 300 since it is not considered generated waste as it was received from an off-site facility and, therefore, needs to be managed accordingly.

9. Condition: *The Permittee shall mark each lab-packed container (lab-pack) with the earliest date of acceptance of any original container to be placed into the lab-pack.*

Basis: Condition to assure that the lab-pack is labeled in order to avoid an accidental mismanagement of the lab-pack and prevent an adverse outcome to human health and the environment that may result from exposure and/or release.

10. Condition: *Each lab-pack shall be labeled or marked clearly. Additionally, each lab-pack shall be labeled with the content, quantities, and physical state of the wastes inside the lab-pack, and a statement or statements which call attention to the particular hazardous properties of the wastes. If there is insufficient space on the label for a full description of the content, quantities, and physical state of the lab-pack, a reference to these items on a packing slip is acceptable. The packing slip shall be attached to the lab-pack until it is shipped to an authorized treatment, storage, and/or disposal facility.*

Basis: Since lab-packs contain many different waste streams in smaller quantities, it is important to have a full description of the lab-pack in order to prevent any accidental exposure to hazardous or mixed waste constituents as well as to ensure that incompatible constituents are not placed within the same lab-pack that could result in an unexpected reaction.

11. Condition: *The Permittee shall not dispose of any waste at the facility.*

Basis: The Permittee applied for, and an environmental analysis was previously conducted by DTSC for, a treatment and storage facility that does not dispose of hazardous waste within the boundaries of the facility. The condition is to assure and clarify that any disposal activity within the facility is prohibited.

12. Condition: The Permittees are authorized to store hazardous waste, including mixed wastes not incorporated into the Site Treatment Plan (STP) that is incorporated by reference and attached to Compliance Order, HWCA 96/97-5002, 2/7/97, in the permitted storage units up to a maximum of one calendar year from date of first acceptance at any of the hazardous waste management units.

Basis: This condition was introduced to comply with the requirements of the Compliance order HWCA 96/97-5002 issued on 02/07/1997.

13. Condition: *The Permittees are authorized to store mixed waste which has been incorporated into the STP in the permitted storage units up to a maximum of one calendar year from the date of DOE's respective notice to DTSC pursuant to Section 2.7.1 of the STP.*

Basis: This condition was introduced to comply with, and not come into conflict with, special condition 12 and the requirements under the Site Treatment Plan.

14. Condition: *In the event of any cracks, leaking, or visible damage to a containment pallet, the containment pallet shall be replaced within one (1) working day.*

Basis: Containment pallets are used as containment for certain containers and are used to segregate incompatible waste streams by providing individual containment per the requirements of California Code of Regulations, title

22, section 66264.175. Therefore, if a pallet is not working correctly or not in good condition, such pallets needs to be replaced to provide the adequate containment for the containers place on it.

15. Condition: *Only employees of the Permittees who are trained to operate a permitted unit and/or perform a permitted activity may independently operate the unit and/or perform the activity.*

Basis: This condition is included to ensure that that the person managing the hazardous and/or mixed waste is trained and understands the correct way to carry out the activity or management of the waste stream in accordance with the California Code of Regulations , title 22 Section 66264.16.

16. Condition: *All portable permitted miscellaneous units shall be chemically and radiologically decontaminated prior to transporting such unit for storage and shall be stored within the boundary of a permitted unit.*

Basis: This condition is included to prevent any unexpected exposure to facility employees from contaminated miscellaneous treatment units that were used for the treatment of hazardous and/or mixed waste that could occur during storage or transportation.

5. PROCEDURES FOR REACHING A FINAL PERMIT DECISION

DTSC is soliciting public comment on this proposed decision. The public comment period will start on April 30, 2015 and end on August 3, 2015. Please submit your comments to:

Alejandro Galdamez
700 Heinz Avenue
Berkeley, California 94710
Alejandro.Galdamez@dtsc.ca.gov

We also invite you to a public meeting/hearing that is going to take place on June 3, 2015 at 6:30 p.m., at Arroyo Seco Elementary School, Multipurpose Room. During the public meeting DTSC will explain the proposed project and answer questions that may arise from all interested parties in the audience prior to the hearing. During the hearing, which will start around 7:00 p.m., DTSC will accept public comments through the use of a court recorder. DTSC will consider all public comments received during the public comment period, including those received at the public hearing, prior of making a final permit decision.

