

**U. S. DEPARTMENT OF ENERGY**

**NATIONAL NUCLEAR SECURITY  
ADMINISTRATION**

**NATIONAL SECURITY CAMPUS**

**KANSAS CITY PLANT**

**SPILL CONTROL PLAN**

June 2014

OPERATED BY:

HONEYWELL, FEDERAL MANUFACTURING  
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# SPILL CONTROL PLAN

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## ***DEFINITIONS***

“Ambient air” - means any air that is not completely enclosed in a building or structure and that is over and around a facility.

“Containment” - means a properly designed, constructed, and maintained structure to contain a hazardous substance. A release into or onto containment is not a release to the environment. (Department of Energy guidance; page 14, Release Reporting Workshop).

“Environment” - means navigable waters, any surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air.

“Extremely hazardous substance” - means those substances listed in 40 CFR 355 Appendix A and B.

“Facility” – under CERCLA means (1) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock or (2) any site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise come to be located. (40 CFR 302.3)

“Facility” – under SARA means all buildings, equipment, structure and other stationary items that are located on a single site or on contiguous or adjacent sites and which are owned by the same person. (40 CFR 355.20)

“Hazardous substance” - means those substances listed in 40 CFR 302.4, Table 302.4. It should be noted that the term hazardous substance does not include petroleum or any fraction thereof which is not specifically listed as a hazardous substance for CERCLA reporting but is required under SARA regulations.

“Immediately” - has been defined in the courts as within 15 minutes of a responsible official having knowledge that the spill or release has exceeded the reportable quantity.

“Initial Responder” - those responders at the operations level who respond to releases for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are level 2 or 3 trained to respond in a fashion to prevent the spread of the release and stop the release.

Oil-filled Manufacturing Equipment - Oil-filled manufacturing equipment stores oil only as an ancillary element of performing a mechanical or chemical operation to create or modify an intermediate or finished product. Examples of oil-filled manufacturing equipment may include reaction vessels, fermenters, high pressure vessels, mixing tanks, dryers, heat exchangers, and distillation columns. Under the SPCC rule, flow-through process vessels are generally considered oil-filled manufacturing equipment since they are not intended to store oil.

Oil-filled Operational Equipment - Oil-filled operational equipment includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment does not include manufacturing equipment. Examples of oil-filled operational equipment include hydraulic systems, lubricating systems (including lubricating systems for pumps, compressors, and other rotating equipment), gear boxes, machining coolant systems, heat transfer systems, transformers, other electrical equipment, and other systems containing oil to enable operation.

Permanently closed - means any container or facility for which:

- (1) All liquid and sludge has been removed from each container and connecting line; and
- (2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure.

“Qualified Container” – Container with >55 gallons of oil.

“Release” - means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment.

“Reportable quantity” - means those amounts enumerated in 40 CFR 302.4, Table 302.4 for CERCLA and 40 CFR 355.20, Appendix A for SARA. The Clean Water Act mixture rule can be used to determine the amount of material released for F and K listed wastes. (Page 13463 in the April 4, 1985 Federal Register)

The September 10, 1992, Federal Register (57 FR 41586) states that releases to the environment would not include releases within contained areas, such as concrete floors or impervious containment areas, unless the release goes beyond the contained areas.

## *ACRONYMS*

BMP – Best Management Practices

CERCLA – Comprehensive Environmental Response Compensation Liability Act

CFR – Code of Federal Regulations

CPZ – Center Point Zimmer

CUP – Central Utility Plant

CWA – Clean Water Act

D/# – Department #

DOE – Department of Energy

ERO – Emergency Response Organization

EPCRA – Emergency Planning Community Right-to-know Act

FM&T – Federal Manufacturing & Technologies

FR – Federal Register

GSA – General Services Administration

HAZWOPER – Hazardous Waste Operations and Emergency Response

HS&E – Health Safety & Environment

HVAC – heating, ventilation, and air conditioning

IWPF – Industrial Wastewater Pretreatment Facility

KCMO – Kansas City Missouri

KCP – Kansas City Plant

LEPC – Local Emergency Planning Committee

MDNR – Missouri Department of Natural Resources

M&O – Management & Operations

NSC – National Security Campus

NFPA – National Fire Protection Association

NNSA – National Nuclear Security Administration

NPDES – National Pollutant Discharge Elimination System

OPA – Oil Pollution Act of 1990

OSHA – Occupational Safety and Health Administration

POTW – publicly owned treatment works

RCRA – Resource Conservation and Recovery Act

SARA – Superfund Amendments and Reauthorization Act

SPCC – Spill Prevention Control and Countermeasures

TSCA – Toxic Substances Control Act

**SPILL CONTROL PLAN COMPLIANCE INSPECTION  
REVIEW PAGE**

Section 1.1 of this plan addresses the various regulatory requirements that are addressed by the Spill Control Plan

In accordance with 40 CFR 112.3 (b) preparation and implementation of a Spill Prevention, Control and Countermeasure Plan (SPCC Plan) is required for NNSA operations at the National Security Campus Kansas City Plant. In addition, as required under 40 CFR 112.5 this plan will be reviewed at least once every five years. As a result of a review or evaluation, NNSA will amend the SCP within six months of the review when there is a change in the facility design, operation, construction, or maintenance that materially affects its potential for a discharge. Any significant amendments to the plan will be certified by a Professional Engineer.

**Review Dates**

1. December 5, 2012
2. June 30, 2014

**Reviewer**

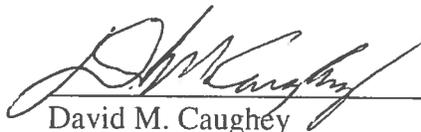
Mike Stites / Paul Kochan  
Mike Stites / Jim Tucholski

***MANAGEMENT APPROVAL***

This plan is designed to implement the requirements of various existing spill control laws and regulations. The procedures and practices described in this plan have the approval and support of management to be implemented as herein described.

  
\_\_\_\_\_  
Don J. Fitzpatrick  
Director, HSE&F  
Honeywell FM&T

*6/26/14*  
\_\_\_\_\_  
date

  
\_\_\_\_\_  
David M. Caughey  
Environmental Manager  
NNSA KCFO

*6/26/2014*  
\_\_\_\_\_  
date

**DEPARTMENT RESPONSIBLE FOR THE SPILL PREVENTION CONTROL  
AND COUNTERMEASURES PLAN:**

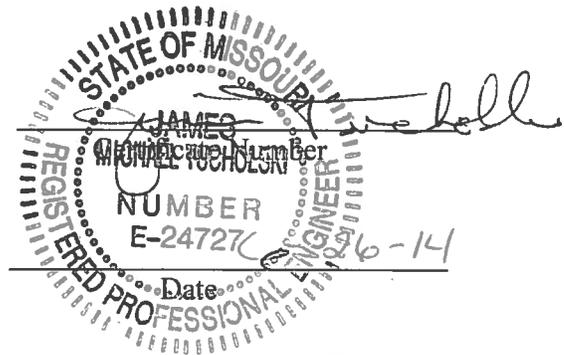
Environmental Compliance

***ENGINEER'S CERTIFICATION***

This plan has been reviewed and is hereby certified by a Registered Professional Engineer. By means of this certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR 112,
- Either myself or my agent has examined the facility,
- This plan has been prepared in accordance with good engineering practice, including consideration of industry standards and the requirements of the rule,
- Procedures for required inspections and testing have been established, and
- This plan is adequate for the facility.

J. M. Tucholski



## **Section 1.0**

### **Introduction**

## **1.0 Introduction**

### **1.1 Overview and Use of Spill Control Plan**

The Spill Control Plan is specific to operations under the control of NNSA and its Management & Operating (M&O) contractor at the NNSA National Security Campus (NSC). The NNSA Spill Control Plan also addresses other related regulatory requirements to develop spill response plans (see Section 1.4). As discussed below the NSC is owned by a private entity and leased by the GSA on behalf of the NNSA. The facility owner operates and maintains certain functions at the facility which are regulated under 40 CFR 112. Due to the separate nature of owner and NNSA operations separate Spill Prevention Control and Countermeasures (SPCC) Plans have been developed that address the requirements of 40 CFR 112 for the NSC. Section 2.4.1, SPCC Guidance for Regional Inspectors (EPA 2013) addresses the development of one or more plans for a given facility as appropriate.

The NNSA National Security Campus NSC is owned by a development company (Center Point Zimmer (CPZ)). The General Services Administration (GSA) leases the facility on behalf of the NNSA. The facility has been designed and built to NNSA specifications in support of the manufacture of non-nuclear components for the nuclear weapon stockpile. The building and associated infrastructure (e.g., HVAC systems, cooling tower operations, boilers) is owned by CPZ and the manufacturing equipment and associated support equipment is owned by the government (NNSA). The NNSA contracts manufacturing operations under a M&O contract. Currently the NNSA's M&O contractor is Honeywell Federal Manufacturing & Technologies (FM&T), LLC. A separate standalone SPCC Plan has been developed and implemented by CPZ that addresses equipment under their control (Terracon 2012). CPZ's SPCC Plan addresses the two 8,000 gallon fuel oil storage tanks located at the Central Utility Plant (CUP), a fuel cell associated with the emergency generator, a fuel cell associated with the backup diesel fire pump, elevator hydraulic systems, oil filled electrical transformers and other locations / equipment

where oil is stored in quantities greater than or equal to 55 gallons. In the event of a significant spill associated with CPZ operations incident command would be facilitated through the NSC's Emergency Plan (DOE 2012a). FM&T's on-site spill response team will serve as the first responders for any spill event at the NSC. If the spill is associated with a CPZ activity once the spill is stabilized CPZ's spill response contractor will assume responsibility for spill response, reporting and cleanup activities. The NSC is designed, maintained, and operated to minimize the potential for spills. However, it is recognized that the potential for spills can never be completely eliminated.

The Spill Control Plan has been prepared as a comprehensive spill prevention and response plan that addresses regulatory requirements related to spill prevention and response related to NNSA operations at the NSC. The Spill Control Plan addresses the following regulations / permits:

- ✓ 40 CFR 112 – Oil Pollution Prevention (separate standalone SPCC Plans are maintained for landlord and tenant operations - see Section 1.4.1)
- ✓ 40 CFR 403.8(f)(2)(vi) – Slug Discharge Control Plan required for categorically regulated facilities
- ✓ 40 CFR 264 Subpart C and D requirements that require prevention and contingency / emergency response planning at RCRA regulated facilities
- ✓ CERCLA, SARA, and EPCRA
- ✓ Stormwater Discharge Permit – No Exposure Certification in lieu of a Missouri State Operating Permit (MSOP)
- ✓ Sanitary / Industrial Wastewater Discharge Permit

The Plan is intended to provide a comprehensive description of prevention systems and response actions that can be taken to protect personnel and minimize impact to the environment. The NSC relies on plant personnel for initial response to incidents. The Spill Control Plan's basic concept of emergency response will be to restrict the spread of a spill and mitigate its effects. This is best accomplished by securing the source of the release, containing the spill as close to the source as possible, protecting sensitive areas and removing the debris as quickly as possible.

Activation of the Spill Control Plan in a timely manner and a full working knowledge of its contents is paramount to the success of response operations. The Spill Control Plan is designed to provide a comprehensive response plan for emergency response and notification for spills associated with the operations at the NSC.

Locations within the facility where quantities of oil greater than or equal to 55 gallons are used or stored that are associated with NNSA manufacturing operations are addressed in this plan. For the most part, these uses include hydraulic oil reservoirs and oil based machine coolant reservoirs in manufacturing equipment and limited storage of drums containing 55 gallons of oil or greater. All equipment is located inside the building. Manufacturing areas of the building have been constructed without floor drains. Drums containing 55 gallons of oil are stored at the Ware Yard (secondary containment provided) or transported inside the building and located near the point of use.

In addition, KCP&L has developed and implemented a SPCC Plan for the substation located at the NSC (KCP&L 2010, 2011).

## **1.2 Scope and Limitations of the Spill Control Plan**

The Spill Control Plan has been developed specifically to address prevention and control of spills regulated under 40 CFR 112 and hazardous substances used throughout the plant. As a result the Spill Control Plan satisfies several regulatory requirements that contain spill response and cleanup provisions. Section 1.4 outlines the various regulations that the Spill Control Plan satisfies.

The majority of the spills of hazardous substances are associated with routine operations at the NSC and range in size from a small leak on a piece of equipment to a release of a few gallons. These spills are cleaned up quickly and normally pose no threat to human health or the environment. In the event of a larger incident, the NSC Emergency Plan (DOEa 2012) will be activated and the incident will be under control of the Emergency Response Organization (ERO).

The Emergency Plan incorporates into one document a description of the entire process designed to plan, prepare, and respond to an emergency at the NSC. Emergencies are significant accidents, incidents, events, or natural phenomena that seriously degrade the safety or security of Department of Energy (DOE), National Nuclear Security Administration (NNSA) facilities. Additionally, the Emergency Plan explains Federal Manufacturing & Technologies (FM&T's) policy and requirements regarding the Emergency Response Organization (ERO), facilities and equipment, offsite interfaces, notifications, training, drills and exercises, and administration of the NSC Emergency Management (EM) System. This plan uses the graded approach to emergency planning. The *Emergency Planning Hazards Survey for the NNSA NSC KCP* (DOE 2012) and the *Emergency Plan for the NNSA NSC KCP* (DOE 2012a) were also used in the development of the Spill Control Plan and applicable portions incorporated.

This Emergency Plan is updated based on changes in the Hazard Assessment and general changes in the mission of the NSC. The Emergency Plan will be republished annually or sooner if significant changes occur in the Hazard Assessment and/or the plants mission that have an impact on the Emergency Plan. The review cycle begins with the update of the NSC Hazard Assessment and concludes with a review of changes throughout the NSC. The NSC Hazard Assessment is reviewed by the NSC's HS&E organization during March and April after the submission of the SARA Title III (Section 312 Tier II) report.

### **1.3 Company Policy and Management**

It is the policy of FM&T to handle and dispose of materials in a manner that protects the environment. The NSC is operated in accordance with the regulations that require contingency plans to provide an organized and prompt response to spills or releases.

FM&T management provides the overall support for spill prevention, control, and cleanup. The actual degree of management's direct involvement will depend on the nature of the incident.

## **1.4 Applicable Laws**

This section briefly summarizes the elements of spill response that are required and regulated by law. The intent of this section is to emphasize the need for personnel to know and comply with the laws and regulations governing spill prevention and response; and to understand the possible consequences of noncompliance.

### ***1.4.1 Clean Water Act***

#### ***40 CFR 112 - Spill Prevention Control and Countermeasure Plans (SPCC)***

The Clean Water Act prohibits the discharge of oil or hazardous substances in harmful quantities into the waters of the United States. The definition is intended to apply to the release of any amount of oil, which results in the presence of a sheen on the receiving water body. The Spill Control Plan has been prepared in accordance with 40 CFR 112 which requires regulated facilities to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan to address the discharge of oil to navigable waters of the U.S. Three criteria must be met before a facility is subject to the SPCC rule. The NSC meets each of the following three criteria:

1. Facility is non-transportation related – NSC is a manufacturing facility
2. Facility has an aggregate above ground storage capacity of 1,320 gallons – NSC exceeds this threshold (boiler backup fuel tanks, emergency generator tanks, etc.).
3. Reasonable expectation of a discharge to navigable waters – determination is made based solely upon consideration of the geographic location and relation to stream and other water bodies. Manmade control structures are not included in this determination.

Owners of facilities that meet the above criteria are required to prepare a SPCC Plan. SPCC regulations contain guidelines and procedures for addressing facility drainage, storage tanks, transfer operations, inspections and records, security, and training which must be included in the SPCC plan. The law requires the “person in charge” to immediately report a discharge to the appropriate agency of the United States. The reporting requirements can be met by calling the National Response Center.

The Oil Pollution Act of 1990 (OPA90) amended Sections 311 of the CWA to require a facility to submit to EPA a facility response plan if the facility meets the substantial harm criteria identified in Appendix B. The NSC does not meet the criteria that would subject the facility to this additional requirement. Appendix B contains a copy of the certification that identifies the NSC as not meeting the applicability criteria identified as having the potential to create substantial harm to the environment.

#### ***40 CFR 403 - Categorically Regulated Facilities – Slug Discharge Control Plan***

The Spill Control Plan also satisfies the requirements of 40 CFR 403.8(f)(2)(vi) that requires Significant Industrial Users (i.e., categorically regulated facilities under the Clean Water Act) to prepare a Slug Discharge Control Plan. In addition to the Federal requirements, the Kansas City, Missouri sewer use ordinances (60-126) and the NSC's Wastewater Discharge Permit also require the development and implementation of a Slug Discharge Control Plan that addresses the following spill / accidental discharge procedures to prevent adverse impacts from accidental discharges:

- description of discharge practices and operating procedures – reference IWPF Procedures
- location of stored materials – reference Tables 3 and 4 and Figure 3
- agency notification procedures – reference Section 2.4.1.6 of this plan

The hazardous substances defined in the CWA and their associated reportable quantities are also hazardous substances under CERCLA.

#### ***1.4.2 Resource Conservation and Recovery Act (RCRA)***

As required by 40 CFR Part 262.34(a)4. generator requirements for contingency planning, whenever there is a release at a facility regulated under RCRA the Emergency Coordinator of the facility must immediately identify the character, exact source, amount and extent of any released materials. The Emergency Coordinator, designated as the Incident Commander at the NSC, must also assess possible hazards to human health or the environment that may result from the release.

The regulations provide that this assessment “must consider both direct and indirect effects of the release”.

If the result of the assessment determines the facility has had a release, which could threaten human health or the environment, the release must be reported to the appropriate State or local authorities and the National Response Center. The Incident Commander will be available to assist appropriate officials determine whether local areas should be evacuated.

#### ***1.4.3 Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA)***

CERCLA contains provisions, which address the uncontrolled releases of hazardous substances into the environment (40 CFR Part 302). These provisions require notification to federal and state agencies when there has been a “release” of a listed hazardous substance equal to or exceeding the “reportable quantity” in any 24-hour period. Failure to notify the appropriate authorities of the release as defined under the Act is punishable by a fine and imprisonment. CERCLA broadly defines the term “release” to include any spilling, leaking, pumping, pouring emitting, emptying, discharging, injection, escaping, leaching, dumping or disposing into the environment . . . . any hazardous substance or pollutant.

Each listed hazardous substance has an associated reportable quantity. The reportable quantities range from one pound to 5000 pounds. If a hazardous substance does not have a specific reportable quantity associated with it, the reportable quantity is statutorily set at one pound.

The release reporting requirements require that the person “in charge” of the facility must report the release to the National Response Center immediately upon learning of a sudden release of a reportable quantity. Failure to report a release can result in the imposition of criminal sanctions.

#### ***1.4.4 Superfund Amendments and Reauthorization Act (SARA) also known as Emergency Planning and Community Right-to-Know Act (EPCRA)***

EPCRA requires that the owner or operator of a facility subject to the emergency release notification requirements immediately notify the community emergency coordinator for the Local Emergency Planning Committee (LEPC) of any area likely to be affected by the release

and the State emergency response commission of any State likely to be affected by the release. The emergency release notification requirements are applicable to facilities at which a “hazardous chemical” is used or stored and there is a release of a reportable quantity of any extremely hazardous substance or CERCLA hazardous substance (40 CFR Part 355).

### **1.5 Relationship to Other Emergency Response Plans**

The NNSA National Security Campus Kansas City Plant is leased by the GSA on behalf of the NNSA from a development company (CPZ). CPZ is responsible for facility infrastructure operations (e.g., boilers, chillers, wastewater collection systems, cafeteria, general building and grounds maintenance). CPZ operations are referred to as supporting the “building shell”. Equipment and operations that are associated with NNSA manufacturing operations are referred to as “tenant improvements” (TI). As such, CPZ and NNSA operations are overseen and managed by each organization in a separate standalone fashion. CPZ maintains a separate SPCC plan for equipment under their control and likewise NNSA maintains a separate plan that addressed SPCC requirements. In the event of a larger spill event potentially affecting the site proper or an event resulting in potential off-site impacts the Emergency Plan would be implemented and followed by both CPZ and NNSA. This relationship is depicted in Figure 1.

The Spill Control Plan is implemented in the initial response phase of a spill or release. As previously outlined, the NSC Spill Control Plan addresses NNSA operations covered under SPCC, RCRA 40 CFR 264 requirements and the requirement to maintain a Slug Discharge Control Plan as required by 40 CFR 403.8. The incident may require the Kansas City Plant Emergency Plan (DOEa 2012) to be implemented if, in the judgment of the Waste Operations response team, the incident is beyond their ability to respond. The Emergency Plan will be implemented in accordance with the requirements of that plan. The activation of the Emergency Plan will also implement the Public Affairs Emergency Plan. The operation of the incident will be transferred to the Emergency Response Organization.

### **1.6 Spill History**

The Kansas City Plant has implemented engineering controls and procedures to minimize the potential of a hazardous substance spill being discharged from the facility to local receiving

streams. Since this is a new facility there have been no spill events which would have met the criteria for reporting to the National Response Center or Missouri Department of Natural Resources.

Spill events at the Plant are anticipated to be primarily the result of equipment leaks, container failures, operator incidents, and transfer of materials between departments at quantities below the reporting requirements. However, these events are documented and corrective action reports are required on selected incidents. The procedure includes a report form, initiated by Waste Operations that is signed by the operating department responsible for the incident. The information from the report form is recorded in a database in Environmental Compliance.

**Section 2.0**  
**Spill Prevention**  
**Control & Countermeasures**

## **2.0 Spill Control & Countermeasures Plan**

### **2.1 Availability of the Plan – 40 CFR 112.3(e)**

This SPCC Plan is maintained on file at the NNSA-NSC. It is available for onsite review during normal working hours. In addition, copies of the Plan are available for access to all persons responsible for administration of the Plan and to employees with responsibilities associated with material addressed by this plan. In addition, the plan is available by computer access through the NSC's intranet site.

### **2.2 Updating the Spill Control Plan – 40 CFR 112.4 & 5**

The Plan will be amended for any of the following reasons:

1. If the facility discharges greater than 1,000 gallons of oil in a single discharge or if more than 42 gallons of oil in each of two discharges has been discharged within a twelve month period the information required under 40 CFR 112.4 must be submitted to the Regional Administrator.
2. When required by the EPA Regional Administrator (40 CFR 112). NOTE: The EPA must notify the Facility operator by certified mail to, or personal delivery to, the Facility owner or operator regarding proposed amendments. Within 30 days from receipt of notice, the Facility can submit information, views and arguments on the proposed amendments.
3. Amendments are required whenever there is a change in Facility design, construction, operations, or maintenance, which materially affects the potential for a discharge of oil into or upon navigable waters of the United States. Such amendments must be implemented as soon as possible, but not later than six months after the change occurs. All amendments must be documented on the SPCC Change Management and Review Form.

4. The owner or operator is required by regulation to review and evaluate the SPCC Plan at least once every five years. An amendment is required if the review indicates that more effective control and prevention technology will significantly reduce the likelihood of a spill event and if such technology has been field proven at the time of review. Such amendments must be implemented as soon as possible, but not later than six months after the review occurs. All amendments must be documented on the SPCC Change Management and Review Form.

