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Interim Essential and Support Drawing List for
K Basins

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7. Abstract

This document presents a list of essential and support drawings that have been identified as required to achieve the mission objectives of K Basin and are an integral part of the in-progress K Basins system baselining effort. The drawings listed in the appendix are those drawings required to safely operate K Basins. These drawings will be authenticated through the field verification and design reconstitution programs to ensure that these identified drawings are consistent with design requirements.

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INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

for

K BASINS

December 15, 1994

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1.0 PURPOSE

This document establishes the list of "essential" and "support" drawings that are necessary to achieve the mission objectives for safe operation and are an integral part of the in-progress K Basins system baselining effort. This interim drawing list will be authenticated through the "field verification program"¹ to ensure that each identified drawing accurately reflects the actual existing physical configuration and that the design is verified and validated, through a "design reconstitution program,"² to ensure that these identified drawings are consistent with design requirements.

This interim list identifies the drawings required for operations during a transition period that allows the current drawing condition to be used until these drawings have been validated through the programs mentioned above. After authentication, these validated drawings (i.e., as-built) that reflect a technical consistency among the design requirements, physical configuration, and documentation shall be formally released into the engineering release system database (ERSDB). Therefore, before using drawings on the interim list, a verification, commensurate with safety and operating requirements should be performed until these drawings are verified and validated by the two programs of field verification and design reconstitution.

2.0 SCOPE

The interim drawing list applies to the SSCs required to support the current operating objectives and supersedes the drawing list established in WHC-SD-NR-TI-054, "100K Area Essential and Support Drawing List." The interim list of drawings and the validated accuracy condition of these drawings will be upgraded to an as-built status when processed through the two programs of field verification and design reconstitution.

3.0 DEFINITIONS

as-built drawings - Those engineering drawings that have been validated through field inspection to reflect the actual (as-constructed/as-installed) configuration of an SSC and verified to be consistent with the design requirements.

essential drawings - Those engineering drawings identified by the facility staff as necessary to directly support the safe operation of the facility (see WHC-CM-6-1, Standard Engineering Practices, Glossary).

general drawings - Those engineering drawings identified by the facility staff as historical, or are not frequently used in the operation or maintenance of the facility, and are not identified as either essential or support drawings (see WHC-CM-6-1, Glossary).

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¹WHC-SD-SNF-FVP-001, "Field Verification Program for K Basins," dated December 2, 1994.

²WHC-SD-SNF-DRP-001, "Design Reconstitution Program for K Basins," scheduled for issue in December, 1994.

support drawings - Those engineering drawings identified by the facility staff that further describe the design details of equipment, components, or systems shown on the essential drawings or are frequently used by the support staff (see WHC-CM-6-1, Glossary).

4.0 DRAWING SELECTION CRITERIA

Essential and support drawings identified in this document are selected in accordance with the criteria defined in WHC-CM-6-1, EP-1.3, "Engineering Drawing Requirements." All other K Basins drawings not listed in the Appendix of this document are categorized as "general" drawings and are not frequently used in the conduct of operations.

5.0 REVISION

The interim drawing list will be updated when drawings are: 1) added or deleted to reflect the required systems and components, and 2) authenticated by the field verification and design reconstitution programs and released as an as-built drawing.

6.0 REFERENCES

WHC-CM-6-1, Standard Engineering Practices, EP-1.3, Engineering Drawing Requirements."

WHC-SD-NR-TI-054, "100K Area Essential and Support Drawing List."

WHC-SD-SNF-DRP-001, "Design Reconstitution Program for K Basins"
(to be issued 12/94).

WHC-SD-SNF-FVP-001, "Field Verification Program for K Basins."

APPENDIX

INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

The drawings listed in this appendix identify existing and future drawings that reflect systems and components necessary for the safe operation of K Basins. This drawing list is organized by major systems and provides information on drawing number, revision status, drawing category (E = essential; S = support), drawing title, building location, and a justification for inclusion into the Interim Essential and Support Drawing List.