If you have questions about this project please contact the following staff:

Project Manager	Public Participation Specialist	Public Information Officer
Alejandro Galdamez 700 Heinz Avenue Berkeley, California 94710 Alejandro.Galdamez@dtsc.ca.gov ov (510) 540-3933	Nathan Schumacher 8800 Cal Center Drive Sacramento, California 95826 Nathan.Schumacher@dtsc.ca.gov (916) 255-3650 Toll Free (866) 495-5651	Jorge Moreno Public Information Officer I Jorge.Moreno@dtsc.ca.gov Media contact (916) 327-4383

If you are a member of the media please contact the Public Information Officer.

You may review the proposed Draft RCRA hazardous waste facility permit and all supporting documents at the following locations:

Civic Center Library 1188 South Livermore Avenue Livermore, California 94550 (925) 373-5500 Open: Monday through Thursday Hours: 10:00am to 9:00 pm	LLNL Visitor Center Reading Room 7000 East Avenue Livermore, California 94550 (925) 423-3272 Open: Tuesday through Friday Hours: 1:00pm to 4:00pm	Department of Toxic Substances Control Berkeley Regional Office Filing Room 700 Heinz Avenue Berkeley, California 94710 (510) 540-3800 Open: Monday through Friday Hours: 8:00am to 5:00pm
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Please contact the Berkeley Regional Office Filing Room in order to make arrangement.

Information is also available in electronic form at:

<http://www.envirostor.dtsc.ca.gov/public/>. Enter "Livermore" as the City, scroll down and select the red circle with "Lawrence Livermore National Lab." Click on the link "Activities" to view documents

Notice for the Hearing Impaired:

TDD users may obtain additional information by using the California State Relay Service at 711 or (800) 735-2929 (TDD). Please ask them to contact Richard Perry at (510) 540-3910 regarding Lawrence Livermore National Laboratory (main site).