The Environmental Compliance Department has the responsibility to ensure the Spill Control Plan adequately addresses current facility operations, evolving laws and regulations, and changes in response personnel. Environmental Compliance staff must work closely with the Waste Operations (on-site spill response) and Emergency Response staff to include improvements in response techniques learned from drills or actual responses.

The Environmental Compliance Department shall review, update and make available the Spill Control Plan at least once every five years for compliance with the SPCC re-certification requirements and RCRA requirements.

There are several possible sources for input to obtain information to revise and improve the Spill Control Plan, including the following:

1. Training sessions with the Waste Operations personnel or other department personnel. These sessions can generate ideas on areas to be improved.
2. Lessons learned from incidents that may be used to prevent similar spills. The information on the spill report will be helpful in this area.
3. Seminars or workshops may provide information on recent developments in technology.
4. Local, state, or federal agencies can advise on any revisions to regulations.

### 2.3 Cross Reference with SPCC Rule – 40 CFR 112.7

**Table 1 - Cross-Reference with SPCC Rule**

<i>PROVISION</i>	<i>PLAN SECTION</i>	<i>SECTION</i>	<i>PAGES</i>
112.3(d)	Professional Engineer Certification		ix
112.3(e)	Location of SPCC Plan	2.1	10
112.5	Plan Review	2.2	10
112.7	Management Approval		viii
112.7	Cross Reference with SPCC Rule	2.3	12
112.7(a)(3)	Part I – General Information and Facility Diagram Facility Diagrams – Figures 1-6	2.4.1	13 42 - 68
112.7(a)(3)(i)	Type of oil in each container and capacity – Appendix A	2.4.1.1	14
112.7(a)(3)(ii)	Discharge prevention measures	2.4.1.2	17
112.7(a)(3)(iii)	Discharge drainage controls	2.4.1.3	18
112.7(a)(3)(iv)	Countermeasures for discovery and response	2.4.1.4	19
112.7(a)(3)(v)	Disposal methods	2.4.1.5	20
112.7(a)(3)(vi)	Contact list and phone #s	2.4.1.6	21
112.4 and 112.7(a)(4)	Discharge Discovery and Reporting Appendix D – Discharge Notification	2.5	23
112.7 (a)(5)	Spill Mitigation Procedures	2.6	24-27
112.7(b)	Potential Discharge Volume and Direction of Flow	2.7	28
112.7(c)	Containment and Diversionary Structures	2.8	28
112.7(d)	Practicability of Secondary Containment	2.9	28
112.7(e)	Inspections, Tests, and Records	2.10	28
112.7(f)	Personnel, Training, and Discharge Prevention Procedures	2.11	29
112.7(f)(1)	Training – operation and maintenance of equipment	2.11.1	29 - 32
112.7(f)(2)	Designated individual responsible for discharge prevention	2.11.2	32
112.7(f)(3)	Spill prevention briefings	2.11.3	32
112.7(g)	Security	2.12	33
112.7(h)	Loading/Unloading Rack – N/A (no rack present at this facility)	2.13	33
112.7(i)	Tank Alterations	2.14	33
112.7(j)	Conformance with State and Local Regulations	2.15	33
112.7(k)	Qualified Oil Filled Operational Equipment	2.16	33 Appendix A
112.8(b)	Facility Drainage	2.17.1-5	35 - 36 Figures 2 & 6
112.8(c)(1)	Tank Compatibility	2.18.1	36
112.8(c)(2)	Secondary Containment	2.18.2	36
112.8(c)(3)	Drainage of Diked Areas	2.18.3	37
112.8(c)(4)	Corrosion Protection	2.18.4	37
112.8(c)(5)	Partially Buried and Bunkered Storage Tanks	2.18.5	37
112.8(c)(6)	Integrity Testing and Inspection	2.18.6	37
112.8(c)(7)	Heating Coils	2.18.7	38
112.8(c)(8)	Overfill Prevention System	2.18.8	38
112.8(c)(9)	Effluent into Navigable Waters	2.18.9	38
112.8(c)(10)	Correction of Tank Deficiencies	2.18.10	38
112.8(c)(11)	Mobile and Portable Containers	2.18.11	38
112.8(d)	Transfer Operations, Pumping and In-Plant Processes	2.19.1-5	39 - 40
112.20(e)	Certification of Substantial Harm	Appendix B	

\* Only relevant rule provisions are indicated. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

## **2.4 General Requirements for SPCC Plans**

### **2.4.1 Physical Layout of the Facility / Facility Diagram – 40 CFR 112.7(a)(3)**

The 177 acre NSC is located approximately 18 miles south of downtown Kansas City, Missouri, within the incorporated city limits. The facility is surrounded to the west by a railroad spur followed by commercial properties and undeveloped land. Missouri Highway 150 and the former Richards Gebaur Air Force base which is now an intermodal rail hub borders the facility to the south. Undeveloped land lies immediately north of the facility and beyond several light industries. Undeveloped property borders the facility to the east.

The NSC manufactures non-nuclear components for nuclear weapons. NSC manufacturing operations include a wide variety of operations and include, machining, electronics fabrication, specialty chemical manufacturing, and laboratory operations. A general site layout including buildings, and facility storm sewer lines is provided in Figure 2.

Figures 3 – 10 provide information on storage and unloading areas, the IWPF, industrial wastewater piping systems, and the sanitary sewer system piping. Table 2 provides general information related to equipment regulated under 40 CFR 112, Table 3 provides information on chemical storage areas, Table 4 provides information on RCRA 90 Day storage areas, and Table 5 provides information related to the industrial wastewater collection, piping and storage equipment. Major operations within the plant that pose the highest spill risk are discussed below.

Building 2 houses the majority of manufacturing operations which consist of limited metal finishing operations Microelectronics Fabrication (M70) and Flat Flex Cable (M10). Both of these departments conduct limited metal plating operations and associated cleaning processes. Other operations in Building 2 include light machining and associated cleaning operations, various laboratory functions, miscellaneous electronic component manufacturing areas and RCRA waste 90 day storage areas storage. Building 3 operations include polymer production operations, foam fabrication, rubber and plastics and several small labs. Building 4 operations include machining, plating and electronics operations.

**Table 2**  
**SPCC REGULATED AREAS - STORAGE & OIL FILLED OPERATIONAL EQUIPMENT**  
*See also Appendix A*

<b>Location</b>	<b>Description</b>	<b>Containment or Control</b>
Bldg 2 Room 2.T210	Storage: Oil / Coolant Storage	Regulated containers stored on containment skids* (Figure 8.d). Estimate up to eight 55 gallon containers of oil in storage.
Ware Yare	Storage: 55 gallon oil storage containers - hydraulic, machining, and heat transfer oil	Segregated chemical storage pods with integral secondary containment (see Figure 8.c). Ware Yard offers additional containment (Figure 8).
Machining Departments	Storage: 55 gallon oil based metal working fluid containers	Up to 12 drums stored on containment skids*.
M70 (D/26)	Operational Equip: Sterlco Units	Heat transfer fluid heating / cooling system for M70 operations.
Machining Departments.	Operational Equip: Oil based coolant	Not required. See Appendix A – Table <i>Metal Working Fluid (Oil Based)</i> which lists equipment by location / department that uses oil based coolant.
Dye Penetrant 2.D201	Operational Equip: Dye penetrant bath with oil as wetting agent	Not required. 80 gallon bath with an approximate 50% concentration of food grade mineral oil.
Bldg 3 3.06.4 -09 / 3.E - H	Operational Equip: Polymer Production - Reactor Heating Oil System	Containment provided for storage and processing areas.
D/91	Operational Equip: Welding Shop with electrical equipment utilizing oil	Not required. See Appendix A – Table <i>Oil Filled Operational Equipment</i> for a complete listing of equipment by location / department that utilizes equipment with > 55 gallons of oil used with electrical equipment.
Bldg 2 2.17.5-19 / 2.U-Z	Operational Equip: Chore Boy mounted pumper truck	Dedicated containment areas for segregation and storage of wastes.

\*Containment skids are capable of containing the contents of a 55 gallon drum. Each skid stores up to four 55 gallon drums.

**Table 3**  
**CHEMICAL STORAGE AREAS > 250 gallons**

Location	Description	Containment
Bldg 2 2.17.5-19 / 2.U-Z	Waste Management Operations	Dedicated containment areas for segregation and storage of wastes.
Ware Yard	Modular Chemical Storage Buildings - contains inventory of a wide range of chemicals.	Separate chemical storage pods with integral containment. Located on roofed storage lot with secondary containment
Bldg 3 3.06.4 -09 / 3.E - H	Polymer Production	Containment provided for storage and processing areas.
M60 (D/25) 2.23-25 / 2.T - U	Machining area with acid passivation line.	Acid passivation room is segregated with spill containment system. Drains to industrial wastewater collection system
M10 (D/61) 2.16-17 / 2.D-F 2.H155	Printed circuit board fabrication shop.	Plating areas and sumps equipped with secondary containment. Drains to industrial wastewater collection system. Separate chemical storage room with containment.
M30 (D/71) 2.15.5-17 / 2.B-D 2.H130 / 140	Micro-Electronics Gold plating and miscellaneous cleaning operations.	Spills contained in equipment chase. Drains to industrial wastewater collection system.
Bldg 4 T-12 4.04.5-06 / 4.S-V	Plating Operations	Containment provided for plating lines and segregated by compatibility. Drains to industrial wastewater collection system. Separate chemical storage rooms with containment
Bldg 2 2.H150	Chemical Storage Area	Spill containment provided for IW sump and cyanide treatment skid.
Bldg 5	Industrial Wastewater Pretreatment Facility (IWPF).	Segregated containment areas for receiving docks, tanks, and processing areas.
Bldg 5 CUP	Boiler and cooling tower water treatment chemicals.	Double walled containers.
North Yard	Spent Coolant Tank	Secondary containment with truck loading station to the West.

**Table 4**  
**RCRA 90 DAY STORAGE**

Location	Description	Containment
Bldg 5 - IWPF	Sludge generated as a byproduct of wastewater treatment operations	Room is provided with secondary containment. Sludge is pressed to remove free liquid.
Bldg 2 2.17.5-19 / 2.U-Z	Waste Management Operations	Dedicated containment areas for segregation and storage of wastes.

**Table 5**  
**INDUSTRIAL WASTEWATER TANKS / SUMPS**

Tank #	Location	Description	Containment or Control
IWPF 1	CUP yard	30,000 gallon tank (west)	Located within secondary containment
IWPF 2	CUP yard	30,000 gallon tank (east)	Located within secondary containment
SUMP2-NE	2.U / 2.21	Industrial Wastewater Sump (1,736 gal)	High level alarm
SUMP2-SW	2.G / 2.07	Industrial Wastewater Sump (1,736 gal)	High level alarm
SUMP2-SE	2.D / 2.15	Industrial Wastewater Sump (1,736 gal)	High level alarm
SUMP3	3.C / 3.07.5	Industrial Wastewater Sump (1,736 gal)	High level alarm
SUMP4-N	4.O / 4.06.5	Industrial Wastewater Sump (1,736 gal)	High level alarm
SUMP4-S	4.F.e / 4.06.5	Industrial Wastewater Sump (1,736 gal)	High level alarm
CN	2.H150	Cyanide holding tank and treatment skid	Located within secondary containment w/ high level alarm
CR	4.04.5-06 / 4.S-V	Chrome holding tank and treatment skid	Located within secondary containment

The facility contains three areas that are classified as “High Hazard” areas under NFPA guidelines. These areas are equipped with dedicated spill containment systems that are capable of containing fire fight water associated with a given event. The waste management area in Building 2, the Polymer Production area in Building 3 and the plating shop in Building 4 are equipped with the above containment. These areas are noted on Figure 5. Numerous other manufacturing areas are equipped with secondary containment, however, these areas are not constructed with containment measures capable of capturing fire protection run-off.

Industrial wastewater piping runs are depicted in Figure 5. Industrial wastewater is routed to one of the two 30,000 gallon tanks located off the southwest corner of Building 5 (Figure 4) where it is held prior to treatment in the IWPF. Concentrated chemicals are not discharged to the IWPF. All concentrated wastes are disposed of off-site. Wastewater discharges to the IWPF must be within the pH range of 4.0 - 11.

Major chemical handling and storage areas are shown on Figure 3 and Tables 3 and 4. New chemicals are stored at the Wareyard (Figure 8) inside chemical storage pods. Chemicals are segregated by compatibility. The storage pods are equipped with secondary containment and the ware yard is constructed with additional containment measures.

#### ***2.4.1.1 Tank Schedule – 40 CFR 112.7(a)(3)(i)***

There are no 40 CFR 112 regulated tanks under the control of NNSA at the NSC. Mobile containers include 55 gallon containers of hydraulic and machining oils. Drums that are not in process are stored at the Ware Yard (Figures 3 and 8) within Chemical Storage pods. Drums are not otherwise stored outside. In process drums are staged throughout the facility near the point of use.

#### ***2.4.1.2 Prevention Measures / Procedures – 40 CFR 112.7(a)(3)(ii)***

Chemical Material Handlers are responsible for transferring oil into or out of equipment. These individuals receive annual training regarding proper handling of chemicals. Transfers are made into or out of oil filled operational equipment listed in Appendix A. In addition procedures have

been developed to guide Chemical Material Handlers and Material Supplier job classifications in the proper handling of chemicals (reference HS&E Documents page for each job classification.

#### ***2.4.1.3 Discharge Controls / Secondary Containment – 40 CFR 112.7(a)(3)(iii)***

Tanks, storage containers and equipment containing greater than 55-gallons of oil or other materials that potentially pose a spill risk of concern are provided with adequate secondary containment. See Sections 2.17, 2.18 and 2.19 for more detail on these containment areas.

The NSC has been designed and constructed to comply with stormwater No Exposure certification requirements outlined at 10 CSR 20-6.200 (1)(B)16 which excludes industrial facilities that meet the requirements of 10 CSR 20-6.200 (1)(B)16.A.(I) through B.(III) from requirements that would otherwise require the facility to obtain a permit. In order to ensure activities at the NSC are in continuous compliance with the above requirements a Stormwater Pollution Prevention Plan (SWPPP) has been developed (DOE 2012b).

The facility also uses drip pans, where possible, to prevent equipment leaks from spreading out within the plant and causing a safety hazard as well as helping to facilitate any cleanup. Since manufacturing operations are located inside buildings, spills would be contained with absorbent or diking material in the area where the incident occurred. Oil-filled equipment that contains less than 55 gallons is exempt as stated under 40 CFR 112.1(d). The NSC meets the requirements for equipment which contains greater than 55 gallons of oil located inside buildings.

*Oil-filled operational equipment located within buildings with limited drainage and which prevent a discharge as described in 40 CFR 112.1(b) meet the requirement for general secondary containment of 40 CFR 112.7(c) (71 FR 77275).*

Oil filled operational equipment within buildings at the NSC meet the above criteria. Appendix A provides a listing of oil filled manufacturing and operational equipment. There are no open storm drain connections within NSC buildings. In addition, floor drains that could potentially discharge to the sanitary sewer system were specifically not allowed as part of the new

construction. Buildings are routinely occupied and plant personnel have been trained to call the spill hotline (xSPIL i.e., x7745) in the event of a spill.

Drainage for the outside areas is controlled by a storm sewer piping system, shown in Figure 2. This system is designed to have runoff drain into specific areas where the inlet allows the water to enter the system. Also, areas that store chemical materials have secondary containment with concrete curbing and a sump to collect runoff. After visual inspection to determine the water quality, the water is discharged to the storm sewer system or for certain areas to either the Industrial Wastewater Pretreatment Facility or sanitary sewer.

Figure 3 and Table 4 provide information on the RCRA 90-day generator storage areas. Figure 4 provides information for the IWPF and associated storage tanks. The following is a description of the spill control or containment for various tanks and storage sites at the facility.

#### ***2.4.1.4 Countermeasures – 40 CFR 112.7(a)(3)(iv)***

The potential for a spill from inside the plant or from outside oil handling units or other sources having a spill potential that could be discharged to nearby off-site surface water bodies or the sanitary sewer is impractical because of the engineering controls, such as the secondary containment, and drainage system configuration at the facility. The volume of material stored is small and does not have a significant possibility to reach the water. There are a series of detention ponds at the facility that could be used to contain a given spill event in the unlikely event engineering controls were unable to control the discharge.

Spills from transportation or delivery operations are possible during container unloading operations. Bulk delivery transfers are not made. In the event of a spill outside a contained area the on-site spill response team would address the spill.

The discharge to the Public Owned Treatment Works (POTW), Little Blue River Atherton Treatment Plant, could result from a release or upset. The POTW must be contacted if the

release caused the discharge to exceed the permit limits. Section 2.4.1.6 provides agency contact telephone numbers and information requirements.

The Kansas City Plant Emergency Plan (latest version incorporated by reference (DOEa 2012)) describes how the facility would respond to catastrophic incidents. This Plan includes descriptions of job responsibilities and duties of members of the response team, lists of equipment and materials available, and local contacts for response support. The Emergency Management organization conducts a drill annually to test the Emergency Plan and related systems.

The NSC maintains a reliable radio communication system. The system provides for timely notification of any incidents and for interconnection with the local emergency response organization. The Plant works closely with the local fire department and Hazardous Material Response Team, which would be involved in most responses. The communication system also can be used to assure the full resources of the plant can be committed if required by the nature of the incident. The Emergency Plan has provisions for utilizing all available resources of the Plant.

The Kansas City Plant has an emergency and spill hotline telephone number, which is staffed 24 hours a day. These telephone numbers are as follows:

Emergency telephone number: 488-3600

Spill telephone number: 488-7745

#### ***2.4.1.5 Disposal – 40 CFR 112.7(a)(3)(v)***

All wastes generated by NSC operations are managed by the Waste Operations (Waste Management) Department. The Waste Management department adequately profiles the waste materials to ensure proper disposal. Prior to placing waste disposal contracts vendors audits are conducted to ensure the disposal facility is in compliance with applicable regulations. All

recovered materials and waste generated by spill response measures will be disposed of in accordance with applicable legal requirements.

**2.4.1.6 Emergency Contacts – 40 CFR 112.7(a)(3)(vi)**

***Facility Response Coordinator***

The manager of the Waste Operations Department is the Facility Response Coordinator that is responsible for spill response, control, and mitigation at the Plant. The Plant notification procedure includes a spill hotline to the Waste Operations Department. The hotline provides a method for notification of spills at the earliest possible time. The Spill Coordinator, designated by the Waste Operations Manager, or alternate can be contacted at any time by pager. Spill response activities at the NSC include any type of spill that results or could potentially result in a release to the environment. The following list provides contact information:

<b>Spill Coordinator:</b>	<b>Phone</b>	<b>Work Phone</b>	<b>Address</b>
Dale Brown	(816)550-2085	997-7309 816-458-1884(pager)	21201 S. Coleman Rd. Peculiar, MO 64078
<b>Alternates</b>	<b>Home Phone</b>	<b>Work Phone</b>	<b>Address</b>
Robert Beauchamp	(913)681-4954	488-3586 816-458-1920(pager)	16150 Kenneth Rd Stilwell, KS 66085

Facility Manager Group Page – activated by contacting Patrol, x3601. Facilities Engineering can arrange subcontractor response through the Facility Manager page system.

Notification of federal, state, or local agencies may be required as a result of an incident. Regulations state specific requirements for immediate notification. “Immediately” has been defined as within 15 minutes. If the incident involves a substance with a “reportable quantity”, the spill coordinator or alternate, will be contacted to determine if notification is required. If notification is required the spill coordinator or alternate, will contact the DOE and make other notifications, as directed.

***Federal, State and Local Spill Contacts***

National Response Center - **(800) 424-8802**  
Missouri Environmental Services Program - **(573) 634-2436**  
Local Emergency Planning Commission - **(816) 474-4240**  
**(816) 421-7758 Fax**

If POTW involved contact:

Little Blue River Atherton Treatment Plant - **(816) 513-7200\***  
KCMO Industrial Waste Control Division - **(816) 513-0600\***

\*Notification phone numbers are to be posted on the IWPF control board. A notice is posted and maintained on the IWPF control panel that identifies whom to call in the event of an accidental or slug discharge. In the event of a slug or accidental discharge or a discharge which violates Part C, Section 1 of the permit, written notification shall be reported to the permit authority within 5 days of the occurrence and the information required by Part B, Section 8.a of the permit provided. Verbal notification shall be provided upon becoming aware of the incident.

In addition to federal reporting requirements, any oil releases that exceed 25 gallons, and are not contained on NSC property, or immediately cleaned up (10 CSR 20-15.020(3)) must be reported in accordance with 10 CSR 24-3.010 at the earliest practical moment upon discovery to:

Missouri Emergency Management Agency - - 24 hour phone (573) 634-2436  
Emergency Response Commission  
2302 Militia Drive  
P.O. Box 3133  
Jefferson City, MO 65102

The spill must also be reported to the LEPC at (816) 474-4240

## **2.5 Spill Reporting – 40 CFR 112.7(a)(4), 10 CSR 20-15 and 10 CSR 24-3.010**

When an agency is notified, record the name of the agency representative and the report number provided by the agency or the National Response Center.

Also, the Environmental Compliance Department shall be contacted if notification is made to a federal, state, or local agency. The Environmental Compliance Department will make the required follow up reports.

The following list contains information required by the State and National Response Center when making a notification (Appendix D provides detailed discharge notification procedures for Honeywell Corporate and DOE):

- Name and telephone number of the reporter;
- Name, address and phone number of the facility; (i.e., U.S. DOE – NNSA, NSC, 14500 Bott's Road, Kansas City, MO 64147, (816) 458-3600
- Date, time, duration and type of incident (e.g., release, fire);
- Name and quantity of material(s) involved and estimated total quantity discharged (MSDS or waste profile type information);
- Source of the discharge, when discovered, and volume discharged,
- If the material is an extremely hazardous substance,
- Description of affected media,
- Cause of the discharge,
- The extent of injuries, or damages if any;
- Known or anticipated acute or chronic health risks,
- Advice regarding medical attention for exposed individuals,
- Actions (including timeframes) being implemented to mitigate the release,
- Whether an evacuation may be needed or other proper precautions,
- The possible hazards to human health and the environment, outside the facility, and
- Names of individuals and/or organizations that have also been contacted.

In addition to the above reporting requirements, if affected, the NSC's city wastewater discharge requires written follow-up notification within five days of the event. The latest version of this permit is incorporated by reference into this plan. In addition, 10 CSR 24-3.010 requires follow-up notifications at MDNR's request.

## **2.6 Emergency Response Plan – 40 CFR 112.7(a)(5)**

### ***2.6.1 General***

The organization described in this section is the one used to respond to the routine spills and releases that occur during normal operation. The organization for the response to a major incident is described in the Emergency Plan. The Emergency Plan can be implemented in phases if, in the judgment of the initial response coordinator, the incident is beyond their response capabilities.

### ***2.6.2 Organization***

Experienced, well-trained people are essential for successful implementation of a spill control program. The Kansas City Plant has an ongoing program that provides training for personnel. In addition to maintaining familiarity with aspects of spill prevention and control, the training program is intended to provide personnel with basic knowledge, skills, and experience necessary to achieve safe and effective spill response in accordance with an effective plan.