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APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Basin Water System					
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection
H-1-51837*	1	0	E†	KE Fuel Storage Basin P&ID	(All sheets) Piping and Instrument Diagram of the K East Fuel Storage Pool containing the Fuel Pool Cleanup, Cooling, Make-up, and Drain Piping and Instruments; Sampling, pH, and level instrumentation. These drawings are deemed essential because of their importance to the safe operation of the Fuel Storage Pool.
H-1-51837*	2	0	E	KE Fuel Storage Basin P&ID	
H-1-51837*	3	0	E	KE Fuel Storage Basin P&ID	
H-1-51837*	4	0	E	KE Fuel Storage Basin P&ID	
H-1-51837*	5	0	E	KE Fuel Storage Basin P&ID	
H-1-51837*	6	0	E	KE Fuel Storage Basin P&ID	
H-1-NEW*	1-6	0	E	KW Fuel Storage Basin P&ID	P&ID for K West Fuel Storage Pool; basis same as H-1-51837
H-1-34663*	1	9	E	KE Electrical Control Diagram	(All sheets) Electrical control diagram for K East Basin; it is used as a troubleshooting tool and an operator aid. It is essential because it is mission critical.
H-1-34663*	2	4	E	KE Electrical Control Diagram	
H-1-34663	3	0	E	KE Electrical Control Diagram	
H-1-34663*	4	0	E	KE Electrical Control Diagram	Ladder/control diagrams for 105KE recirculation pumps, skimmer, chillers, decapper and remaining pumps, motors, and 30 ton crane.
H-1-34663*	5	0	E	KE Electrical Control Diagram	
H-1-34717*	1	8	E	KW Electrical Control Diagram	(All sheets) Electrical control diagram for K West Basin; basis is the same as H-1-34663, above.

* Denotes drawings common to one or more systems.