6. FIGURES

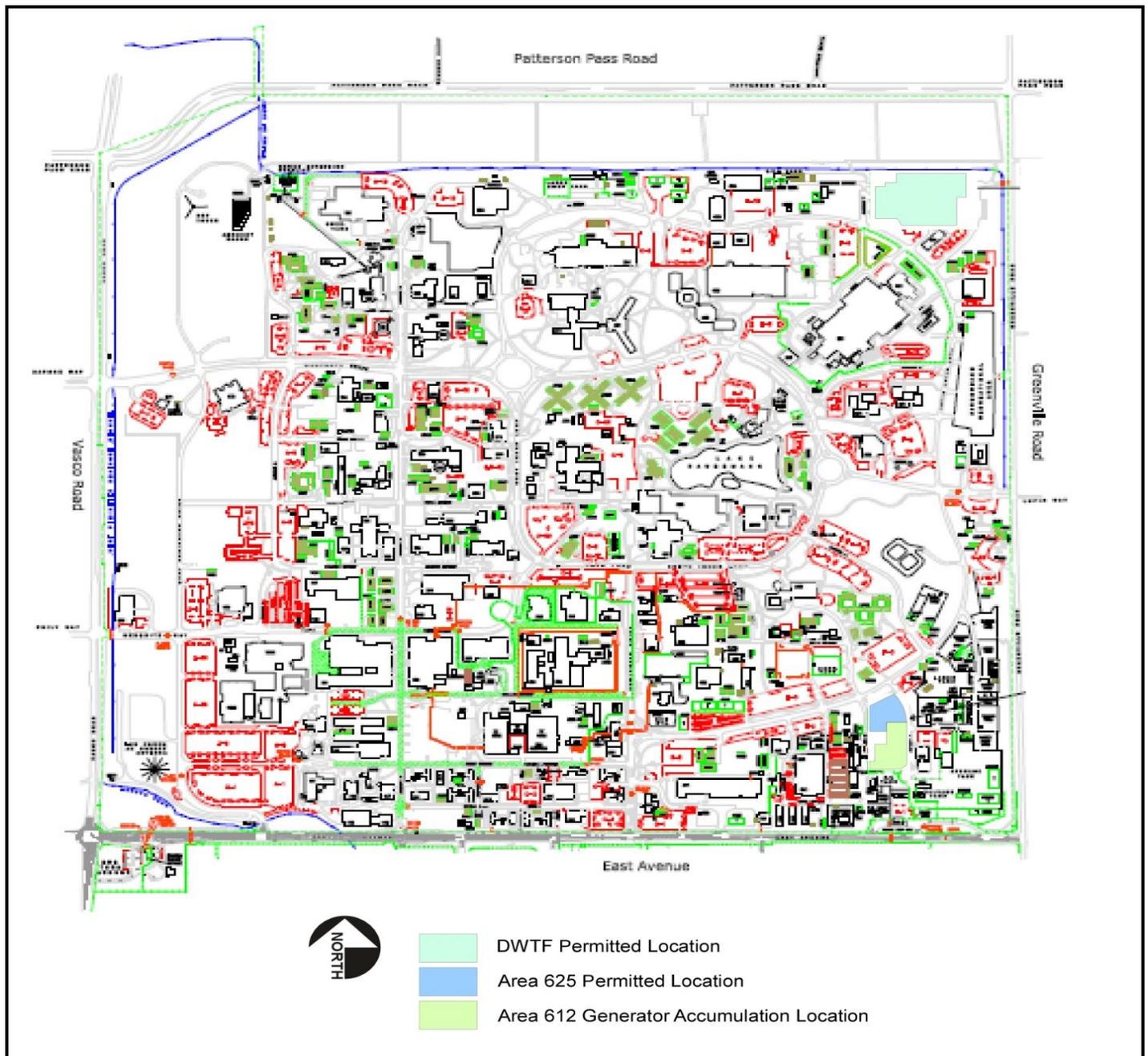


Figure 1: DWTF, Area 625, and Area 612 Location

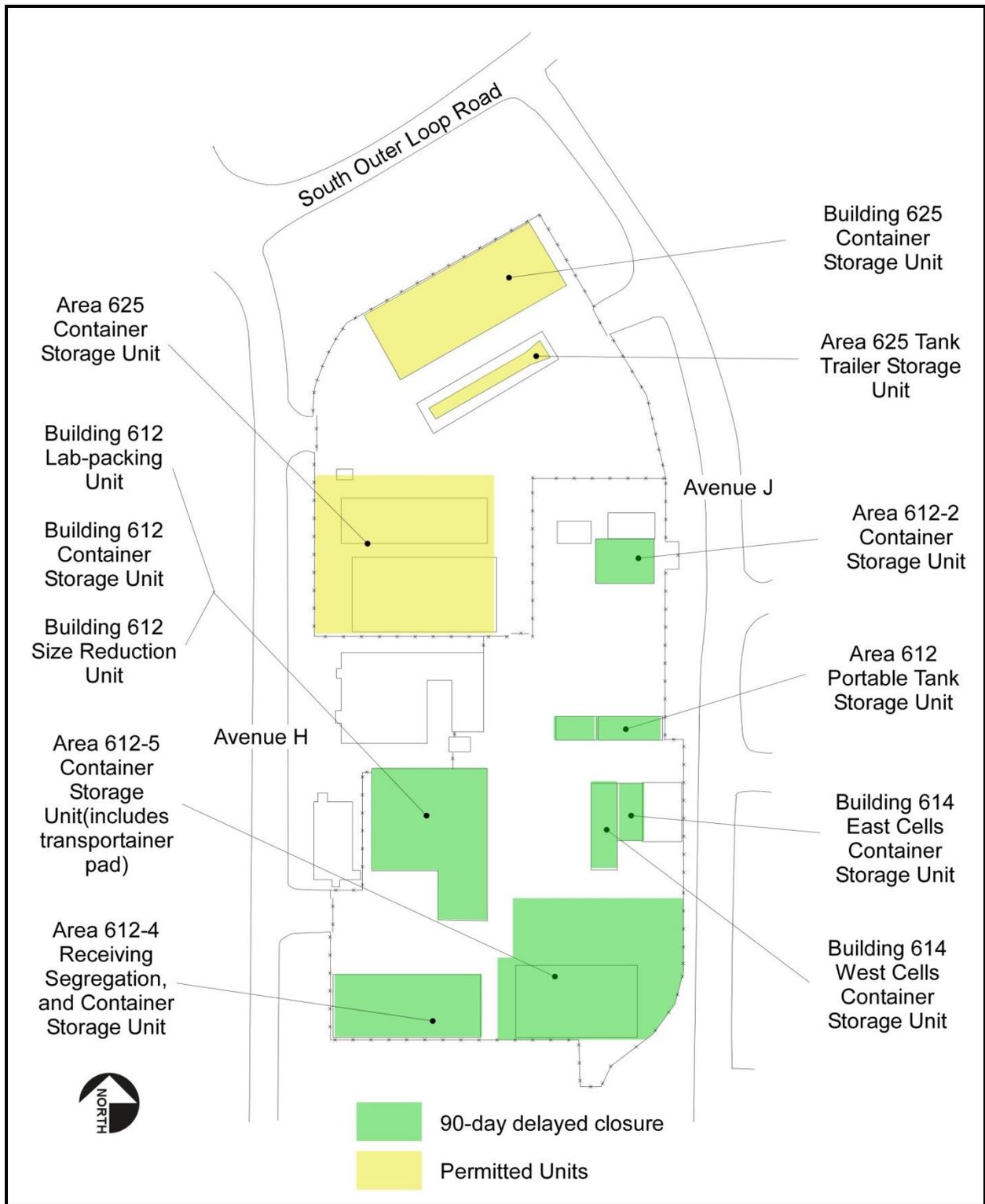