The Federal Occupational Safety and Health Administration (OSHA) rule, Hazardous Waste Operations and Emergency Response (HAZWOPER), became law on March 6, 1990. This law sets minimum training and/or competency requirements for people associated with emergency response. HAZWOPER requirements are briefly described in this section.

The department at the Plant primarily involved with spill prevention, response, and cleanup is the Waste Operations Department. The Waste Operations Department includes technical support personnel who are responsible for spill cleanup and the disposal of waste generated at the

facility. The Waste Operations Department includes the chemical material handlers who respond to and cleanup spills and releases addressed in this Plan.

The Waste Operation Manager has the responsibility to oversee the response to spills or releases and cleanup operations. There are two associates assigned as spill response coordinators who respond to spill incidents. The Environmental Compliance Department reviews the incidents to determine if corrective actions are complete, if Best Management Practices (BMP) are followed, or if additional BMPs need to be implemented and prepares written notification if required.

### ***2.6.3 Discovery / Internal Notification***

This section identifies the notification and initial response procedures that should be carried out in the event of a spill or release.

Any associate, upon discovering a suspected spill or release of any material which may be a hazardous substance, should contact Waste Operations using the spill hotline, extension 7745. This includes immediately reporting such incidents to the operator in charge of the area or supervisor. With regard to human safety, the following measures are required:

- Avoid direct contact with the spilled material;
- Avoid inhalation of any gases, fumes, vapor or smoke. All personnel should stay upwind;
- Move and keep people away from the incident scene;
- Do not take any actions for which you are not properly trained which may result in bodily injury to you or other personnel;
- Supervisors shall record time and date of discovery of incident and any other pertinent information.

The specific action taken to control, contain, and cleanup a spill will vary with the type of material spilled, the location, and the amount. The initial responders will analyze the situation and exercise good judgment in formulating the best action plan for the type of spill that occurred.

#### **2.6.4 Spill Type**

Spills at the NSC are categorized into four areas. They are equipment failure, container failure, transportation and handling, and operations. The equipment and container failure spills are difficult to prevent except through a preventative maintenance program. The transportation and handling and operations spills are usually a result of an oversight and can be prevented through training and improved care by the associates in operations.

Equipment spills are typically observed by the operator who reports the spill to the hotline. The operator will report the location of the spill, the department, type and estimated amount of material spilled.

Container spills are from leaks in containers that have corroded or been otherwise damaged during shipment or storage. These spills can be any of the many chemicals used at the Plant. The associates in the departments routinely observe containers for signs of leaks.

The operation and transportation and handling spills are usually the result of an accident or incident like overfilling. The associates are encouraged to be aware of the conditions and proper operating procedures to prevent this type of spill.

#### **2.6.5 Initial Response**

The basic principles in the initial response are listed below:

- Assess the extent of the release and necessary safety precautions.
- Determine the appropriate area to be controlled.
- Determine the material spilled.
- Review MSDS and other pertinent information for protective equipment requirements.
- Assemble resources to respond and mitigate the incident.
- Stop the release or spill, if necessary.
- Contain or mitigate the release, if necessary.

### ***2.6.6 Initial Notification and Spill Responder Call Outs***

An associate discovering a release shall move to a safe location and immediately call the spill hotline, extension 7745. The hotline call initiates the response and serves as the beginning of the log to document actions taken in the response. The hotline is answered in the Waste Operations Department or the call will rollover to patrol. The spill response team is paged using the spill pager number 816-458-1487. The team then calls the hotline number and is given the location and information regarding the incident.

Documentation is critical in the event of a CERCLA/SARA or other incident that requires immediate notification. The determination of whether a spill or release is reportable is determined by the Environmental Compliance Department. The Environmental Compliance Department is notified of the incident if there is a report to the DOE or other agency. The Environmental Compliance Department is responsible for establishing a procedure to ensure the notifications are made in accordance with CERCLA, SARA, TSCA, or RCRA regulations. See Section 2.4.1.6 for Agency Notification information.

When spills or releases occur after regular business hours the spill response coordinators are contacted by pager. They will contact the spill response team to respond to the incident or contact the Incident Commander to determine if the emergency plan should be implemented.

### ***2.6.7 Spill / Release Documentation***

The spill documentation is initiated by Waste Operations and is summarized on the Spill Report Log, using form 2469 (Appendix C). The information called in to the spill hotline and from the chemical material handlers that responded to the incident is used to complete the form. Also, the supervisor of the department where the spill occurred describes corrective action on form 2469. Spills of a significant nature (i.e., reportable) or, as determined necessary by the Spill Coordinator, will require root cause assessment and implementation of corrective actions after the spill event.

## **2.7 Spill Potential – 40 CFR 112.7(b)**

Reasonable potential for equipment failures and subsequent discharge potential has been evaluated on a facility / media wide basis (i.e., to satisfy spill scenarios not just those regulated by SPCC regulations) in the NSC's Emergency Planning Hazards Survey (DOE 2012). This document is incorporated by reference into the Spill Control Plan.

## **2.8 Containment and Diversion Structures – 40 CFR 112.7(c)**

Figures 3, 4, 7, 8, 9, 11 and 12 provide information regarding containment structure type and size. Areas of the facility covered by under SPCC regulations that require containment structures only include the covered Ware Yard where 55 gallon drums of oil will be stored.

## **2.9 Practicability of Secondary Containment – 40 CFR 112.7(d)**

With the exception of certain pieces of qualified oil-filled operational equipment noted in Appendix A, structures or pieces of equipment required under 40 CFR 112.7 (c) and (h)(1) that address secondary containment requirements are in place. For the most part, manufacturing equipment is not equipped with secondary containment, however, it is located within buildings and any means of discharge to plant sewer systems is not available (e.g., floor drain, sump pump).

*Oil-filled operational equipment located within buildings with limited drainage and which prevent a discharge as described in 40 CFR 112.1(b) meet the requirement for general secondary containment of 40 CFR 112.7(c) (71 FR 77275). Oil-filled operational equipment often is subject to routine maintenance and inspections to ensure proper operation. Therefore, the Agency believes it is appropriate to allow the same alternative means of compliance with general secondary containment requirements to apply to both oil-filled electrical and operational equipment (71 FR 77276).*

Therefore, additional containment for pieces of equipment listed in Appendix A is not required.

## **2.10 Inspections Tests and Records – 40 CFR 112.7(e)**

Preventative Maintenance and inspection procedures are managed at the NSC by implementation of an off the shelf software program (Maximo). Maintenance and inspection procedures and intervals are documented within this program for a minimum of three years. This inspection

program is intended to provide a mechanism to prevent and detect system malfunctions, equipment deterioration, and operator errors. It is also designed to provide an early warning of the potential for such events in order that corrective actions may be taken in a timely manner.

Utility and Maintenance personnel perform PM and inspection activities as scheduled through the Maximo system. The programmed PM and inspection activities use a checklist to inspect the system. The job plan within Maximo serves as the checklist of activities to be conducted.

There are no SPCC regulated bulk storage tanks or transfer areas at the NSC under the control of NNSA that require formal routine SPCC inspections. Oil filled equipment used in manufacturing operations (e.g., hydraulic systems associated with presses, machining equipment with oil based coolants) and oil filled transformers are not formally inspected, however during routine PMs of equipment oil levels are checked. IWPF holding tanks and the spent coolant tank are routinely inspected.

## **2.11 Training and Discharge Prevention – 40 CFR 112.7(f)**

### ***2.11.1 Personnel Training – 40 CFR 112.7(f)(1)***

Oil handling personnel are trained in the operation and maintenance of equipment to prevent discharges, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations and the contents of the SPCC Plan by completing an annual SPCC training course. This course is administered through the ELMS (Learning Management System) on-line training application.

Annual spill response training, which includes a discharge prevention briefing, is also provided to the emergency response personnel annually at the HAZWOPER refresher. Approximately 30 emergency response personnel at the plant receive annual training for responses to emergency situations including oil releases.

The HAZWOPER requirements (29 CFR 1910.120) are based on the various levels of response recognized by the hazardous material response industry. OSHA has identified five levels of

response, each with increasing levels of required training and expertise. The required training criteria for individuals involved with a response are based on the duties and functions associated with the level of response they may be expected to perform.

### ***HAZWOPER Skill and Knowledge Levels***

The five HAZWOPER skill and knowledge levels and minimum training requirements for each level are summarized in Table 3.

#### **Level 1: First Responder Awareness Level**

This level describes anyone who is likely to witness or discover a discharge or potential discharge. Although the OSHA standards are intended for employees who are expected to participate in emergency response, any associates at the facility may be the first to have knowledge of a spill. Associates should not take further action beyond calling the spill hotline, extension 7745 and notifying their supervision. Security personnel who provide site control are examples of this level. All site personnel have been trained to call the SPIL hotline, however, they are not considered trained to Level 1 of HAZWOPER.

#### **Level 2: First Responder Operations Level**

First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby person, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading and prevent exposures.

#### **Level 3: Hazardous Material Technicians**

Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or

otherwise stop the release of a hazardous substance. Chemical material handlers are an example of this level.

Table 3  
 Responder Training Levels

HAZWOPER Training Requirements	Level 1	Level 2	Level 3	Level 4	Level 5
Training Required (Hours)	Training or Experience	Minimum 8 Hrs training Level 1 in addition to areas of Competency	Minimum 24 Hrs training equal to Level 2 in addition to areas of Competency	Minimum 24 Hrs training equal to Level 2 in addition to areas of Competency	Minimum 24 Hrs training to Level 3 in addition to areas of Competency
Hazard Communication	X	X	X	X	X
Site Security & Control	X				
Emergency Response plan and equipment		X	X	X	X
Information sources	X	X	X	X	X
Personal Protective Equipment		X	X	X	X
Decontamination Procedures		X	X	X	X
Demonstration Competency/ written certification		X	X	X	X
Standard operating procedures and safe work practices		X	X	X	X
Respiratory Protection			X	X	X
Containment and cleanup of hazardous material			X	X	X
Airborne Contaminant Level Monitoring equipment use			X	X	X
Incident Command System			X	X	X
Hazard risk assessment and characterization - Area of impact evaluation					X
Federal/State/Local emergency plans				X	X

#### Level 4: Hazardous Materials Specialist

Hazardous material specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more direct or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the liaison with other agencies.

#### Level 5: On-Scene Incident Commander

This level corresponds to the Emergency Plan organization, which utilizes the Incident Command System.

Skilled support personnel, whose skills are needed temporarily to perform immediate emergency support work, are not required to meet the training requirements.

Refresher training or a demonstration of competency is required annually to maintain qualification at a responder level. During this training aspects of the SPCC Plan are reviewed. Documented drills qualify as part of the annual refresher training.

In addition procedures have been developed to guide Chemical Material Handlers and Material Supplier job classifications in the proper handling of chemicals (reference HS&E Documents page for each job classification).

#### ***2.11.2 Discharge Prevention Designee – 40 CFR 112.7(f)(2)***

The HS&E Manager has overall responsibility for discharge prevention measures and practices. This individual assigns and oversees professional staff that is tasked with day to day responsibility for development and implementation of the Spill Control Plan. The HS&E Manager reports to the Director of HS&E and Security who reports to the FM&T Vice President.

#### ***2.11.3 Spill Prevention Briefings – 40 CFR 112.7(f)(3)***

See also Section 2.11.1. Spill prevention is discussed during annual training. Personnel responsible for oil handling activities at the facility are required to complete and pass a computer

based training course that provides an overview of the SPCC Plan and related operational activities.

### **2.12 Security – 40 CFR 112.7(g)**

The facility is completely fenced and lighting is adequate to discover a spill if it occurred at night. The security of the facility is maintained 24 hours a day 365 days a year in accordance with the “Site Security Plan for the Kansas City Plant.” Access to the NSC is restricted by a perimeter fence through secure gates. Once inside the perimeter fence access to buildings and grounds is further restricted by badge reader access and locked gates to prevent unauthorized access by the general plant population. Valving and pump controls can only be accessed by authorized individuals.

### **2.13 Tank Car and Tank Truck Loading / Unloading Racks – 40 CFR 112.7(h)**

This section is not applicable to NSC operations. This section only applies where a loading / unloading arm is used (73 FR 74248).

### **2.14 Tank Alterations – 40 CFR 112.7(i)**

Not applicable. There are no tanks regulated under 40 CFR 112 under the control of NNSA at the NSC. Tanks used to store other materials will be evaluated following repair, alteration, reconstruction, or a change in service that may have a significant effect on the tanks integrity will be inspected prior to being placed back in service.

### **2.15 State and Local Spill Prevention Rules – 40 CFR 112.7(j)**

*See also Section 2.4.1.6 and 2.5* (state regulations found at 10 CSR 20-15 and 10 CSR 24-3.010 are addressed)

### **2.16 Qualified Oil-Filled Operational Equipment – 40 CFR 112.7(k)**

#### **Oil-filled Manufacturing Equipment**

Oil-filled manufacturing equipment is distinct from bulk storage containers in their purpose. Oil-filled manufacturing equipment stores oil only as an ancillary element of performing a mechanical or chemical operation to create or modify an intermediate or finished product.

Examples of oil-filled manufacturing equipment may include reaction vessels, fermenters, high pressure vessels, mixing tanks, dryers, heat exchangers, and distillation columns. Under the SPCC rule, flow-through process vessels are generally considered oil-filled manufacturing equipment since they are not intended to store oil (EPA 2013).

The NSC does not have Oil-filled Manufacturing Equipment with greater than 55 gallons of oil in use as part of manufacturing operations.

### **Oil-filled Operational Equipment**

Oil-filled operational equipment includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment does not include manufacturing equipment.

Examples of oil-filled operational equipment include hydraulic systems, lubricating systems (including lubricating systems for pumps, compressors, and other rotating equipment), gear boxes, machining coolant systems, heat transfer systems, transformers, other electrical equipment, and other systems containing oil to enable operation. (EPA 2013)

A list of oil-filled operational equipment at the NSC is provided in Appendix A. The NSC meets the containment requirements for oil-filled equipment located inside and outside of buildings. Oil-filled equipment that contains less than 55 gallons is exempt as stated under 40 CFR 112.1(d).

*EPA further notes that oil filled operational equipment located within buildings with limited drainage and which prevent a discharge as described in § 112.1(b), may already meet the requirements for general secondary containment of § 112.7(c). (71 FR 77275).*

Oil filled operational equipment within buildings at the NSC meet the above criteria (see Section 2.4.1.3). There are no open storm drain connections within NSC buildings. In addition, floor drains that could potentially discharge to the sanitary sewer system have been removed or

abandoned by filling with grout. Buildings are routinely occupied and plant personnel have been trained to call the spill hotline (xSPIL i.e., x7745) in the event of a spill.

## **2.17 SPCC Requirements for Onshore Facilities – 40 CFR 112.8**

### ***2.17.1 Facility Drainage – 40 CFR 112.8(b)***

There is a potential for a release to enter the environment through the storm drains from the plant. The release scenario would most likely be associated with spills from transportation / delivery operations rather than bulk storage locations since adequate engineering controls are in place to address spills associated with storage locations. Drainage from the facility is routed around the perimeter through several detention ponds (Figure 2) and discharged through one of two outfalls to an unnamed tributary of the Little Blue River. It is critical that contaminated storm water and spills not be allowed to reach nearby surface waters.

The Plant has a system of storm drain piping to control storm runoff, shown in Figure 2. Areas that store chemical materials have secondary containment with concrete curbing and a sump to collect runoff. After visual inspection to determine water quality, the water is discharged to the storm sewer system. In the event the event water accumulating within containment areas is contaminated the water will be containerized for further treatment and / or disposal or discharged to the sanitary sewer or IWPF as appropriate.

### ***2.17.2 Valves & Pumps on Diked Areas – 40 CFR 112.8(b)(1-2)***

There are no secondary containment structures regulated under 40 CFR 112 under the control of the NNSA that are equipped with valves or pumps. Other non-SPCC regulated secondary containment structures are likewise not equipped with valves. The Ware Yard, Outdoor Drum Storage Lot, and the Spent Coolant containment areas are equipped with pumps. However, these pumps are not float actuated and rain water accumulating in these areas must be visually inspected prior to discharging to the adjacent ground surface. Any contaminated rain water would be containerized for disposal.

***2.17.3 Plant Drainage from Undiked Areas – 40 CFR 112.8(b)(3)***

Regulated storage areas / equipment are provided with adequate secondary containment.

Therefore, this section is not applicable.

***2.17.4 Drainage Diversion System – 40 CFR 112.8(b)(4)***

The facility has adequate controls in place where petroleum products are stored to prevent stormwater discharges contaminated with petroleum products from migrating off the property; therefore this section is not applicable.

***2.17.5 Facility Drainage Systems – 40 CFR 112.8(b)(5)***

This section is not applicable. Drainage waters from secondary containment areas covered by the Spill Control Plan are not continuously treated.

**2.18 Bulk Storage Tanks – 40 CFR 112.8(c)**

There are no bulk oil storage tanks under the control of NNSA at the NSC regulated under 40 CFR 112. Oil storage containers are constructed and used in accordance with good engineering practices and industry standards.

***2.18.1 Tank Compatibility – 40 CFR 112.8(c)(1)***

Tanks are compatible with the materials stored and the environmental conditions to which they are expected to be subjected. None of the tanks are used to store material at greater than atmospheric pressure and temperatures. The tanks are vented to prevent the collapse of the tanks when transferring products to or from the tanks. Only mobile / portable containers (i.e., 55 gallon drums) and oil filled operational equipment are addressed by this plan.

***2.18.2 Secondary Containment – 40 CFR 112.8(c)(2)***

Secondary containment is provided for oil storage containers as described in Section 2.8 of this Plan. There are no bulk storage tanks under the control of NNSA. Therefore, only mobile / portable containers (i.e., 55 gallon drums) and oil filled operational equipment are addressed by this plan. As noted under Section 2.16 of this plan oil filled operational equipment inside

buildings with limited drainage may meet the requirement for secondary containment. Other containment areas are designed to include sufficient freeboard for a significant rainfall. See Section 2.16 regarding secondary containment for Qualified Oil-Filled Operational Equipment

***2.18.3 Drainage of Uncontaminated Rainwater from Containment Areas – 40 CFR 112.8(c)(3)***

Reference Section 2.17.

***2.18.4 Buried Metallic Storage Tanks – 40 CFR 112.8(c)(4)***

There are no buried in service underground storage tanks (USTs) at the NSC.

***2.18.5 Partially Buried Storage Tanks – 40 CFR 112.8(c)(5)***

There are no partially buried in service underground storage tanks (USTs) at the NSC.

***2.18.6 Periodic Integrity Testing – 40 CFR 112.8(c)(6)***

There are no tanks or containers regulated under 40 CFR 112 under the control of NNSA at the NSC that require periodic integrity testing.

Oil-filled manufacturing equipment is located inside buildings at the NSC and is therefore, frequently observed and maintained by knowledgeable plant personnel. Equipment that is leaking oil / material is at risk of damaging the equipment thus resulting in significant repair or replacement cost. Therefore, equipment is regularly maintained and observed which would identify any equipment leaks which would result in the appropriate corrective action(s)

*Additionally, although oil-filled manufacturing equipment is not a bulk storage container and is therefore not subject to the frequent visual inspection requirement for bulk storage containers under § 112.8(c)(6), EPA believes that it is good engineering practice to have some form of visual inspection or monitoring for oil-filled manufacturing equipment in order to prevent discharges as described in § 112.1(b) (71 FR 77277).*

*The definition of bulk storage container in §112.2 specifically excludes oil-filled electrical, operating, and manufacturing equipment (“oil-filled equipment”). Therefore, oil-filled equipment is not subject to the bulk storage container requirements in §§112.8(c), 112.9(c), and 112.12(c). (EPA 2013).*

Mobile / portable containers of oil at the NSC are associated with product shipped to the facility. As such, these containers are subject to the DOT construction and continuing qualification and maintenance requirements (49 CFR part 178 and 49 CFR part 180). SPCC guidance notes that DOT requirements may be used by the facility owner and operator and by the certifying PE as references of good engineering practice for assessing the fitness for service of mobile/portable containers. These product containers are emptied and disposed. Therefore, a formal inspection program is not implemented for these types of portable containers at the NSC.

***2.18.7 Internal Heating Coils – 40 CFR 112.8(c)(7)***

There are no internal heating coils in use at the facility. Therefore, this section is not applicable.

***2.18.8 Overfill Protection – 40 CFR 112.8(c)(8)***

There is no equipment under the control of NNSA at the NSC regulated under this paragraph of 40 CFR 112.

***2.18.9 Effluents into Navigable Waters – 40 CFR 112.8(c)(9)***

This section is not applicable to NSC operations. There are no effluent treatment facilities that discharge to navigable waters.

***2.18.10 Correction of Tank Deficiencies – 40 CFR 112.8(c)(10)***

There is no equipment under the control of NNSA at the NSC regulated under this paragraph of 40 CFR 112.

***2.18.11 Mobile / Portable Oil Storage Tanks – 40 CFR 112.8(c)(11)***

When mobile containers are in a stationary, unattended mode and not under the direct oversight or control of facility personnel, the containers are stored inside secondary containment (engineered containment or portable containment skid). When mobile containers are involved in

activities such as fuel transfer, on-site movement, or preparation for such activities in “stand-by” mode, the requirements of §112.8(c)(11) do not apply because the container is not positioned. For discharges that occur only during attended or observed activities, such as those occurring during transfers, an active measure (e.g., sock, mat, other portable barrier, or land-based response capability) may be appropriate, provided that the measure is capable of containing the most likely volume of an oil discharge from a typical failure mode, and is timely and properly constructed/deployed (EPA 2013).

## **2.19 Transfer Operations and In-Plant Processes – 40 CFR 112.8(d)**

Transfer operations only occur from 55 gallon drums, or smaller containers, to oil filled operational equipment. These transfers are made inside the building. There are no oil storage tanks under NNSA control at the NSC. Transfer operations covered under SPCC rules are also addressed in section 2.18.8 of this plan. The transfer of oil and hazardous substances from containers presents a significant potential for spills. The chemical material handlers and oilers are trained to take necessary precautions to prevent spills.

There are no underground storage tanks in operation at the NSC.

A list of hazardous materials used in the facility can be developed from the facility database used to complete the SARA reporting and chemical stores records. The reportable quantity for chemicals can be determined by the Environmental Compliance Department.

### ***2.19.1 Buried Piping Installations – 40 CFR 112.8(d)(1)***

There are no buried piping installations at the NSC regulated under 40 CFR 112.

### ***2.19.2 Out of Service Piping – 40 CFR 112.8(d)(2)***

This section is not applicable to NSC operations. There is no out of service piping associated with SPCC regulated processes.

***2.19.3 Piping Support Design – 40 CFR 112.8(d)(3)***

There are no piping runs under the control of NNSA at the NSC regulated under 40 CFR 112. Other piping runs at the facility have been installed per applicable design standards and engineering practices.

***2.19.4 Inspection of Valves and Piping – 40 CFR 112.8(d)(4)***

There are no oil valves, fittings, and aboveground pipelines under the control of NNSA at the NSC regulated under 40 CFR 112.

***2.19.5 Overhead Piping Vehicle Notification – 40 CFR 112.8(d)(5)***

Trucks and other vehicles do not come into close proximity to aboveground piping.