† E = Essential drawing; S = Support drawing

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Basin Water System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-34717	2	TBD	E	KW Electrical Control Diagram	Ladder / control diagrams for 105KW recirculation pumps, skimmer, chillers, decapper, 30 ton crane, and other pumps and motors.	105KW
H-1-34717	3	TBD	E	KW Electrical Control Diagram		105KW
H-1-34717*	4	TBD	E	KW Electrical Control Diagram		105KW
H-1-34717*	5	TBD	E	KW Electrical Control Diagram		105KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Basin Instrumentation System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-51837*	1-6	0	E	KE Fuel Storage Basin P&ID	(All sheets) Piping and instrument drawing of the KE fuel storage basin, showing instrumentation for water level, temperature, pH; level alarms; sampling stations.	105KE
H-1-NEW*	1-6	0	E	KW Fuel Storage Basin P&ID	P & ID for K West; basis same as H-1-51837.	105KW
H-1-34663*	1	9	E	KE Electrical Control Diagram	105KE Annunciator elementary diagram.	105KE
H-1-34717*	1	8	E	KW Electrical Control Diagram	105KW Annunciator elementary diagram.	105KW
H-1-NEW	1	0	E	Emergency Communications System Block & Elementary Diagrams	Emergency communications system block & elementary diagrams.	
H-1-34663*	TBD	0	E	105 KE 480 Volt Motor Control Diagrams	Control diagrams for all major equipment with automatic and manual controls	105KE
H-1-34717*	TBD	0	E	105 KW 480 Volt Motor Control Diagrams		105KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Fuel Handling System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80104	1	1	E	Isolation Barriers	Drawings depict Safety Class 1 components.	105KE/ KW
H-1-80104*	2	1	E	Isolation Barriers		105KE/ KW
H-1-80104	3-6	1	E	Isolation Barriers		105KE/ KW
H-1-42659	1-2	1	E	Isolation Barriers		105KE/ KW
H-1-NEW	TBL	0	S	Railcar Control	Drawing depicts Safety Class 1 component.	105KE/ KW
H-1-NEW	TBD	0	S	Sludge Pumping System	Provides for maintenance, repair, and lock and tag operations.	105KE
H-1-NEW	TBD	0	S	OH-142 MK 1 Cask	CVI drawing only.	105KE/ KW
H-1-34762	1	1	S	Canister Storage Racks	Drawings depict Safety Class 1 components.	105KW
H-1-34763	1	1	S	Canister Storage Racks		105KW
H-1-34764	1	1	S	Canister Storage Racks		105KW
H-1-34651	1	1	S	Canister Storage Racks		105KE
H-1-34652	1	1	S	Canister Storage Racks		105KE
H-1-34658	1	1	S	Canister Storage Racks		105KE
H-1-34677	1	2	S	Canister Hook	Hooks used for moving fuel; drawings are for fabrication of replacements.	105KE/ KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Fuel Handling System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-34706	1	4	S	Offset Canister Hook	Hooks used for moving fuel; drawings are for fabrication of replacements.	105KE/ KW
H-1-34707	1-2	4	S	Offset Canister Hook		105KE/ KW
H-1-44932	1	0	S	Canister Handling Hook		105KW
H-1-46215	1-6	4	S	MK-II Canister	Design drawings for fabrication.	105KE/ KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Radiation Protection System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-34663*	1	9	S	Electrical Control Diagrams	Shows the schematic of the connections to the annunciator system, alarm relays, sirens, and beacon lights for the KE basin.	105KE
H-1-34663*	2	2	S	Electrical Control Diagrams		
H-1-34717*	1	6	S	Electrical Control Diagrams	Shows the schematic of the connections to the annunciator system, alarm relays, sirens, and beacon lights for the KW basin.	105KW
H-1-51343	1	1	E	Spent Fuel Storage Basin Area Radiation Monitor	Shows the locations of the radiation detectors and monitoring equipment, and mounting details.	105KE 105KW
H-1-51343	2	1	E	Spent Fuel Storage Basin Area Radiation Monitor		
H-1-51832	1-4	0	S	K Area Programmable Radiation Monitoring System Electrical Connection Diagram	Shows the electrical connections in the Radiation Monitoring System.	105KE 105KW
H-1-34669	1	5	S	Instrumentation Panels A & B Arrangement & Rear Panel Wiring	Shows wiring details of connections to the annunciator system.	105KE
H-1-34725	1	6	S	Instrument Panel Arrangement & Rear Panel Wiring	Shows wiring details of connections to the annunciator system.	105KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Environmental Protection / Waste Handling System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-NEW	1	0	E	Outfall & Flow Monitoring Diagram 1904/1908/105K	Depicts equipment configuration used for licensing permission and effluent volume considerations.	183KE
H-1-NEW	1	0	E	100K Environmental Air Monitoring		183KE
H-1-NEW	1	0	S	100K Rad. Waste Packaging, Handling, Shipping Facility		183KE
H-1-NEW	1	0	E	100K Process Ventilation		183KE 190KE
H-1-NEW	1	0	S	100K Ground Water Monitoring	Contains well data, location, and driller log.	100K
H-1-NEW	2	0	S	100K Ground Water Monitoring		100K