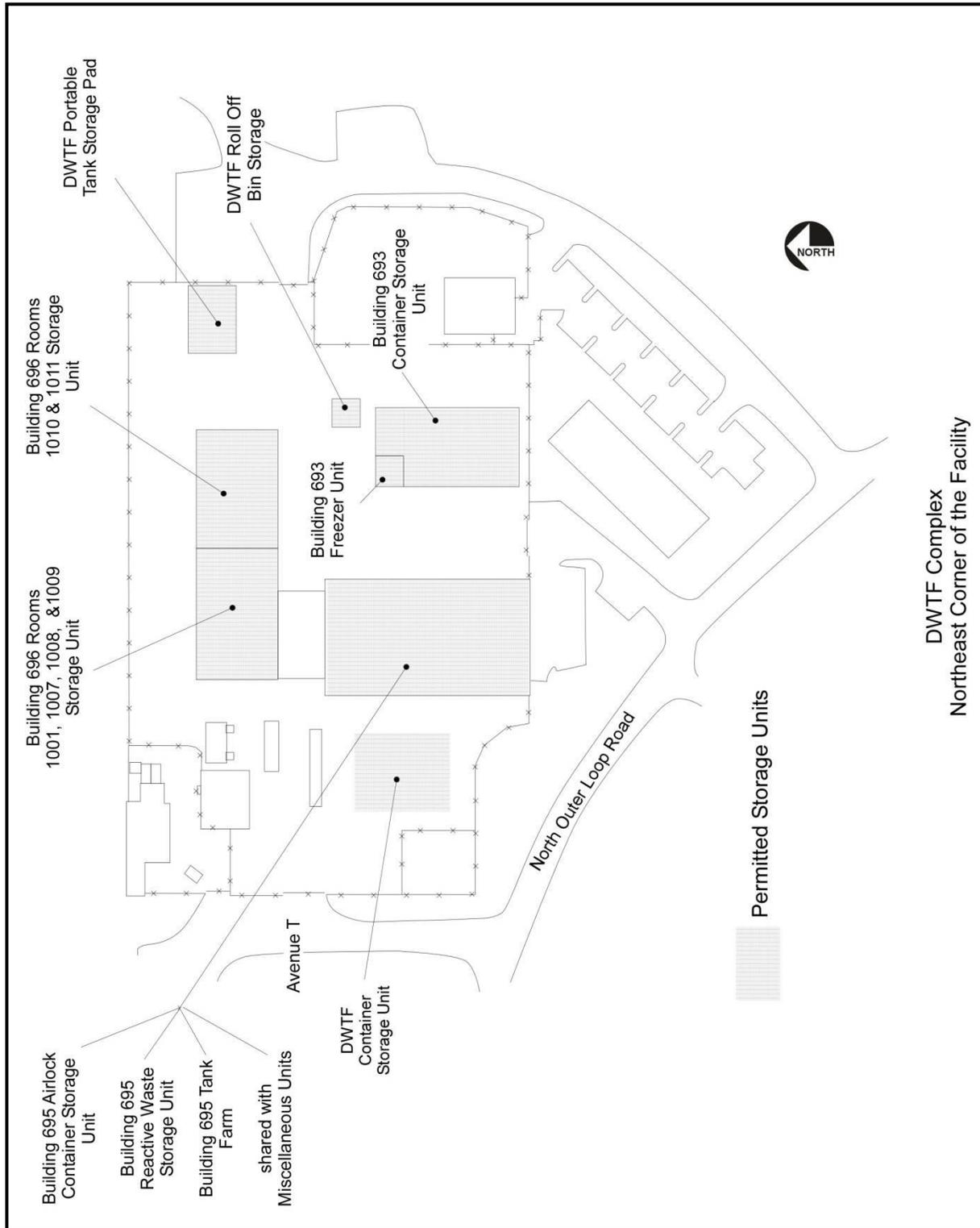


Figure 2: Area 625 and Area 612



DWTF Complex
Northeast Corner of the Facility

Figure 3: DWTF Area