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DOE 2012. *Emergency Planning Hazards Survey*. November 2012.

DOE 2012a. *Emergency Plan for the NNSA NSC*. November 2012.

DOE 2012b. NNSA National Security Campus *Storm Water Pollution Prevention Plan*. November 2012.

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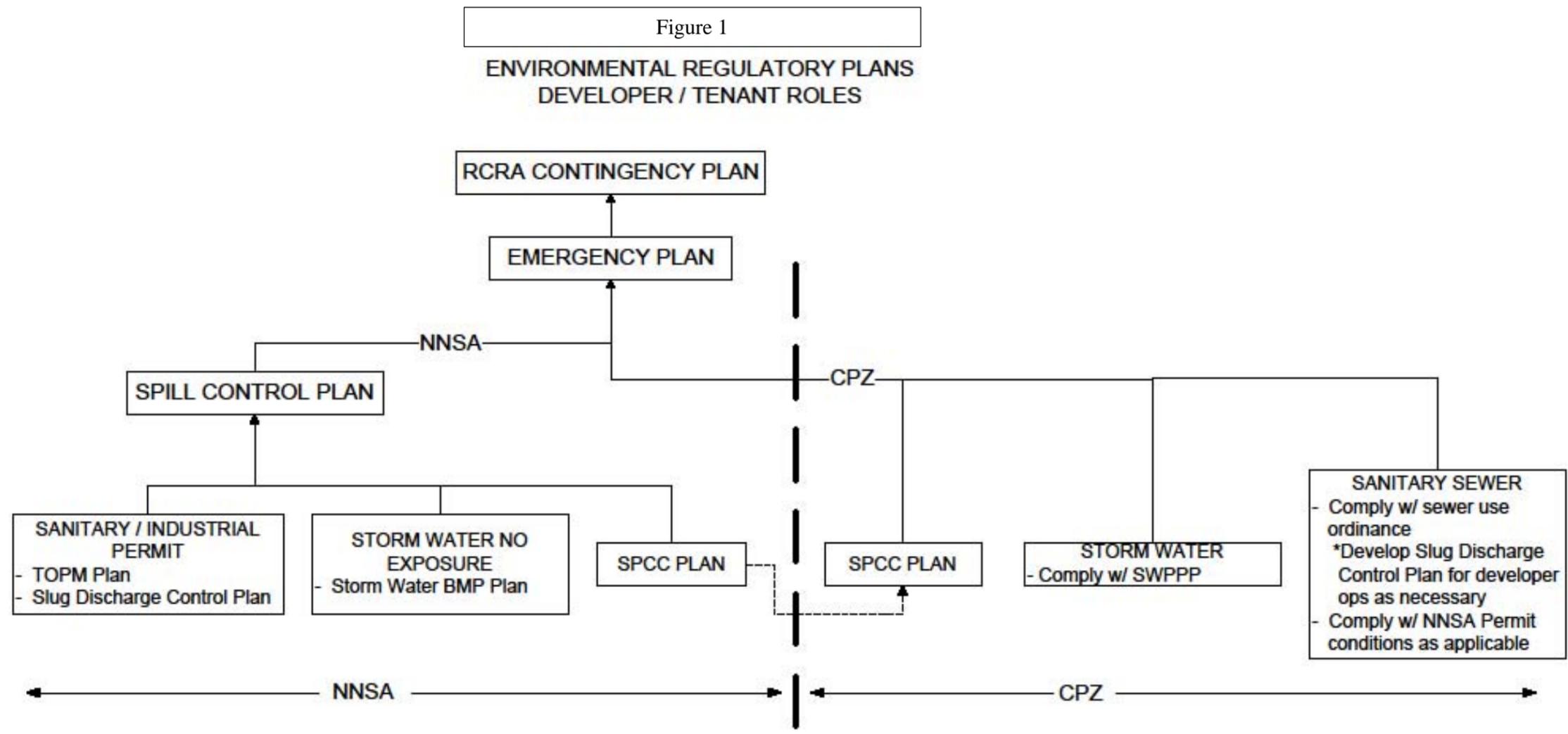
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BMP – Best Management Practices. BMP Plan will be utilized to facilitate No Exposure.  
 SPCC – Spill Control & Countermeasures. Required under 40 CFR 112  
 SWPPP – Storm Water Pollution Prevention Plan. Used to facilitate No Exposure  
 TOPM – Toxic Organic Pollutant Management. Required under 40 CFR 433.12  
 Slug Discharge Control Plan. Required under 40 CFR 403.8(f)(2)(vi).

FIGURE 2.a - STORM SEWER LINES

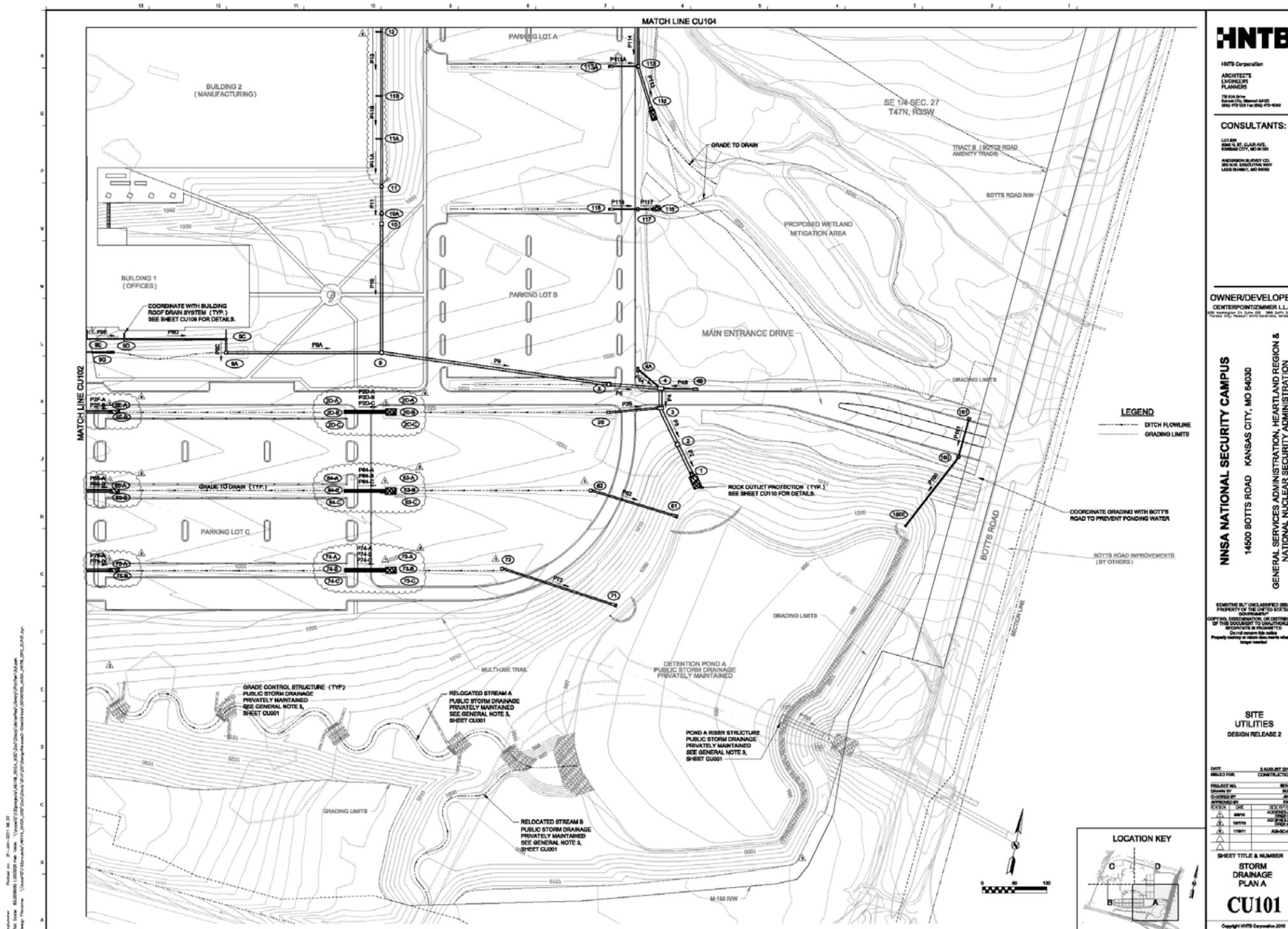
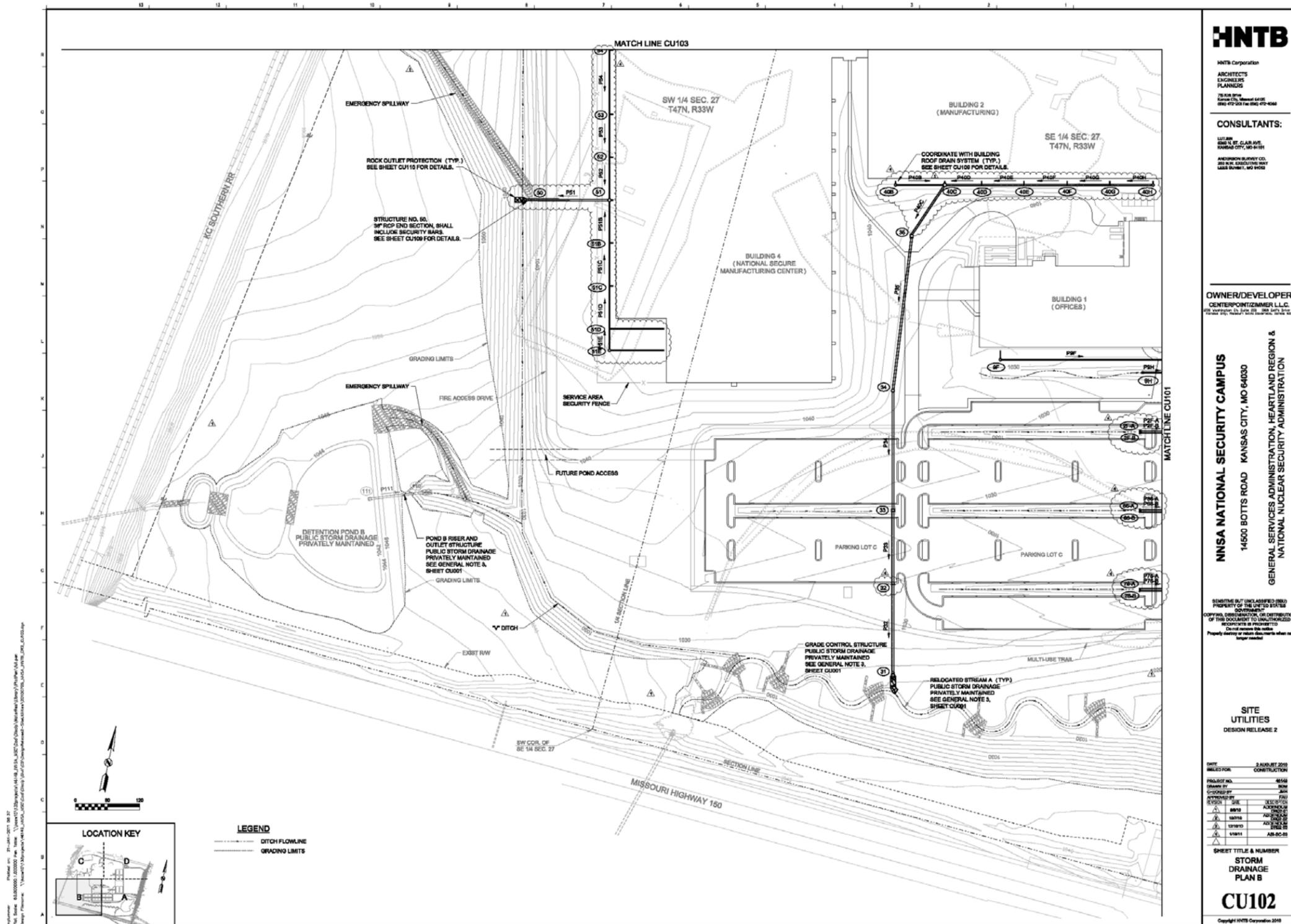


FIGURE 2.b - STORM SEWER LINES



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ISSUED BY	JM	
CHECKED BY	PAJ	
REVISION	DATE	DESCRIPTION
1	08/13	ADDITIONAL
2	08/26	ADDITIONAL
3	09/02	ADDITIONAL
4	09/02	ADDITIONAL
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Figure 2.d Storm Sewer Lines

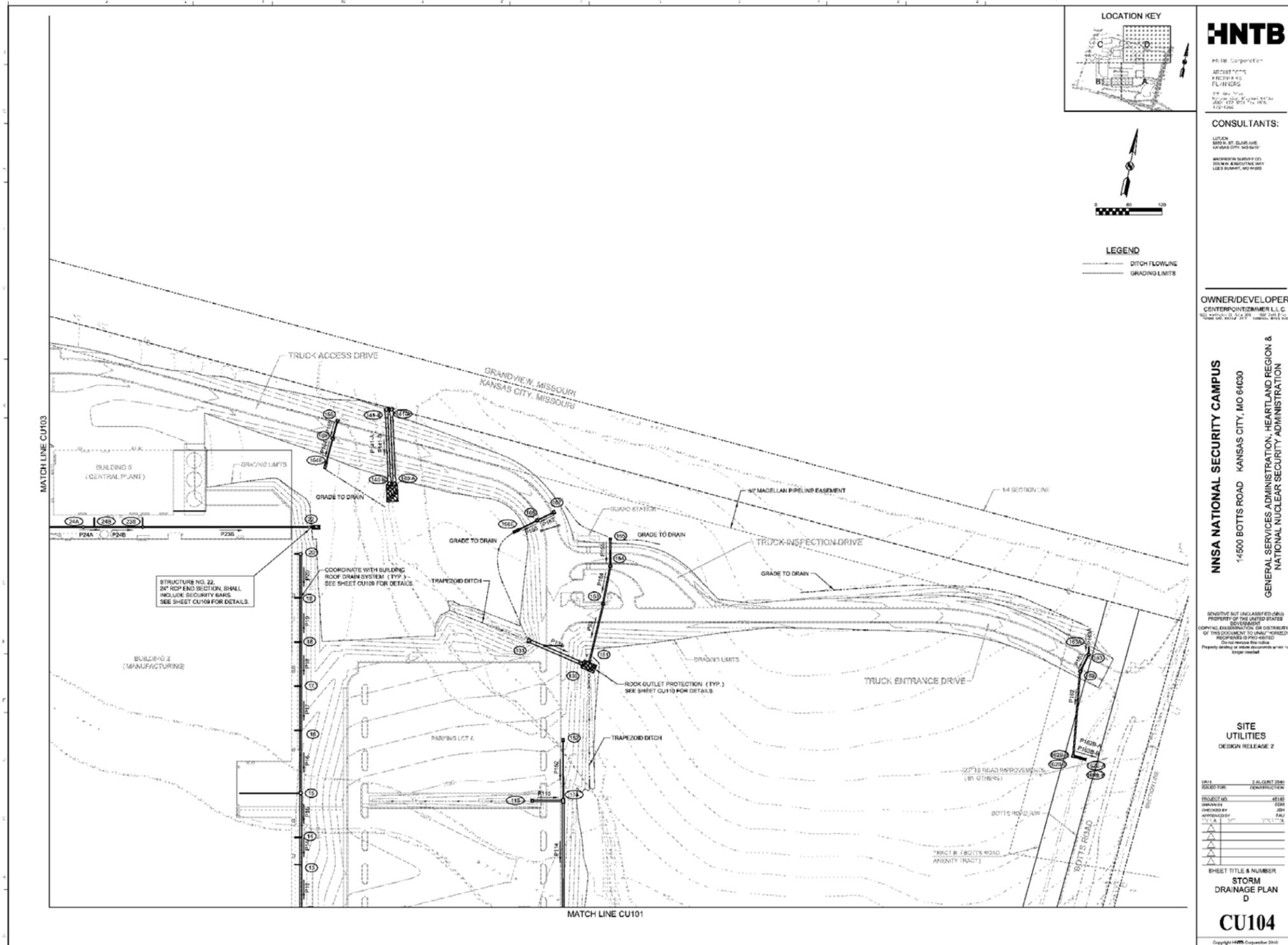
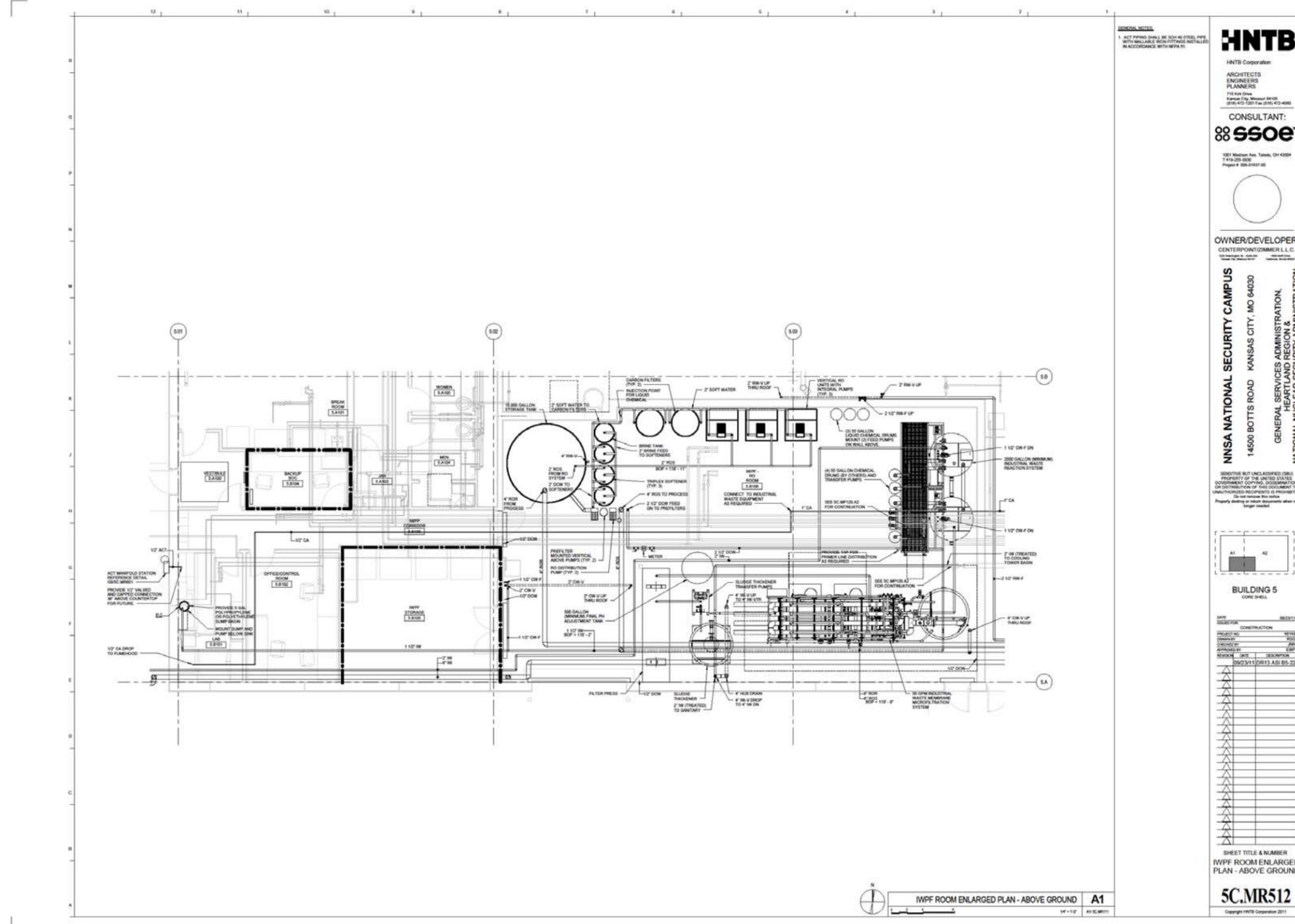




FIGURE 4 – INDUSTRIAL WASTEWATER PRETREATMENT FACILITY LAYOUT







R  
Q  
P  
N  
M  
L  
K  
J  
H  
G  
F  
E  
D  
C  
B  
A

**SHEET NOTES - FOUNDATION PLAN**

- 1 REFERENCE SHEETS SC.S001 THROUGH SC.S002 FOR STRUCTURAL GENERAL NOTES.
- 2 REFERENCE SHEETS SC.S010 THROUGH SC.S011 FOR STANDARD DETAILS.
- 3 REFERENCE SHEET SC.S800 FOR FOOTING, FOUNDATION AND PIER SCHEDULES.
- 4 REFERENCE ARCHITECTURAL DRAWINGS FOR OVERALL COLUMN GRID LAYOUT GEOMETRY AND ALL DIMENSIONS. CONTACT THE ARCHITECT IMMEDIATELY TO RESOLVE ANY CONFLICTS SHOWN BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 5 TOP OF INTERIOR FLOOR SLAB ELEVATION = 100'-0" TYPICAL UNLESS NOTED OTHERWISE (DATUM ELEVATION = ..... PER CIVIL AND ARCHITECTURAL DRAWINGS).
- 6 PROVIDE SLEEVES THROUGH WALLS AND FOUNDATIONS TO ACCOMMODATE INSTALLATION OF UTILITIES IN FUTURE BID PACKAGES. COORDINATE FINAL SIZE AND LOCATION WITH CIVIL AND MEP DRAWINGS.