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Building Structures						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80104*	2	1	E	Basins Discharge Chute - Isolation Barriers	Depicts Safety Class 1 component.	105K
H-1-21001	1	9	S	Architectural Key Plan at El. 0-0	The following structural drawings are not required to directly support the safe operation of the facilities and are provided for information only.	105K
H-1-21007	1	8	S	Architectural Flr Plan Elev 0'0" Stor & XFR		105K
H-1-21024	1	6	S	Architectural Elevations		105K
H-1-21035	1	1	S	105KW Building Perspective View (105KE similar to 105KW)		105K
H-1-21015	1	5	S	Architectural Roof Plan		105K
H-1-21071	1	7	S	Structural Concrete Sects Below Elev. 0'0" Storage & XFR		105K
H-1-21087	1	2	S	Structural Concrete Water Stops		105K
H-1-20919	1	1	S	Storage Basin Area, Sub-Basin Drainage Sections		105K
H-1-20925	1	1	S	Storage Basin Area Sub-Basin Drainage Piping		105K
H-1-21102	1	8	S	Structural Steel Plans, sections & Details Transfer Area		105K
H-1-21103	1	5	S	Structural Steel Framing Plan Storage Area		105K
H-1-21104	1	4	S	Structural Steel Sections & Details Process Area, Office Side		105K
H-1-21105	1	6	S	Structural Steel Plans, Sections & Details Process Area, Office Side		105K
H-1-21273	1	4	S	Mechanical Equipment 30 Ton Crane Transfer Area Specification Drawing		105KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Building Structures						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-34967	1	1	S	Structural Plan Elevation, Details & Sections (metal roof over basin)		105KW
H-1-25134	1	9	S	Control Building Basement Floor Plan		165K
H-1-25135	1	10	S	Control Building Operating Floor Plan		165K
H-1-25137	1	6	S	Control Building Roof Plan & Details		165K
H-1-25306	1	4	S	Control Bldg Concrete Roof Plan		165K
H-1-25200	1	6	S	River Pump House Floor & Foundation Plans		181K
H-1-25147	1	7	S	Head-House First Floor Plan		183K
H-1-25118	1	2	S	Head House Roof Plan and Details		183K
H-1-25126	1	5	S	Main Pump House Basement Plan		190K
H-1-25127	1	6	S	Main Pump House Operating Floor Plan		190K
H-1-25288	1	7	S	Main Pump House Concrete - Operating Floor Plan		190K
H-1-25296	1	6	S	Main Pump House Steel Framing, Plans, Sections		190K
H-1-25171	1	9	S	Service Building Floor Plans		1717K
H-1-25172	1	2	S	Service Buildings Elevations		1717K
H-1-25174	1	9	S	Service Buildings, Roof Plan & Details		1717K
H-1-24927	1	7	S	Service Building, Wall Sections & Details		1717K

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Infrastructure						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-51837*	6	0	E	105KE Fuel Storage Basin, P&ID, Compressed Air	Flow diagram showing sequence of piping, valving, pressure vessels ID numbers, compressors, etc. Compressed air is required to maintain air pressure on the submerged sludge pump. The system, if operated, should have adequate one line drawings to operate safely and effectively.	105KE
H-1-NEW*	1	0	E	105KW Fuel Storage Basin, P&ID, Compressed Air	Flow diagram showing sequence of piping, valving, pressure vessels, compressors, etc; need adequate drawings to operate safely and effectively.	105KW
H-1-NEW	1	0	E	165/190KE, EFD, Compressed Air system	Flow diagram describing compressed air system.	190KE
H-1-NEW	1	0	E	183KE, EFD, Compressed Air system	Flow diagram describing compressed air system.	183KE
H-1-25080	1-2		S	Sanitary sewer systems	This drawing shows all site septic sewer systems. New state septic permits require drawings.	All
H-1-NEW	1-2	0	S	Site Drainage Sewers, NPDES Potential Discharges	Flow diagram identifying the source, path, status (plugged / deactivated / active), size of drain, and flow path to the edge of a source building, potentially or actually feeding into the 1904 outfall site drainage sewer.	1904K

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Infrastructure					
Drawing No.	Sht.	Rev.	Type	Title	Bldg. #
H-1-51837	7	0	E	P & ID Glycol Boiler Heating System	Flow diagram showing sequence of piping, valving, pressure vessels ID numbers, compressors, etc. The system should have adequate one line drawings to operate safely & efficiently.
H-1-NEW	TBD	0	E	P & ID Glycol Boiler Heating System	

100K Area Site Plan					
Drawing No.	Sht.	Rev.	Type	Title	Bldg. #
H-1-NEW	1	0	S	100K AREA SITE PLAN	H-1 drawing of the general site layout.