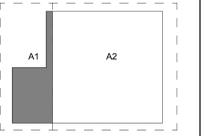
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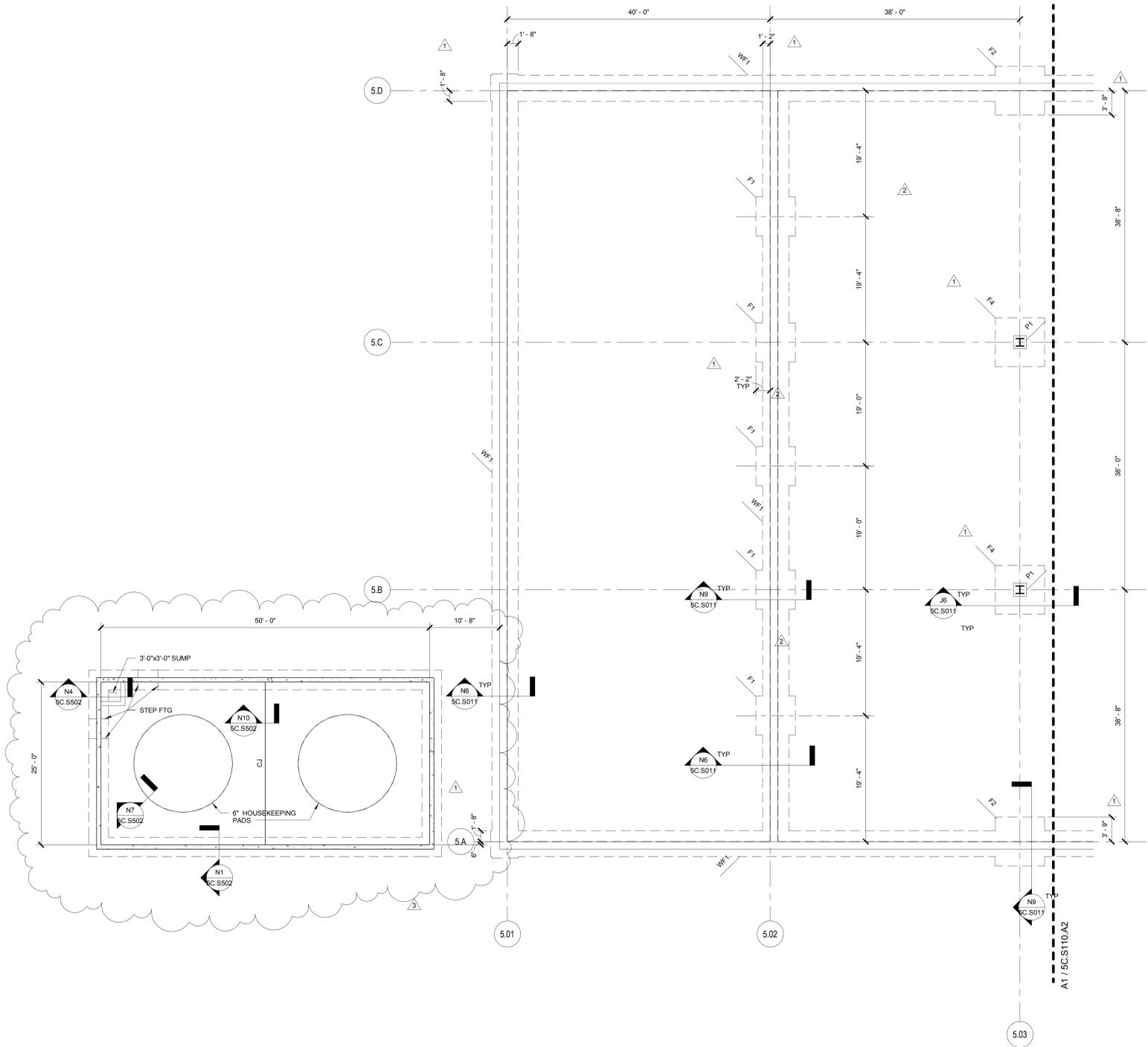
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**BUILDING 05**  
CORE SHELL

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1	08/23/10	ADD NO 1
2	11/16/10	ASI B5-01
3	02/09/11	ASI B5-07





**IWPF Containment**

**Volume Calculations**

<b>Tank Volume</b>	30,528.00	gallon
<b>100 yr rain calculation</b>		
containment area = 25' x 50'	1,250.00	ft2
100 yr storm event 8" (8" /24 hr / ft2) = 5 gal / ft2	5.00	gal / ft2
100 rain event total	6,250.00	gal
<b>Tank volume + 100 year storm event volume</b>	<b>36,778.00</b>	gal
<b>Containment Volume</b>		
Height	4.5	ft
Width	25	ft
Length	50	ft
	5,625	ft3
<b>Calculated Volume</b>	<b>42,078</b>	gallon
<b>Articles inside containment</b>		
tank pad		
pad radius = 7.75ft or diameter = 15.5 ft	7.75	ft
pad height	0.5	ft
$\pi \times R^2 \times \text{height} = \text{volume}$	94.30	ft3
convert ft3 to gallons	705	gallons
plus second pad	705	gallons
total tank pad volume	<b>1,410</b>	gallons
piping - 45ft length of 0.5ft dia pipe w/ insulation		
45 ft length	45	ft
0.25ft radius or 0.5 ft dia (w/ insulation)	0.25	ft
$\pi \times R^2 \times \text{length} = \text{volume}$	9	ft3
convert ft3 to gallons	<b>66</b>	gallons
piping - 16ft length of 0.92ft dia pipe w/insulation		
16 ft length	16	ft
0.46ft radius or 0.92 ft dia (w/ insulation)	0.46	ft
$\pi \times R^2 \times \text{length} = \text{volume}$	11	ft3
convert ft3 to gallons	<b>80</b>	gallons
pump cabinet		
3ft x 6.5ft x 4.5ft	87.75	ft3
convert ft3 to gallons	656	gallons
~displacement of cabinet and pumps w/in = 20%	<b>131</b>	gallons
stairs	<b>50</b>	gallons
damaged tank - if leaks will not be empty will equilibrate with containment fluid height.	0	
volume of second tank displacement (14' dia x 4.0' high)	616	ft3
convert ft3 to gallons	<b>4,606</b>	gallons
<b>Less volume of articles inside containment</b>	<b>6,343</b>	
<b>Net Containment</b>	<b>35,734.40</b>	gallon

Figure 5.a - Building 2 southwest - Industrial Waste Water Piping System

Legend:  
Red lines - industrial waste water piping  
Blue lines - spill containment piping

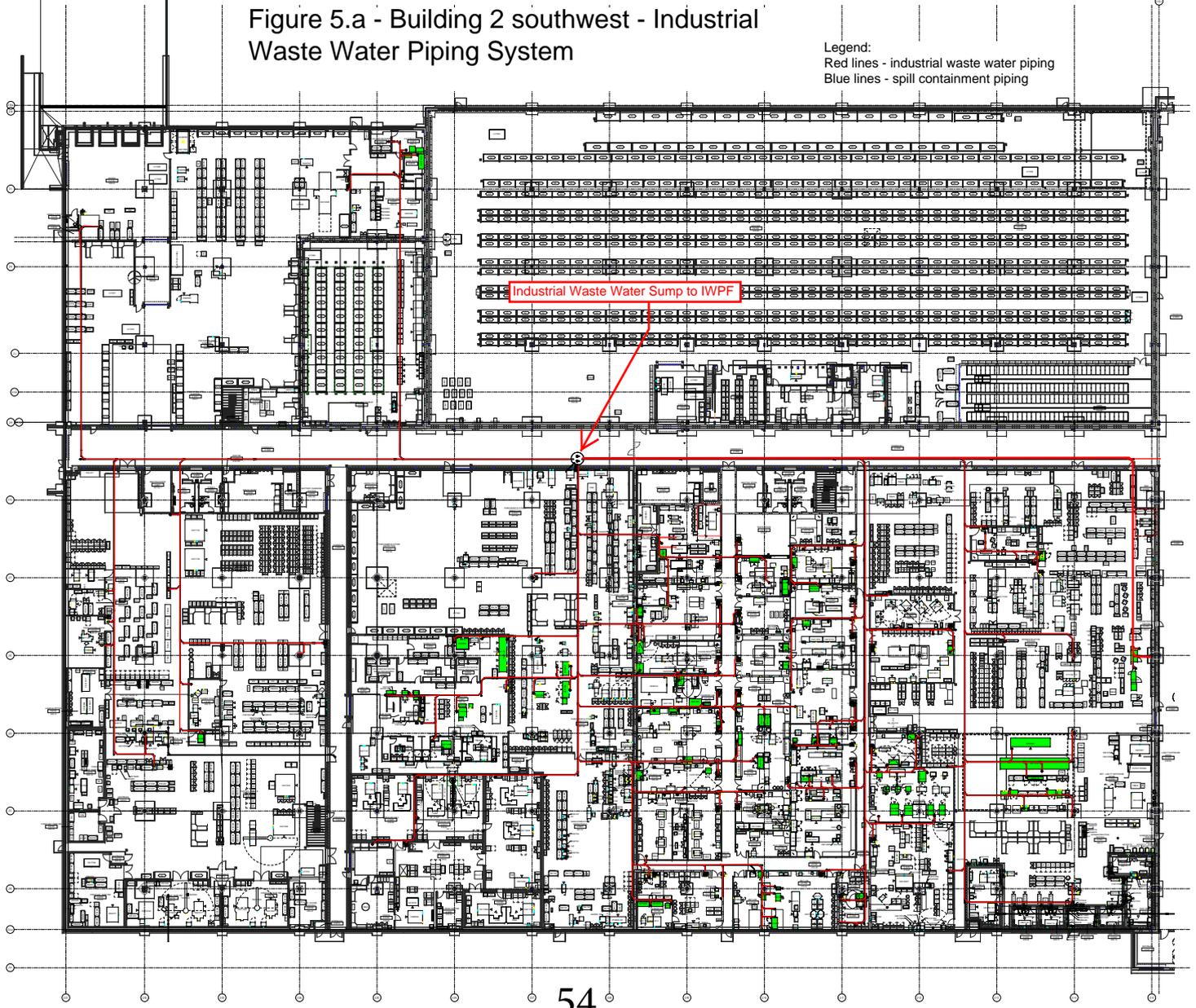


Figure 5.b - Building 2 southeast - Industrial Waste Water Piping

Legend:  
Red lines - industrial waste water piping  
Blue lines - spill containment piping



Industrial Waste Water Sump to IWPF

Figure 5.c - Building 2 northeast -

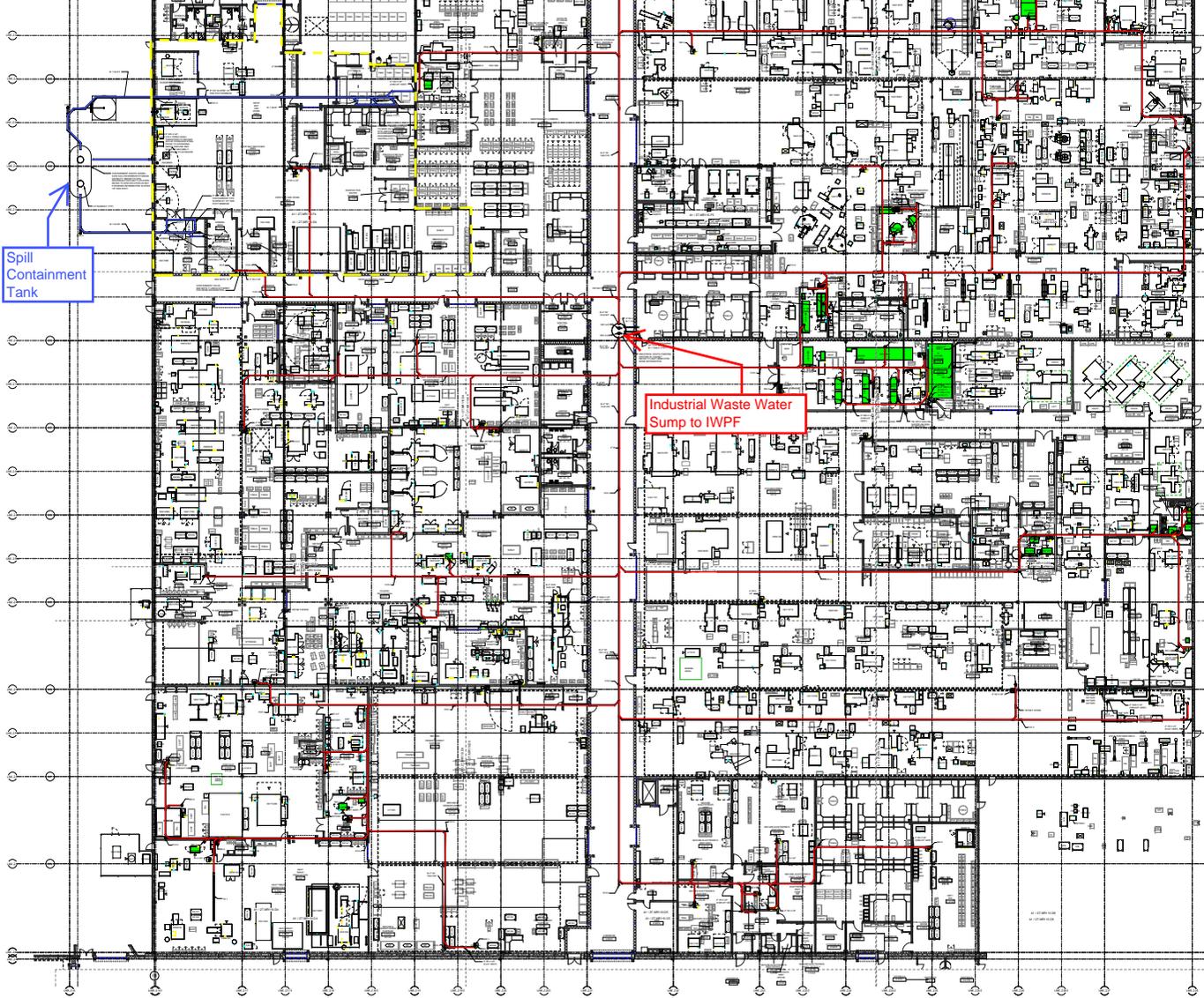
Industrial Waste Water Piping

Legend:

Red lines - industrial waste water piping

Blue lines - spill containment piping

yellow line - outline of waste mgt storage area





Spill Containment Tanks

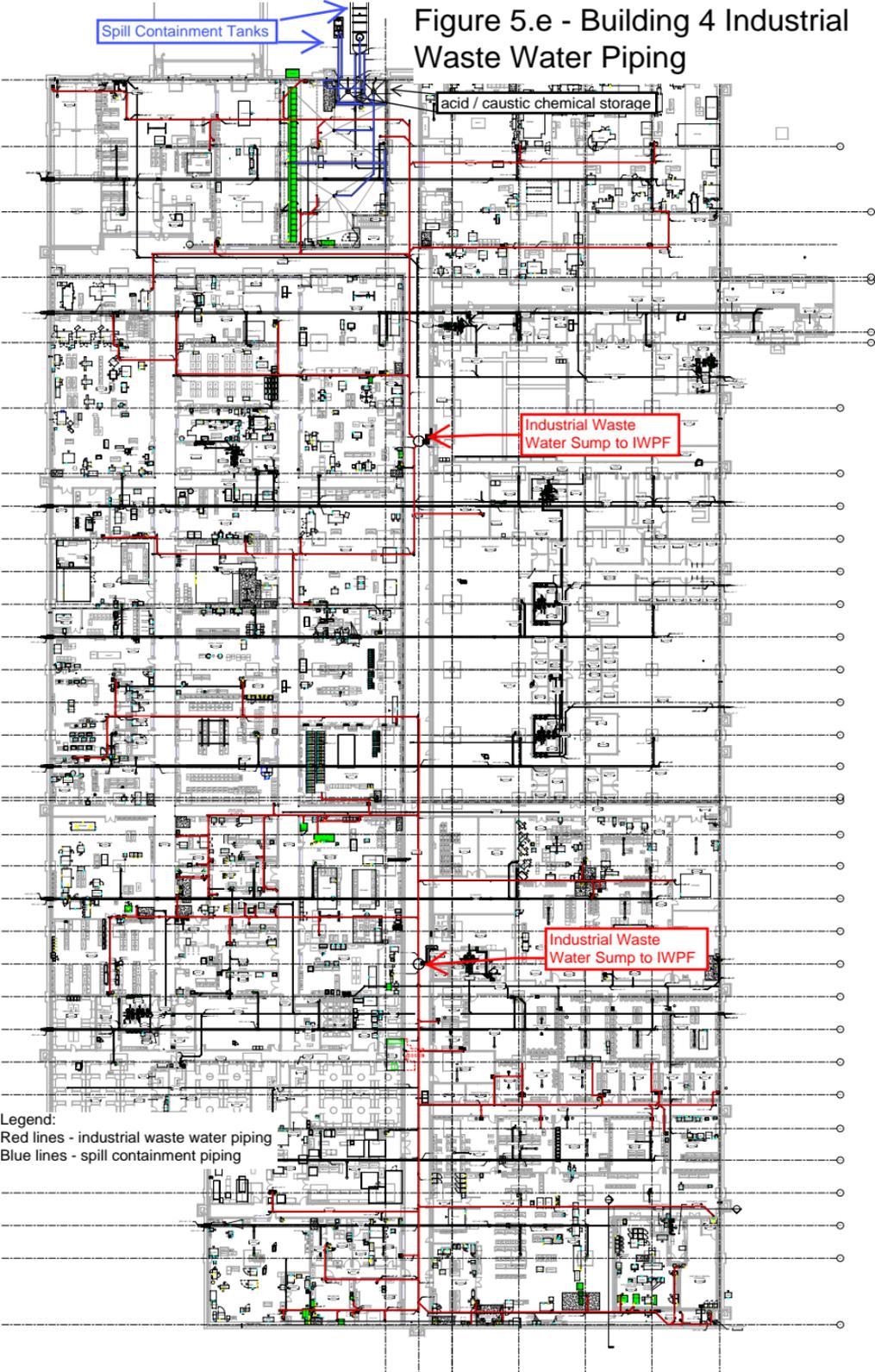
Figure 5.e - Building 4 Industrial Waste Water Piping

acid / caustic chemical storage

Industrial Waste Water Sump to IWPF

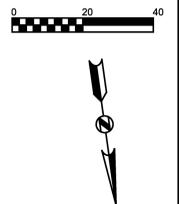
Industrial Waste Water Sump to IWPF

Legend:  
Red lines - industrial waste water piping  
Blue lines - spill containment piping





# Figure 6.b - Sanitary Sewer System Collection Piping



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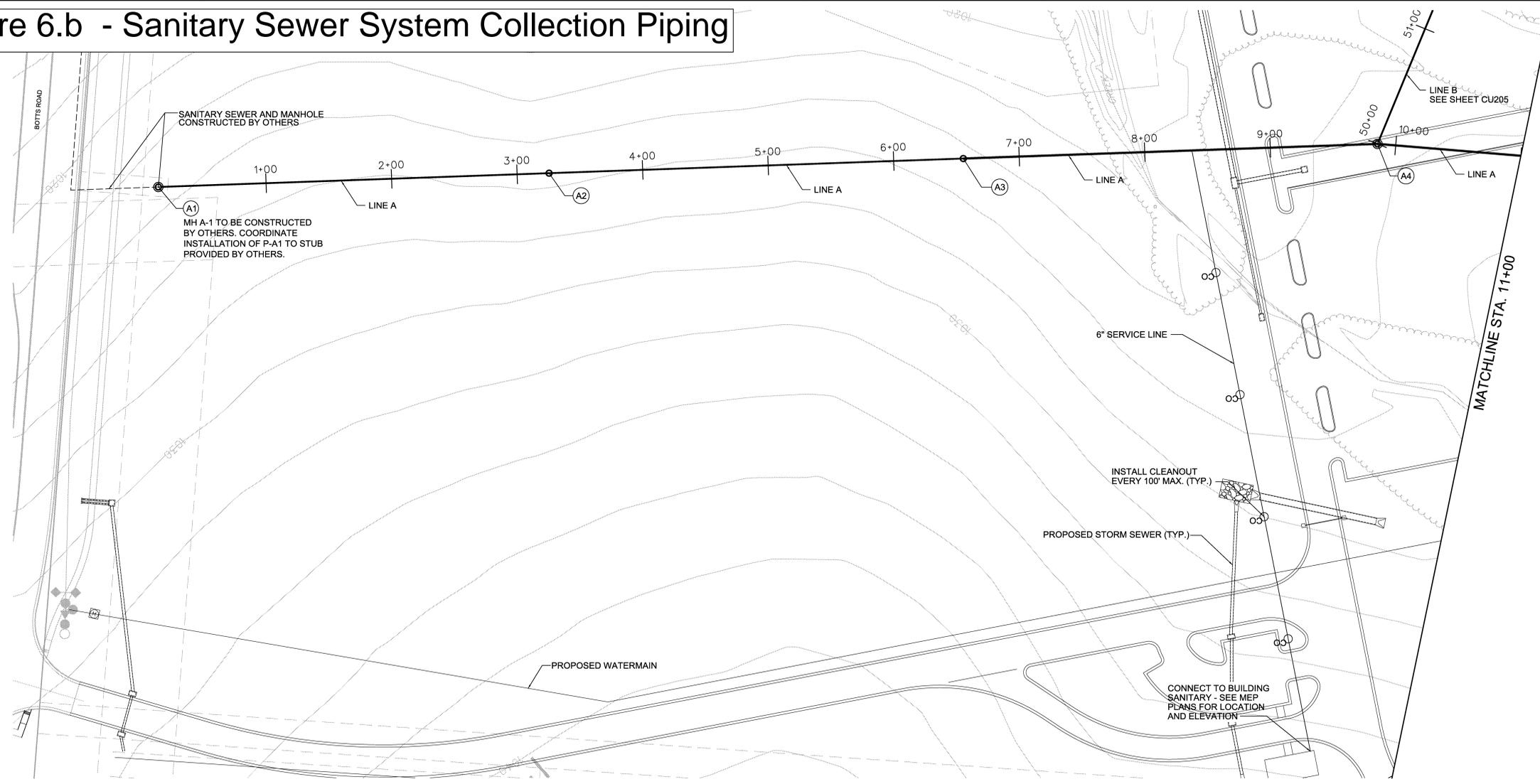
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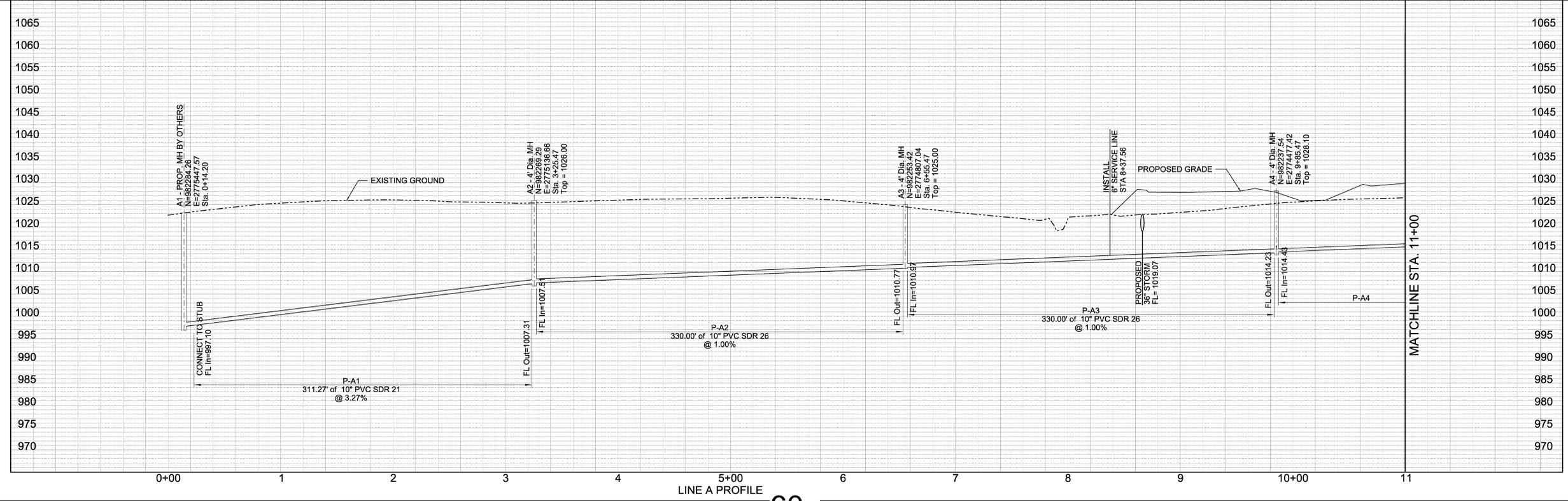
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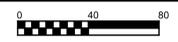
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Figure 6.c Sanitary Sewer Collection Piping