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Fire Protection System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80058		0	S	Fire Protection-Site Plan	Identifies fire hydrants, post indicator valves, RFAR boxes and buildings by number. Provides overview of Fire Protection System general locations.	N/A
H-1-80061		0	S	Fire Protection-Electrical	Provides electrical diagrams for trouble shooting and prompt repair of the alarm and detection system.	165KE
H-1-80080		0	S	Fire Protection-Mechanical	Provides piping plans for maintenance and emergency repairs and lock and tag operations.	105KE
H-1-80092		0	S	Fire Protection-Electrical	Provides electrical diagrams for trouble shooting and prompt repair of the alarm and detection system.	105KE
H-1-80083		0	S	Fire Protection-Mechanical	Provides piping plans for maintenance and emergency repairs and lock and tag operations.	105KW
H-1-80095		0	S	Fire Protection-Electrical	Provides electrical diagrams for trouble shooting and prompt repair of the alarm and detection system.	105KW
H-1-80059		0	S	Fire Protection-Partial Distribution Piping Plan	Provides partial underground distribution piping plans for maintenance and emergency repairs and lock and tag operations.	1717K

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Electrical System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80022	1		E	One Line Diagram 480V. Switchgear	One line diagrams essential for safe operation.	105 KE
H-1-80022	3		E	One Line Diagram MCC # 1		105 KE
H-1-80022	4		E	One Line Diagram MCC # 2A		105 KE
H-1-80022	5		E	One Line Diagram MCC # 2B		105 KE
H-1-80022	6		E	One Line Diagram MCC # 3		105 KE
H-1-80022	7		E	One Line Diagram MCC # 4		105 KE
H-1-80022	8		E	One Line Diagram MCC #5		105 KE
H-1-80025	1		E	One Line Diagram 480 V. Switchgear MCC 4 & 5		183 KE
H-1-80025	2		E	One Line Diagram MCC # 4		183 KE
H-1-80025	3		E	One Line Diagram MCC # 5		183 KE
H-1-80026	1		E	Diagram 480 Stat. Serv. Switchgear		1706 KER
H-1-80026	2		E	One Line Diagram MCC # 4 & # 5		1706 KER
H-1-80026	4		E	One Line Diagram MCC # 9		1706 KER
H-1-80026	5		E	One Line Diagram MCC # 10		1706 KER
H-1-80028	1		E	PNLBD Sched. For A & B	Depicted information for maintenance and lock and tag operations.	105 KE
H-1-80028	2		E	PNLBD Sched. For C & D		105 KE

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Electrical System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80028	3		E	PNLBD Sched. For E, F, & G		105 KE
H-1-80028	4		E	PNLBD Sched. For H & J		105 KE
H-1-80028	5		E	PNLBD Sched. For K, L, & M		105 KE
H-1-80028	6		E	PNLBD Sched. For N, R, & U		105 KE
H-1-80028	7		E	PNLBD Sched. For X & Y		105 KE
H-1-80028	8		E	PNLBD Sched. For B, MD-A, MD-B, & MD-C		105 KE
H-1-80028	9		E	PNLBD Sched. For H & Y		165 KE
H-1-80028	10		E	PNLBD Sched. For X & Z		165 KE
H-1-80028	11		E	PNLBD Sched. For J & K		190 KE
H-1-80028	12		E	PNLBD Sched. For L & M		190 KE
H-1-80028	13		E	PNLBD Sched. For A & B		183 KE
H-1-80028	14		E	PNLBD Sched. For BB, & BX		183 KE
H-1-80028	15		E	PNLBD Sched. For C, D, E, & EA		183 KE
H-1-80028	16		E	PNLBD Sched. For F, & G		183 KE
H-1-80028	17		E	PNLBD Sched. For 183-10		183 KE
H-1-80031	1		E	One Line Diagram 13.8/4.16 KV Switching	One line diagrams essential for safe operation.	165 KW
H-1-80032	1		E	One Line Diagram 480 VOLT Switchgear		105 KW
H-1-80032	3		E	One Line Diagram MCC # 1		105 KW
H-1-80032	4		E	One Line Diagram MCC # 2A		105 KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Electrical System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80032	5		E	One Line Diagram MCC # 2B		105 KW
H-1-80032	6		E	One Line Diagram MCC # 3		105 KW
H-1-80032	7		E	One Line Diagram MCC # 4		105 KW
H-1-80032	8		E	One Line Diagram MCC # 5		105 KW
H-1-80033	1		E	One Line Diagram 480 VOLT Switchgear		165 KW
H-1-80033	8		E	One Line Diagram BR. AUX. MCC # 6		165 KW
H-1-80036	1		E	PNLBD Sched. For A & B	Same as H-1-80028	105 KW
H-1-80036	2		E	PNLBD Sched. For C & D		105 KW
H-1-80036	3		E	PNLBD Sched. For E, F, & G		105 KW
H-1-80036	4		E	PNLBD Sched. For H & J		105 KW
H-1-80036	5		E	PNLBD Sched. For K, L, & M		105 KW
H-1-80036	6		E	PNLBD Sched. For N, R, & U		105 KW
H-1-80036	7		E	PNLBD Sched. For X & Y		105 KW
H-1-80036	8		E	PNLBD Sched. For B, MD-A, & MD-B		105 KW
H-1-80036	9		E	PNLBD Sched. For H & Y		165 KW
H-1-80036	10		E	PNLBD Sched. For X & Z		165 KW
H-1-80036	11		E	PNLBD Sched. For J & K		190 KW
H-1-80036	12		E	PNLBD Sched. For L & M		190 KW

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Water Supply and Distribution System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-25523	1		E	Service Water Flow Diagram	Piping and Instrument Drawing (P&ID) of the service water system identifying piping, flow path, and location. The drawing is essential for operator control of the system.	N/A
H-1-25524	1		E	Potable Water Flow Diagram	Piping and Instrument Drawing (P&ID) of the potable water system. The drawing is essential for operator control of the system.	N/A
H-1-25537	1		E	Raw Water / Water Treatment Flow Diagram	Piping and Instrument Drawing (P&ID) of the Raw water and Water Treatment systems. The drawing is essential for operator control of the system.	N/A

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Water Treatment / Chemical Handling System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-80048	1	1	E	Separan Chemical Feed System P & ID	Provides piping plans for maintenance, emergency repairs, and lock and tag operations.	183KE
H-1-NEW	1	0	E	Separan Control System	Provides control theory for trouble shooting and prompt repair of transfer pump, injection pumps, and magnetic flow meter. Identifies proper locations for lock and tag operations of live circuits.	183KE
H-1-80047	1	1	E	Alum Chemical Feed System P & ID	Provides piping plans for maintenance, emergency repairs, and lock and tag operations.	183KE
H-1-NEW	1	0	E	Alum Control System	Provides control theory for trouble shooting and prompt repair of injection pumps and magnetic flow meter. Identifies proper locations for lock and tag operations of live circuits.	183KE
H-1-80046	1	1	E	Chlorination System P & ID	Provides piping plans for maintenance, emergency repairs, and lock and tag operations.	183KE
H-1-NEW	1	0	E	Chlorination Control System	Provide control theory for trouble shooting and prompt repair of chlorine pump. Identifies proper locations for lock and tag operations of live circuits for chlorine pump, exhaust fan, and dedicated circuits for chlorine analyzers.	183KE

APPENDIX - INTERIM ESSENTIAL AND SUPPORT DRAWING LIST

Water Treatment / Chemical Handling System						
Drawing No.	Sht.	Rev.	Type	Title	Basis For Selection	Bldg. #
H-1-NEW*	1	0	E	183 Lab Instr., Elec. & Flow Diagram	Identifies flow path of water samples through proper instrumentation. Provides electrical diagrams and correct circuits for trouble shooting and prompt repair of equipment.	183KE
H-1-NEW	1	0	E	Backwash P & ID/Flow	Provides piping plans for maintenance, emergency repairs, and lock and tag operations.	183KE 190KE