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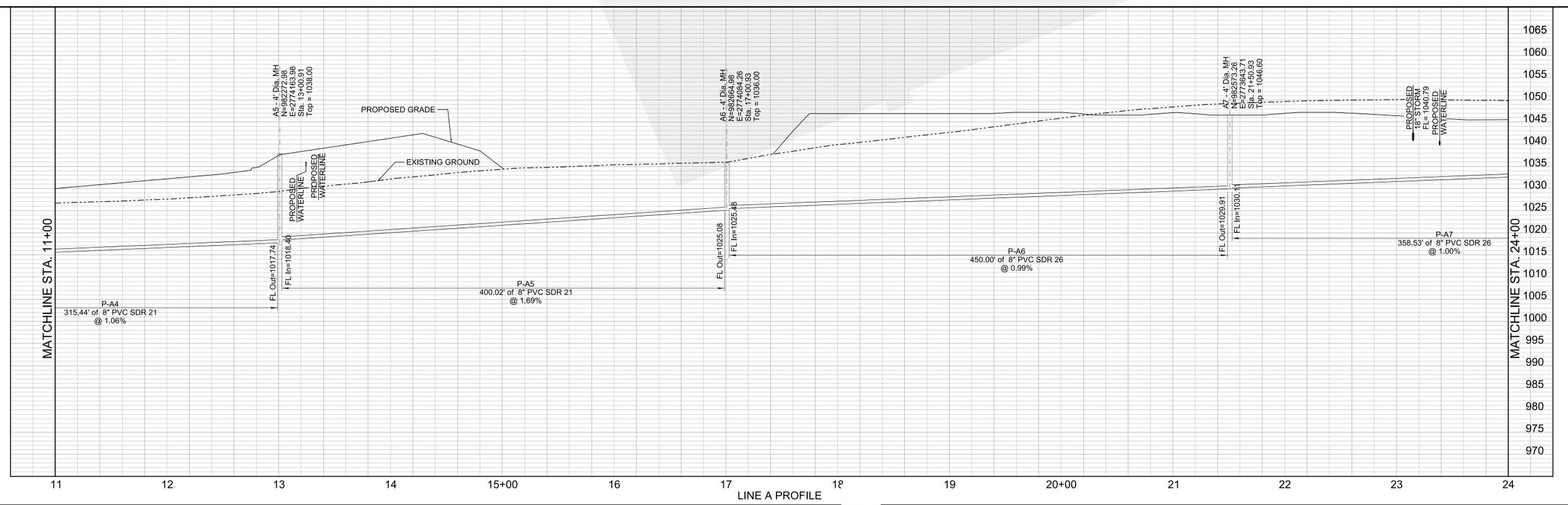
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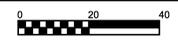
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Figure 6.d - Sanitary Sewer System Collection Piping



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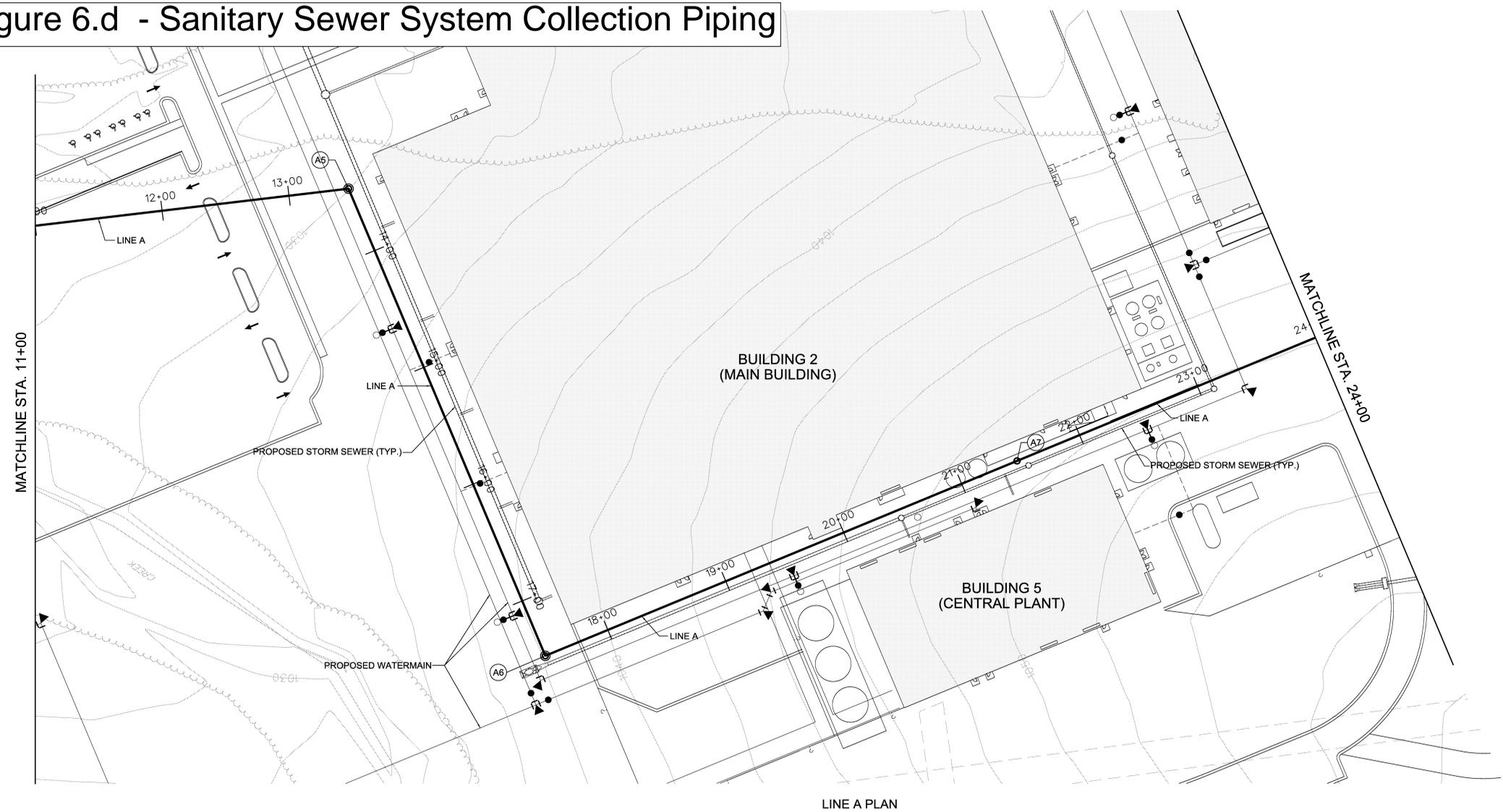
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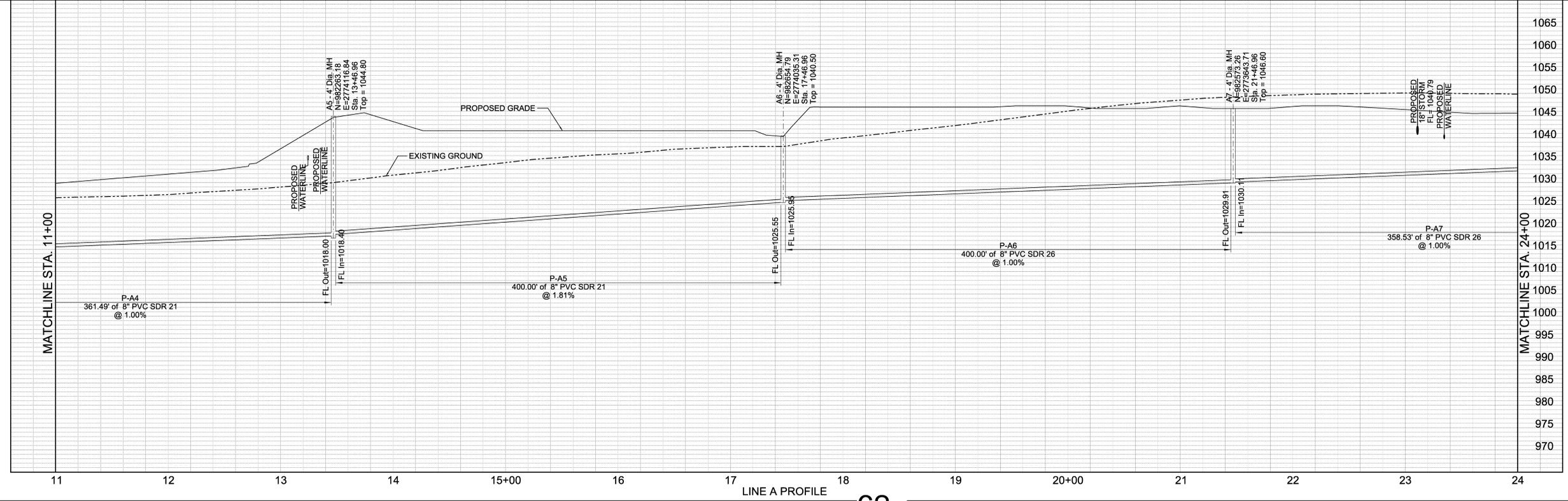
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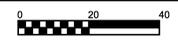
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Figure 6.e - Sanitary Sewer System Collection Piping



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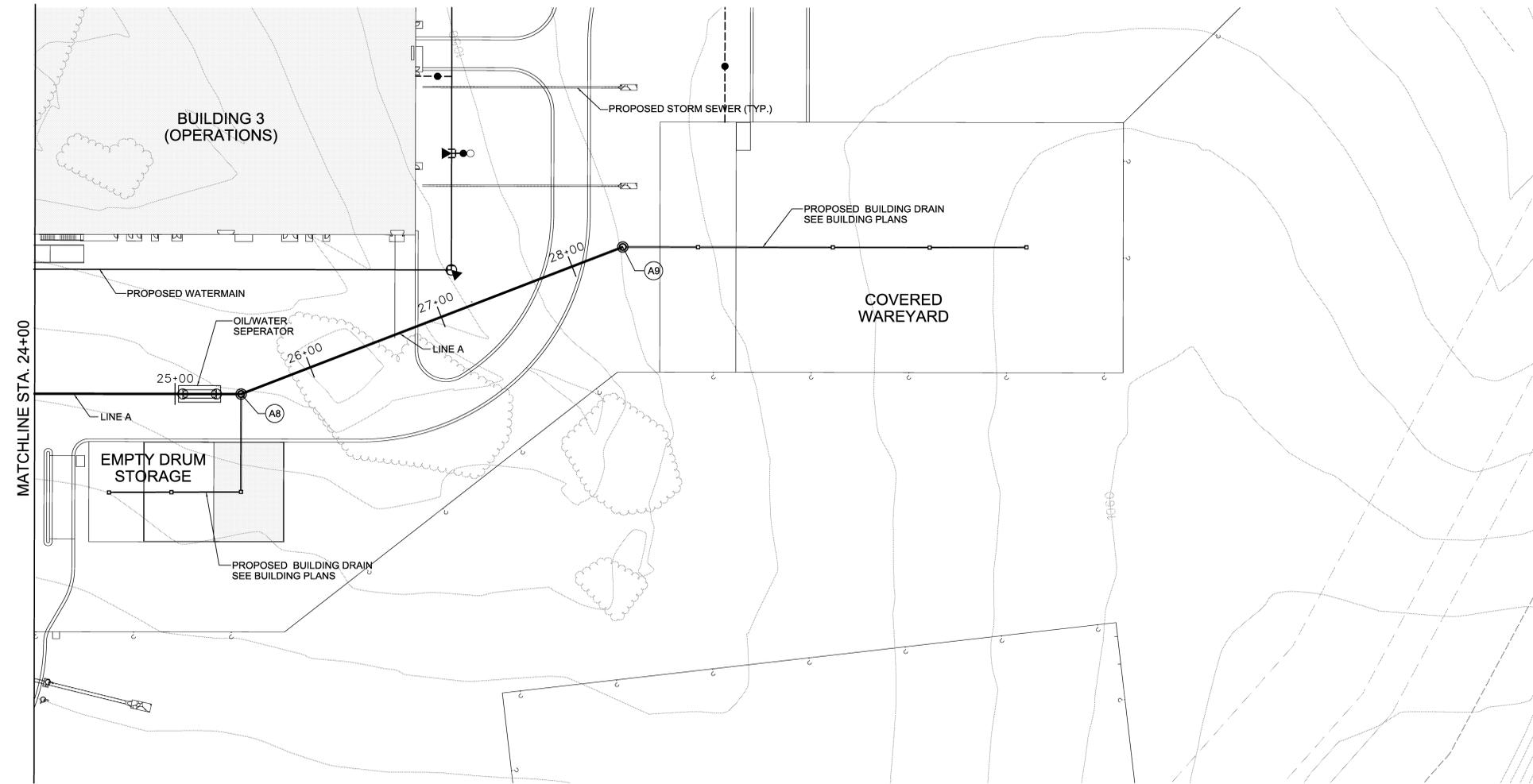
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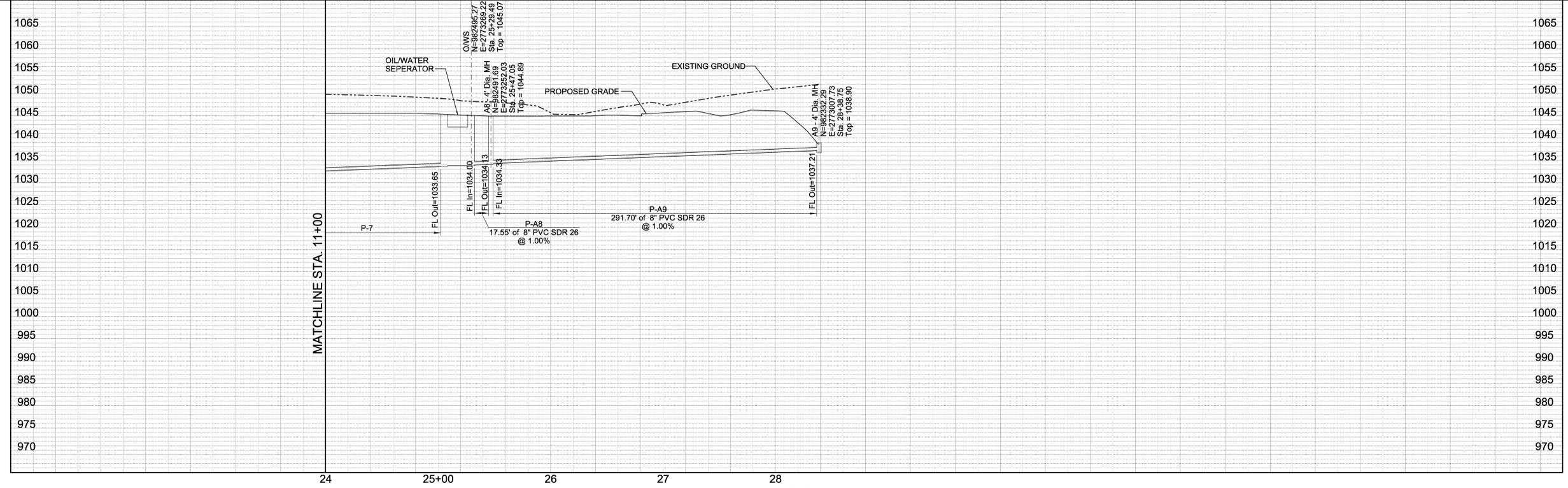
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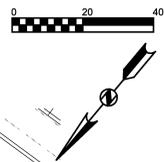
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# Figure 6.f - Sanitary Sewer System Collection Piping



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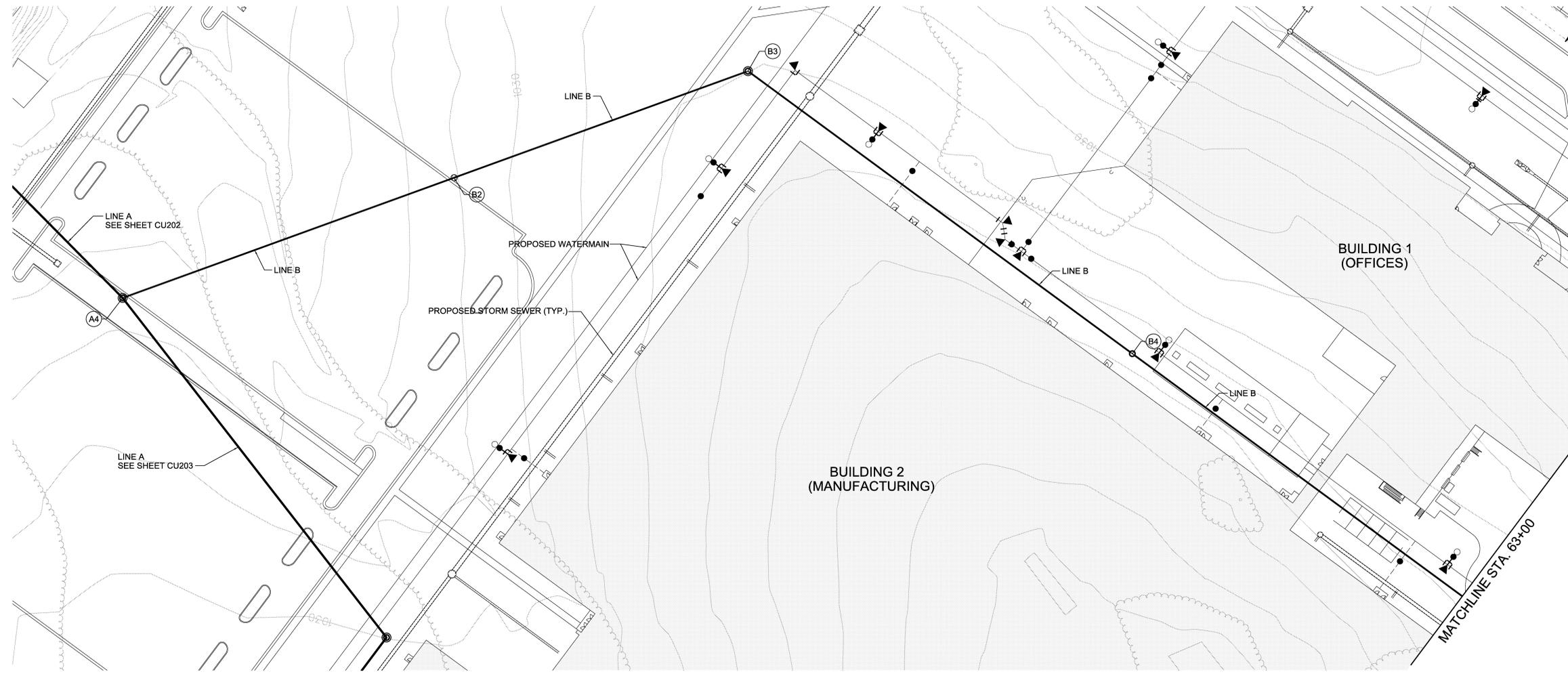
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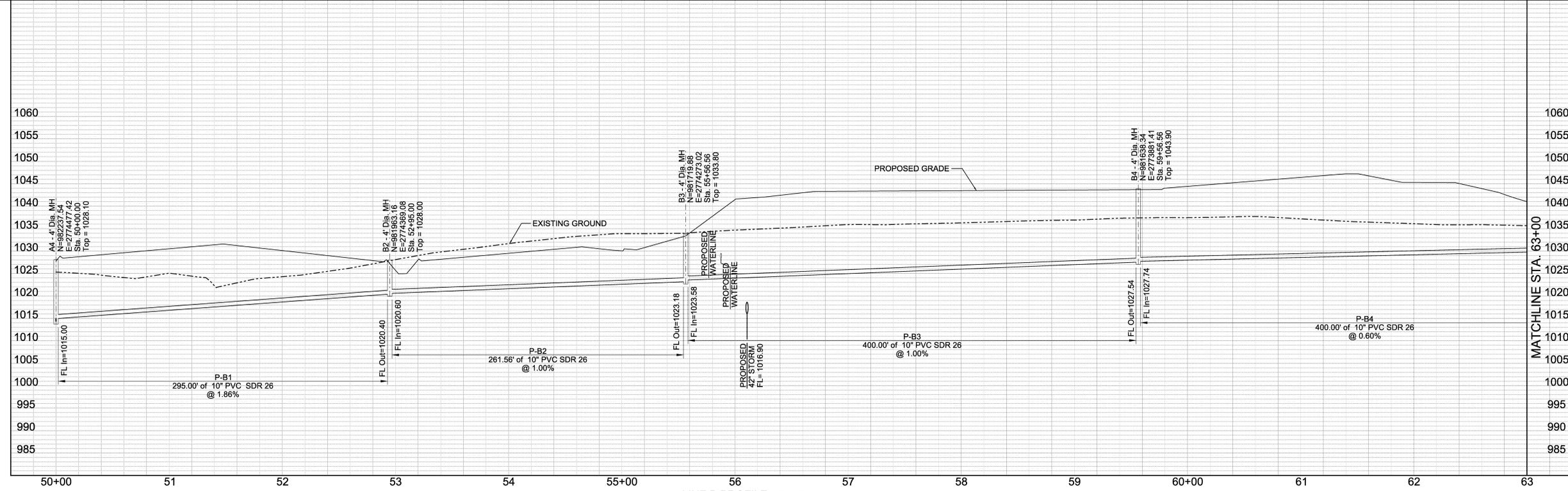
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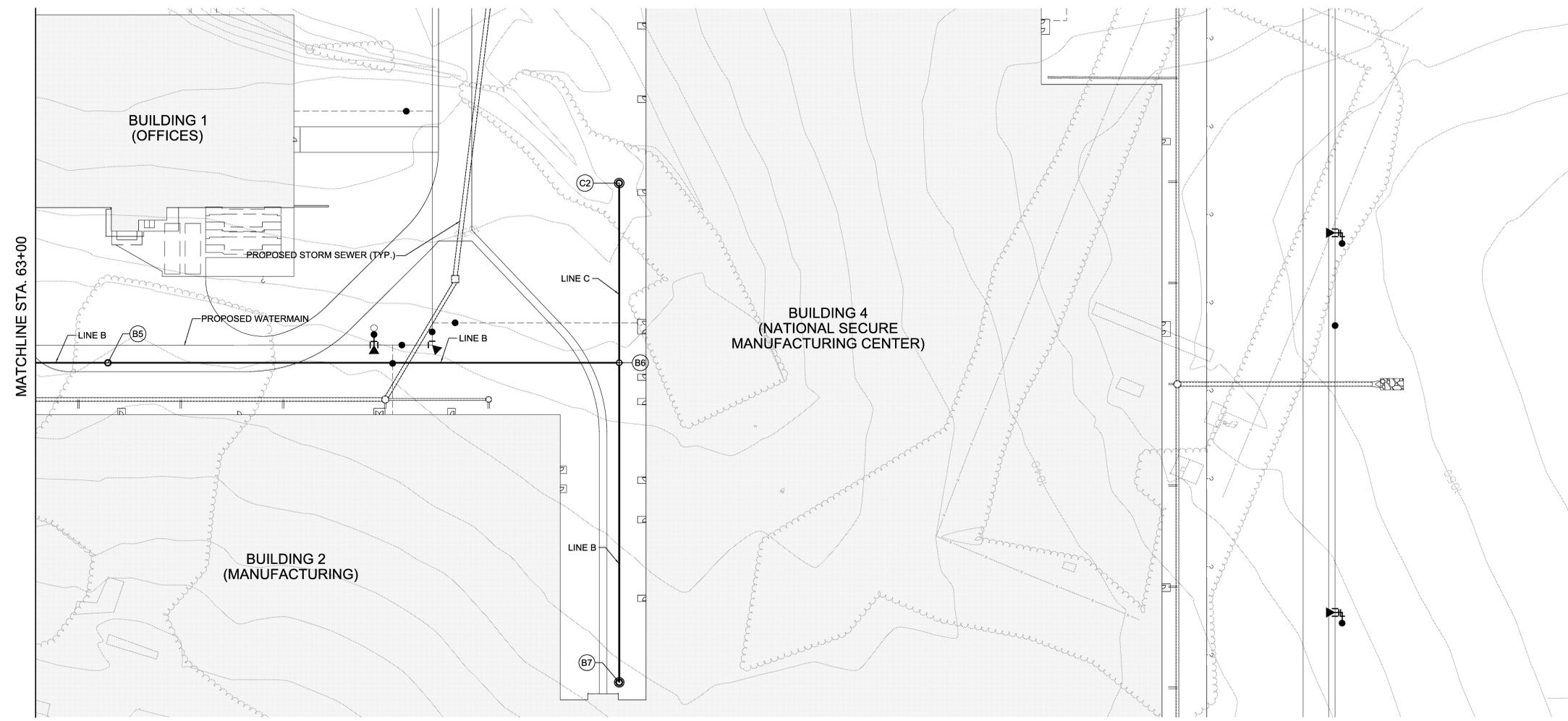
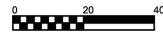
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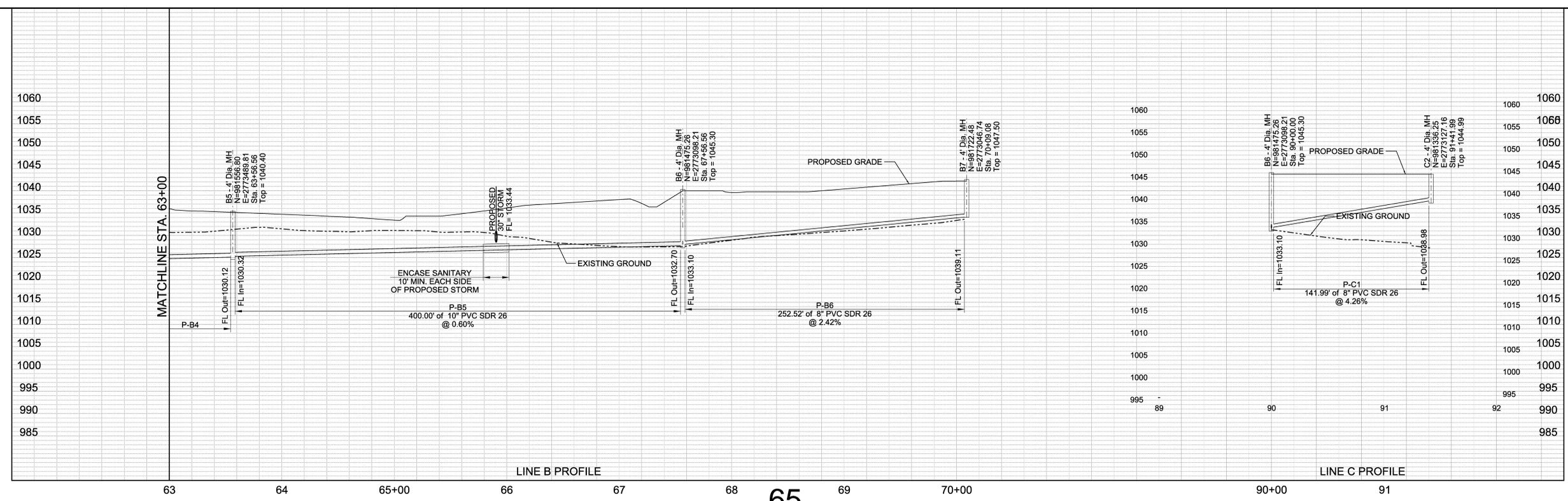
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# Figure 6.g - Sanitary Sewer System Collection Piping



LINE B & C PLAN



LINE B PROFILE

LINE C PROFILE



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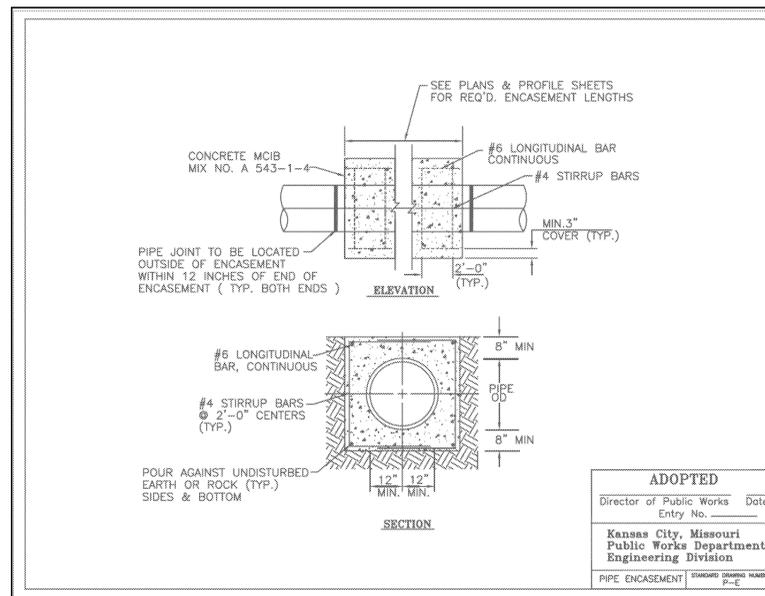
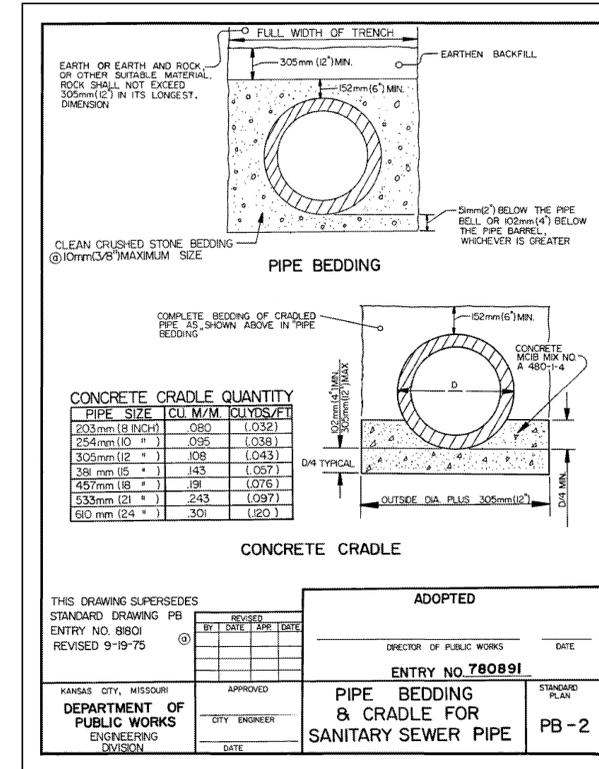
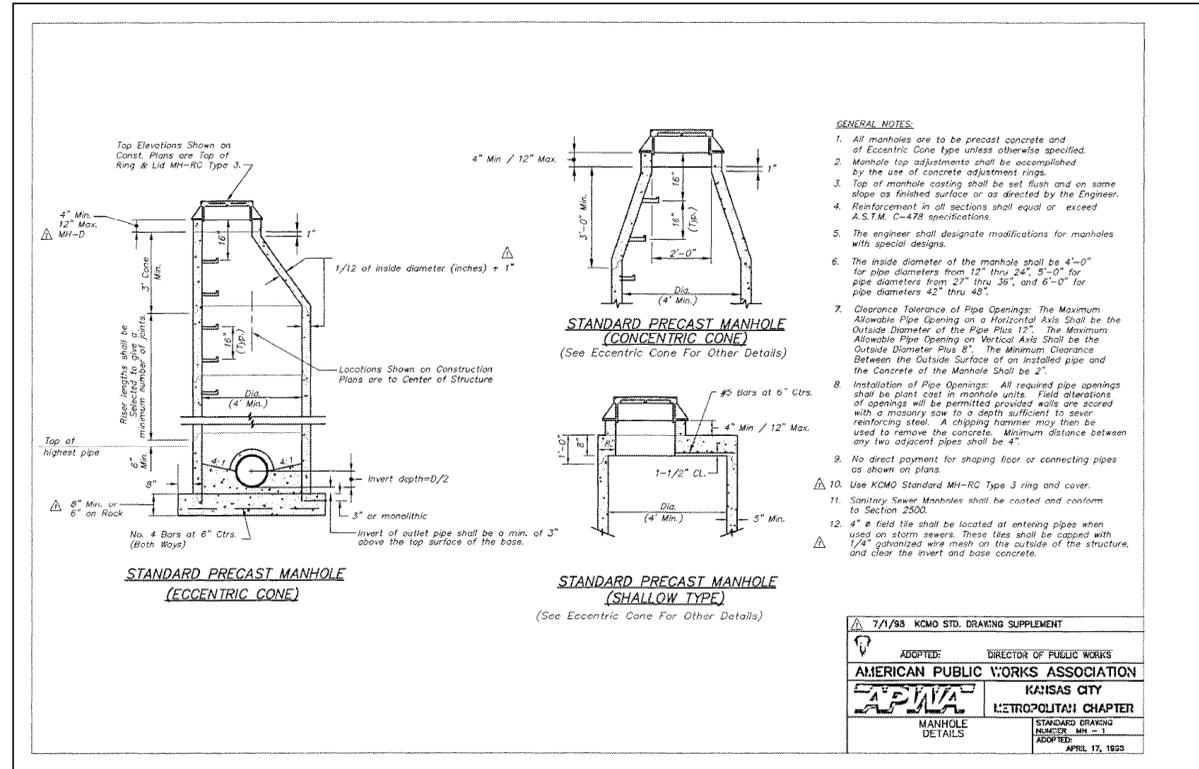
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# Figure 6.h - Sanitary Sewer System Collection Piping



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### SITE UTILITIES

DESIGN RELEASE 2

DATE: 2 AUGUST 2010  
ISSUED FOR: CONSTRUCTION

PROJECT NO.	46146	
DRAWN BY	SDM	
CHECKED BY	JSH	
APPROVED BY	FAU	
REVISION	DATE DESCRIPTION	
▲		
▲		
▲		
▲		

### SHEET TITLE & NUMBER

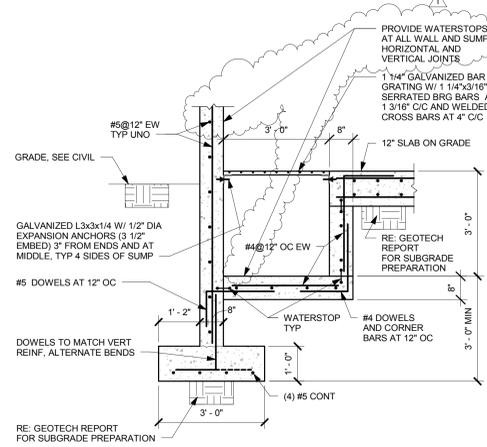
SANITARY SEWER  
DETAILS

## CU207

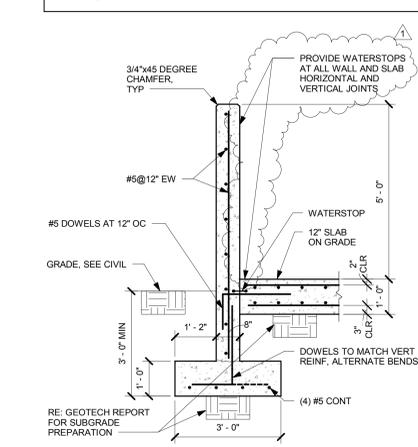
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Plotted on: 02-AUG-2010 10:27  
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Design Filename: \\kscw01\022\projects\46146\NNSA\_NSC\Drawings\Sanitary Sewer\Sanitary Sewer Details.dwg

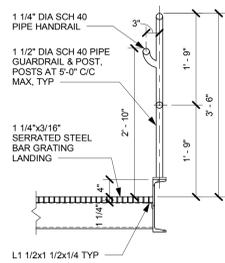
# Figure 7 - Spent Coolant Tank



**DETAIL M10**  
1/2" = 1'-0"  
A1/ 6T.S111

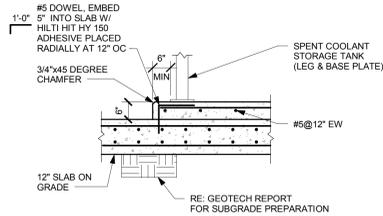


**DETAIL M7**  
1/2" = 1'-0"  
A1/ 6T.S111

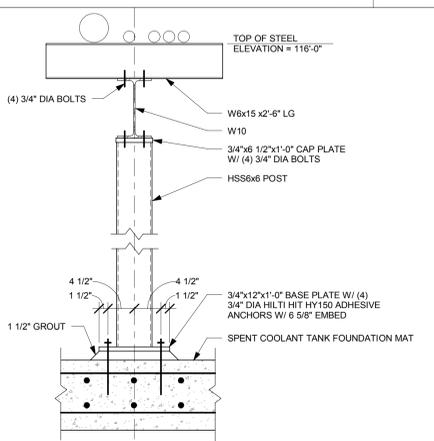


NOTE:  
ALL STEEL SHALL BE GALVANIZED.

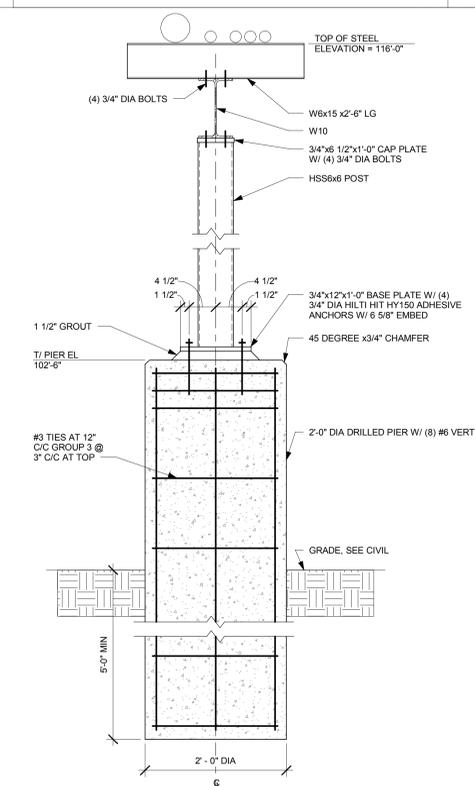
**DETAIL K1**  
3/4" = 1'-0"  
A1/ 6T.S111



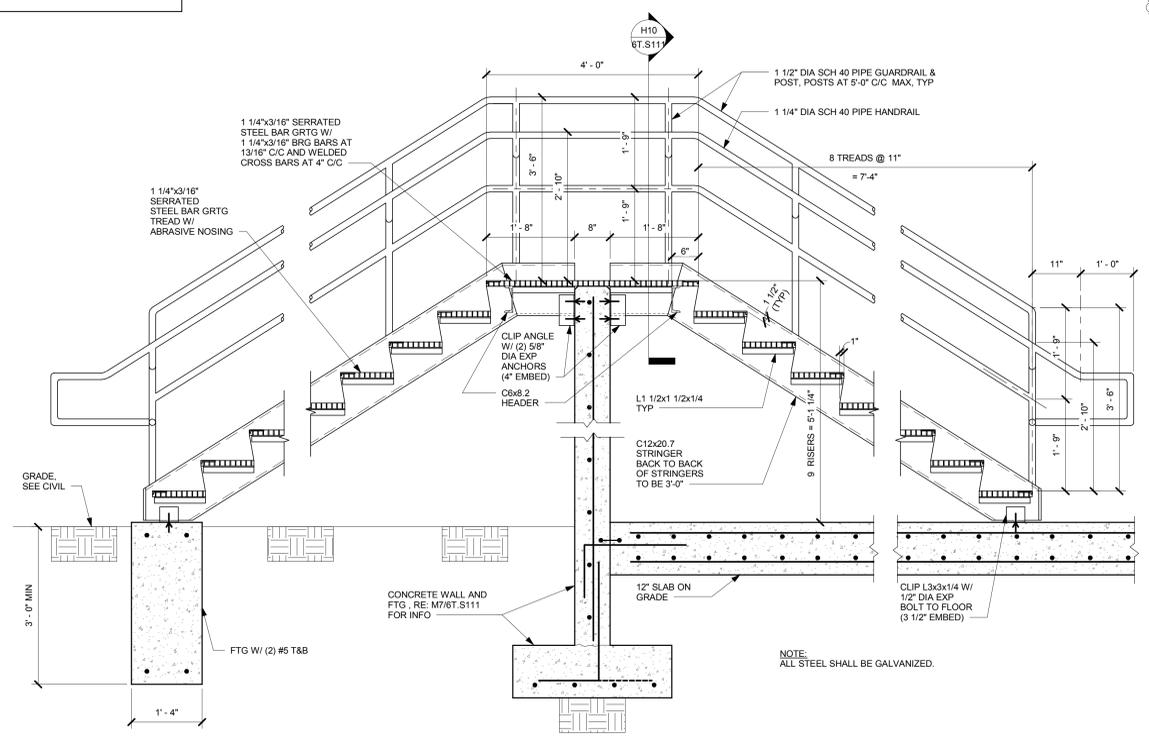
**DETAIL H7**  
1/2" = 1'-0"  
A1/ 6T.S111



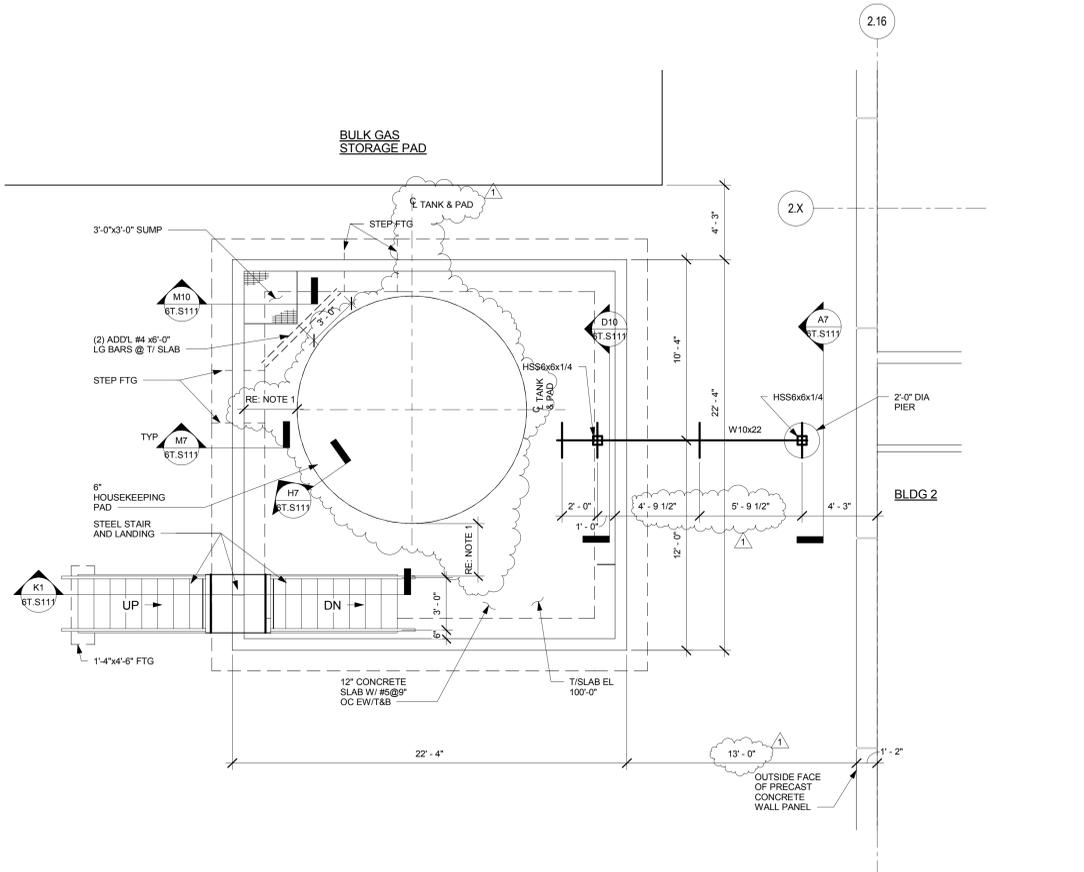
**PIPE SUPPORT SECTION D10**  
1" = 1'-0"  
A1/ 6T.S111



**PIPE SUPPORT SECTION A7**  
1" = 1'-0"  
A1/ 6T.S111



**DETAIL K1**  
3/4" = 1'-0"  
A1/ 6T.S111



**SPENT COOLANT TANK FOUNDATION A1**  
1/4" = 1'-0"

**HNTB**  
HNTB Corporation  
ARCHITECTS  
ENGINEERS  
PLANNERS  
715 Kirk Drive  
Kansas City, Missouri 64105  
(816) 472-1201 Fax (816) 472-4080

CONSULTANT:  
**S&S**  
S&S, Inc.  
1001 Madison Ave. Toledo, OH 43604  
T 419-255-3830  
Project # 008-01637-00

OWNER/DEVELOPER:  
CENTERPOINT/ZIMMER L.L.C.  
1201 Washington St., Suite 200  
Kansas City, Missouri 64111  
1808 South Drive  
Overbrook, Illinois 60520

**NNSA NATIONAL SECURITY CAMPUS**  
14500 BOTTS ROAD KANSAS CITY, MO 64030  
GENERAL SERVICES ADMINISTRATION,  
HEARTLAND REGION &  
NATIONAL NUCLEAR SECURITY ADMINISTRATION

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**SITE WORK**  
TENANT IMPROVEMENTS

REVISION	DATE	DESCRIPTION
1	01/11/12	DR12B PR SC-01
2	12/09/11	DR12B PR SC-01

DATE	ISSUED FOR	CONSTRUCTION
12/09/11	CONSTRUCTION	48149
		GH
		TB
		TB

SHEET TITLE & NUMBER  
**SPENT COOLANT TANK  
FOUNDATION PLAN AND  
DETAILS**

**6T.S111**  
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**Spent Coolant Tank**

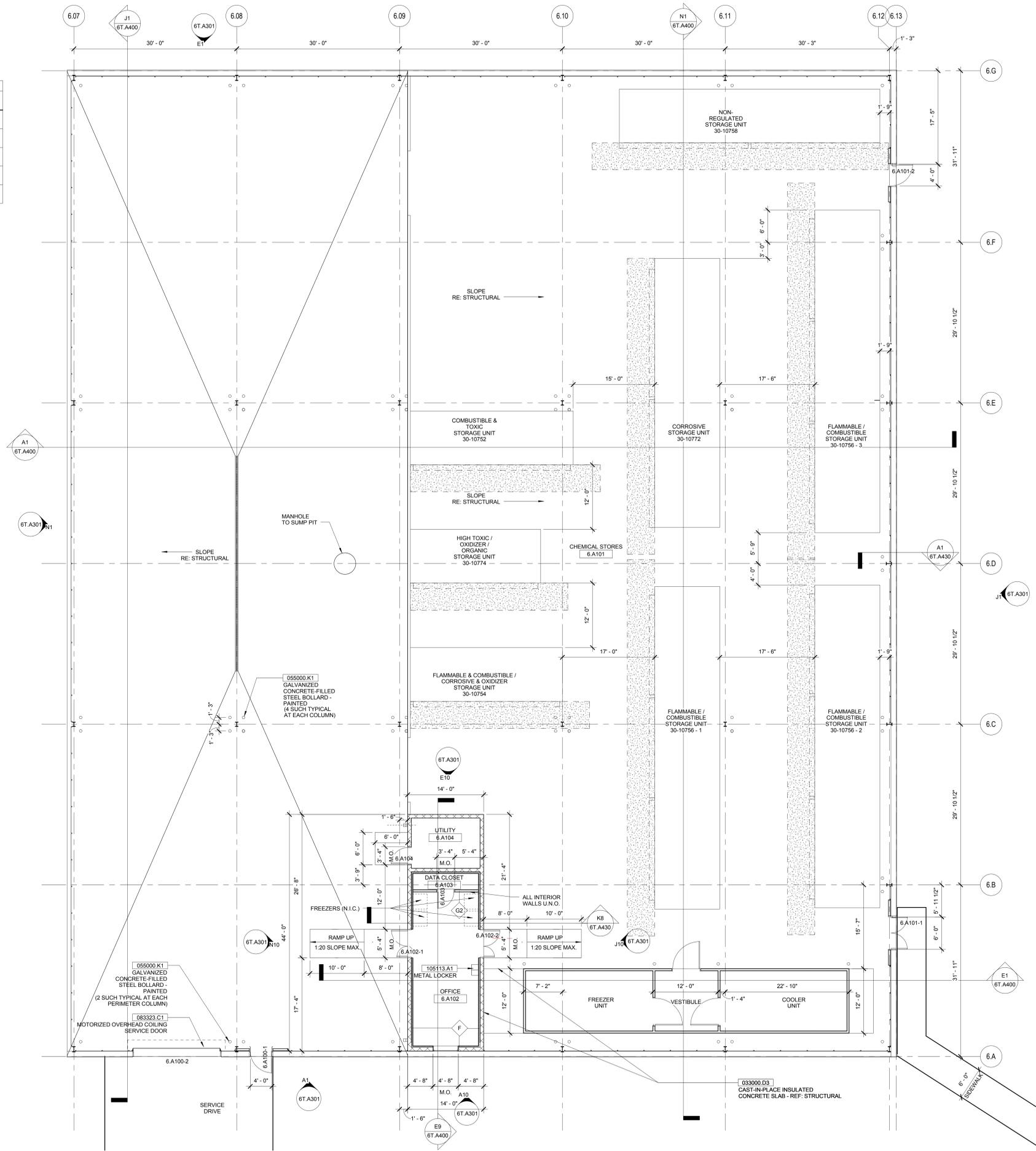
**Volume Calculations**

<b>Tank Volume</b>	12,000.00	gallon
<b>100 yr rain calculation</b>		
containment area = 21' x 21'	441.00	ft2
100 yr storm event 8" (8" /24 hr / ft2) = 5 gal / ft2	5.00	gal / ft2
100 rain event total	2,205.00	gal
<b>Tank volume + 100 year storm event volume</b>	<b>14,205.00</b>	gal
<b>Containment Volume</b>		
Height	5.0	ft
Width	21	ft
Length	21	ft
	2,205	ft3
<b>Calculated Volume</b>	<b>16,495</b>	gallon
Articles inside containment		
tank - if leaks will not be empty will equilibrate with containment fluid height.	0	
Less misc. displacement of solid metal inside containment	200	gallon
<b>Net Containment</b>	<b>16,294.50</b>	gallon



Figure 8.b - Covered Ware Yard

FINISH SCHEDULE						
ROOM NUMBER	NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	Finish Comments
6.A100	WAREYARD	--	--	--	--	PAINT STRUCTURAL STEEL
6.A101	CHEMICAL STORES	--	--	--	--	PAINT STRUCTURAL STEEL
6.A102	OFFICE	SC	B2"	P1	APC3	* JOHNSONITE #08 "ICICLE"
6.A103	DATA CLOSET	SC	B2"	P1	--	* JOHNSONITE #08 "ICICLE"
6.A104	UTILITY	SC	B2"	--	--	* JOHNSONITE #08 "ICICLE"



WAREYARD FLOOR PLAN - AREA A2 **A1**

**HNTB**  
 HNTB Corporation  
 ARCHITECTS  
 ENGINEERS  
 PLANNERS  
 775 N. 14th Drive  
 Kansas City, Missouri 64105  
 (816) 472-1201 Fax (816) 472-4060

CONSULTANT:

OWNER/DEVELOPER:  
 CENTERPOINT/ZIMMER L.L.C.  
 1201 Washington St., Suite 200  
 Kansas City, Missouri 64111  
 1808 South Drive  
 Overbrook, Illinois 60523

**NNSA NATIONAL SECURITY CAMPUS**  
 14500 BOTTS ROAD KANSAS CITY, MO 64030  
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 NATIONAL NUCLEAR SECURITY ADMINISTRATION

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**BUILDING 6**  
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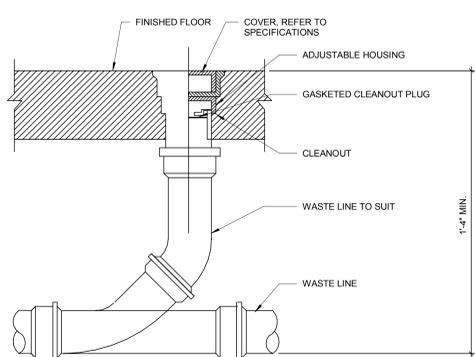
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ISSUED FOR:	CONSTRUCTION	
PROJECT NO.	48149	
DRAWN BY	JMP	
CHECKED BY	SP	
APPROVED BY	CM	
REVISION	DATE	DESCRIPTION
1	11/09/11	DR12C
2	07/27/12	PR SC-09

PROGRESS SET, NOT FOR CONSTRUCTION

SHEET TITLE & NUMBER  
 FLOOR PLAN - AREA A2

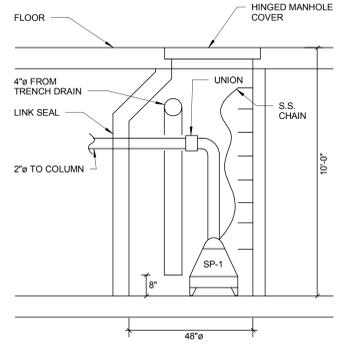
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ISSUED FOR:	CONSTRUCTION	
PROJECT NO.	48149	
DRAWN BY	LFM	
CHECKED BY	KAK	
APPROVED BY	EWP	
REVISION	DATE	DESCRIPTION
1	11/09/11	DR12C
2	08/03/12	PR SC-09
3	10/12/12	ASI SC-53



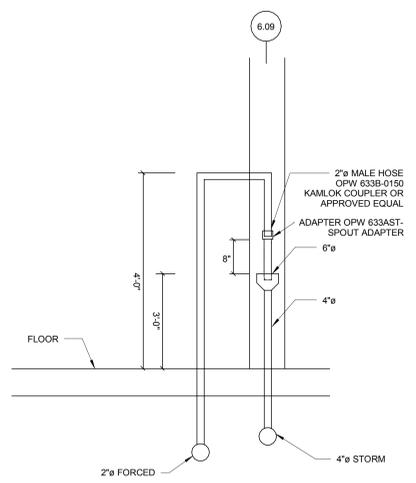
**FLOOR CLEANOUT**

DETAIL	<b>K10</b>
Not To Scale	



**SECTION A-A**

DETAIL	<b>K7</b>
Not To Scale	



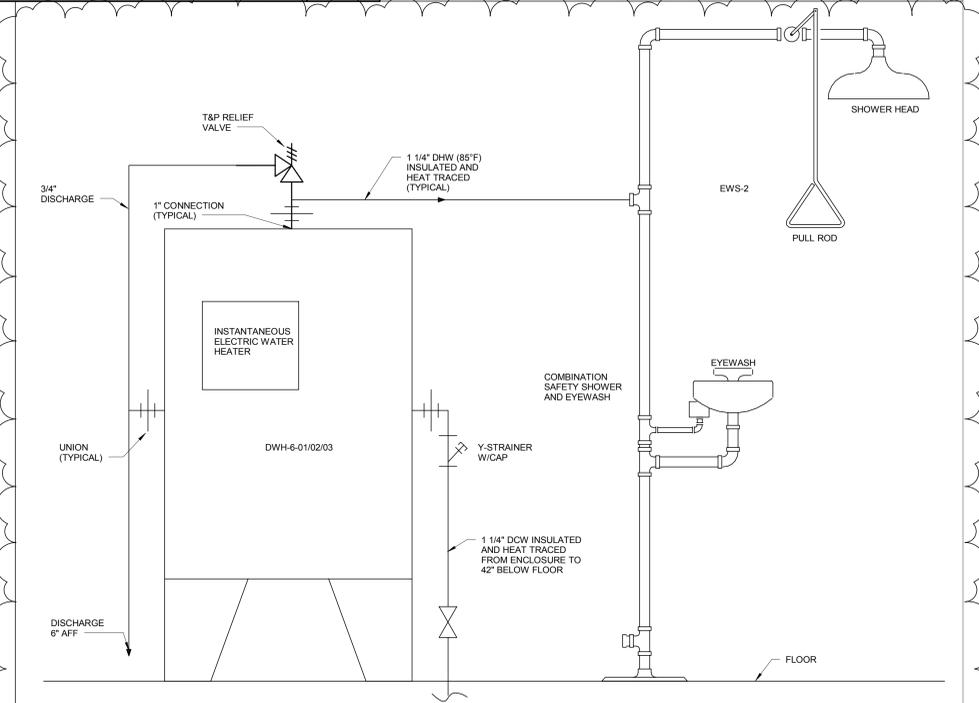
**SECTION B-B**

DETAIL	<b>K4</b>
Not To Scale	

ELECTRIC WATER HEATER SCHEDULE - WAREYARD												
Mark	LOCATION	SERVICE	MFR.	MODEL	STORAGE (GAL)	TOTAL WATTS (KW)	EWT (DEG. F)	LWT (DEG. F)	GPM	ELEC (V/PH/Hz)	FLA	REMARKS
DWH-6-01	WAREYARD	EMERGENCY SHOWER/EYEWASH	KELTECH	SN1263	---	126	50	87	23	480/3/60	156	ASME RATED, FREEZE PROTECTED NEMA 4 ENCLOSURE
DWH-6-02	WAREYARD	EMERGENCY SHOWER/EYEWASH	KELTECH	SN1263	---	126	50	87	23	480/3/60	156	ASME RATED, FREEZE PROTECTED NEMA 4 ENCLOSURE
DWH-6-03	WAREYARD	EMERGENCY SHOWER/EYEWASH	KELTECH	SN1263	---	126	50	87	23	480/3/60	156	ASME RATED, FREEZE PROTECTED NEMA 4 ENCLOSURE

PLUMBING FIXTURE SCHEDULE - WAREYARD								
DESCRIPTION	MFR.	MODEL	MARK	DCW	DHW	STORM	VENT	REMARKS
EMERGENCY SAFETY SHOWER / EYE WASH - FREE STANDING COMBINATION UNIT, FROST PROOF	BRADLEY	S19-300T	EWS-2	1-1/4"	---	---	---	HEAD AND BOWL: 10" DIAMETER YELLOW IMPACT-RESISTANT PLASTIC. VALVES, CHROME-PLATED BRASS STAY-OPEN TYPE. STEEL PULL ROD WITH TRIANGULAR HANDLE. PIPE & FITTING; PROTECTED WITH SAFETY YELLOW COATING. HEAT TRACE AND INSULATION TO PREVENT FREEZING TO -50°F. SELF REGULATING CABLE, 120 V, 5 WATTS/FT.
FLOOR CLEANOUT - (HEAVY-DUTY PLANT AREAS)	ZURN	ZN-1400-BP	FCO-2	---	---	---	---	DURA COATED IRON ROUND SCORAITED SECURED TOP, CAST IRON BODY, BRONZE PLUG, ADJUSTABLE TOP, ANCHOR FLANGE.
FLOOR DRAIN	ZURN	Z503-AR	FD-1	---	---	4"	---	ACID RESISTANT EPOXY COATED CAST IRON STRAINER, 15" DIAMETER
MODULAR CHANNEL TRENCH DRAIN	ZURN	Z874-12	TD-1	---	---	4"	---	PRE-SLOPED HDPE CHANNEL SECTIONS, HEAVY DUTY, EPOXY COATED, DUCTILE IRON, GRATE. TD LENGTHS: TD-1 = 40'-0". PROVIDE A Z817-12 CATCH BASIN WITH SEDIMENT BUCKET
MODULAR CHANNEL TRENCH DRAIN	---	---	TD-2	---	---	---	---	NOT USED
MODULAR CHANNEL TRENCH DRAIN	ZURN	Z874-12	TD-3	---	---	4"	---	PRE-SLOPE HDPE CHANNEL SECTIONS, HEAVY DUTY, EPOXY COATED, DUCTILE IRON, GRATE. TD LENGTHS: TD-3 = 20'-0"
MODULAR CHANNEL TRENCH DRAIN	ZURN	Z874-12	TD-4	---	---	4"	---	PRE-SLOPE HDPE CHANNEL SECTIONS, HEAVY DUTY, EPOXY COATED, DUCTILE IRON, GRATE. TD LENGTHS: TD-4 = 13'-4"
MODULAR CHANNEL TRENCH DRAIN	ZURN	Z874-12	TD-5	---	---	4"	---	PRE-SLOPE HDPE CHANNEL SECTIONS, HEAVY DUTY, EPOXY COATED, DUCTILE IRON, GRATE. TD LENGTHS: TD-5 = 26'-8"
MODULAR CHANNEL TRENCH DRAIN	ZURN	Z874-12	TD-6	---	---	4"	---	PRE-SLOPED HDPE CHANNEL SECTIONS, HEAVY DUTY, EPOXY COATED, DUCTILE IRON, GRATE. TD LENGTHS: TD-6 = 46'-8"
MODULAR CHANNEL TRENCH DRAIN	ZURN	Z874-12	TD-7	---	---	4"	---	PRE-SLOPED HDPE CHANNEL SECTIONS, HEAVY DUTY, EPOXY COATED, DUCTILE IRON, GRATE. TD LENGTHS: TD-7 = 53'-4"

PUMPS - WAREYARD											
MARK	LOCATION	MFR.	MODEL	TYPE	GPM	HEAD (FT. W.G.)	FLUID TYPE	ELECTRICAL			REMARKS
								HP	RPM	V/PH/Hz	
SP-1	WAREYARD	ZOELLER	IX165	SUBMERSIBLE DEWATERING	50	50	WATER	1.0	3500	200/1/60	PROVIDE ZOELLER 10-1242 SIMPLEX, MANUAL CONTROL PANEL; EXPLOSION PROOF CONSTRUCTION



**COMBINATION SAFETY SHOWER/EYEWASH AND ELECTRIC WATER HEATER DETAIL**

DETAIL	<b>K1</b>
Not To Scale	

REVISIONS				
CHANGES BY	REV	DESCRIPTION	DATE	APPROVED
AL	B	CHANGED MIXING/DESPENSING NOTE	09/13/11	
AL	C	ADDED LIFTING LUGS	10/14/11	

**3 IDENTICAL BUILDINGS**

**STORAGE/DISPENSING OF CLASS 1A AND DISPENSING OF CLASS 1B FLAMMABLE LIQUIDS MORE THAN 60 GALLONS PROHIBITED.**

**SUPPLY VOLTAGE 120/240V/1φ/60hz**

**GENERAL NOTES:**  
 1- ALL MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST REVISION OF THE UBC, IBC AND STATE BUILDING CODES. DESIGN ACCORDING TO AISC, ASD, AND WITH ANSI/ASCE 7.  
 2- NO LOADS OTHER THAN THOSE GIVEN UNDER "DESIGN DATA" BELOW SHALL BE IMPOSED ON THE "STRUCTURE."  
 DESIGN DATA (MATERIALS)  
 STRUCTURAL QUALITY ASTM SPECIFICATION, A36 ER70S WELDING WIRE.  
 DESIGN DATA IN ACCORDANCE WITH ANSI/ASCE 7:  
 MINIMUM ROOF LIVE LOAD (PSF) = 40  
 Pg: GROUND SNOW LOAD (PSF) = 50  
 V: WIND VELOCITY (MPH) = 130  
 SEISMIC ZONE = 4

**FOUNDATION NOTES:**  
 THE FOUNDATION DRAWING IS A SUGGESTION ONLY. CHANGES MAY BE NECESSARY DUE TO LOCAL BUILDING REGULATIONS AND SITE CONDITIONS.  
 1- THE PAD PERIMETER SHOULD BE AT LEAST 24" LARGER THAN THE BUILDING, BOTH IN LENGTH AND WIDTH.  
 2- THE FOUNDATION SHOULD BE FORMED ON NATURAL UNDISTURBED SOIL CAPABLE OF SUSTAINING 2,000 PSF.  
 3- GRANDUAL BASED GRAVEL OR CRUSHED STONE SHOULD BE COMPACTED TO A DEPTH OF 4". THE SLAB SHOULD CONSIST OF 8" THICK 2,000 PSI CONCRETE.  
 4- FINISH SURFACE SHOULD BE LEVEL AND THEN INSTALL 3/4" X 4" ANCHOR BOLTS INTO THE TIE DOWNS ATTACHED TO THE BUILDING CORNERS.

ALL DIMENSIONS SHOWN ON THIS PRINT ARE FOR YOUR REFERENCE. TOLERANCES ARE ±1" UNLESS OTHERWISE NOTED.

DATE: 08/26/11  
 DRAWN BY: AL

**Honeywell FM&T-DOE**  
 14500 Botts Road  
 Kansas City, MO 64147  
 MODEL NO. FL6012 CUSTOM  
 QUOTE NO. 66364  
 ORDER NO. 30-10756

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SIGNATURE \_\_\_\_\_  
 PLEASE PRINT NAME \_\_\_\_\_ DATE \_\_\_\_\_

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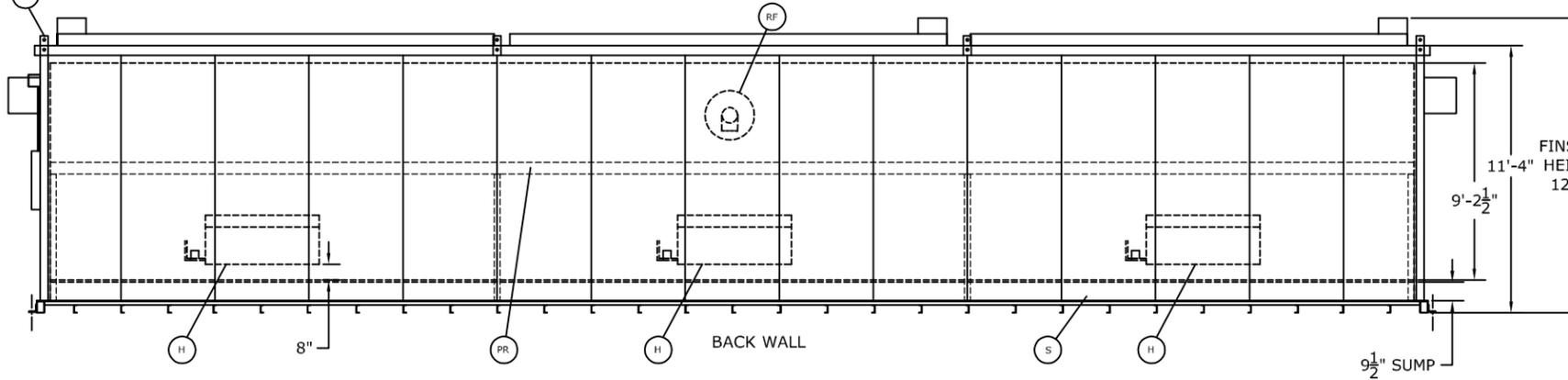
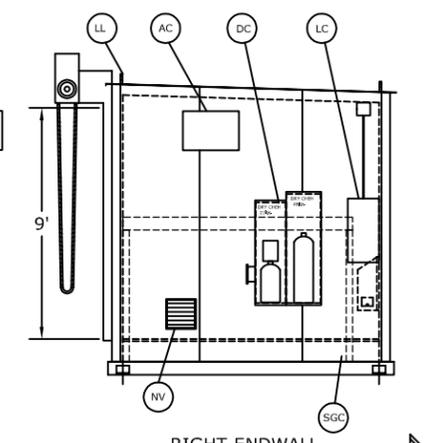
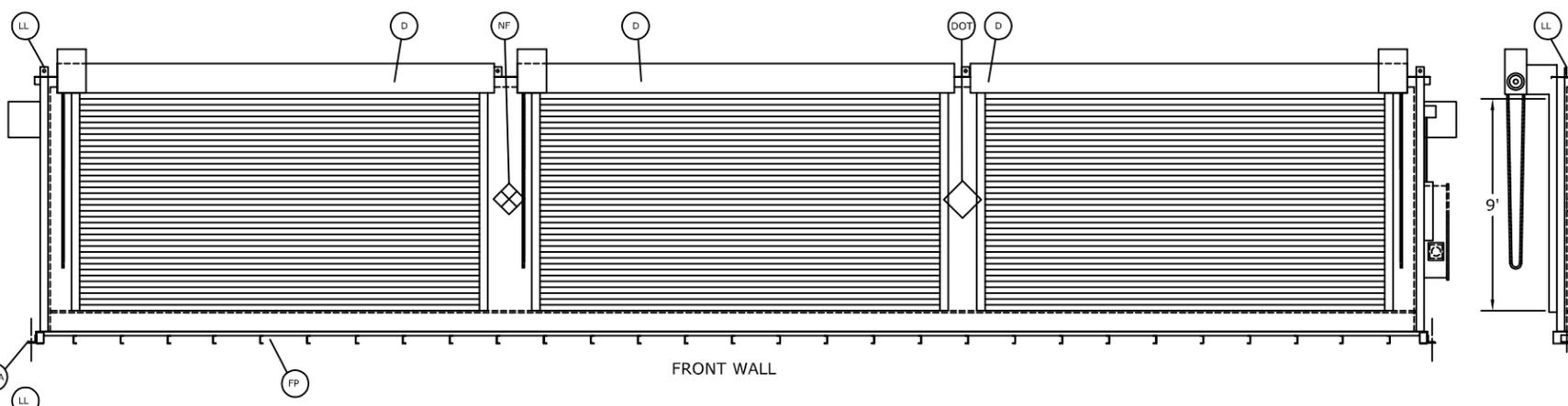
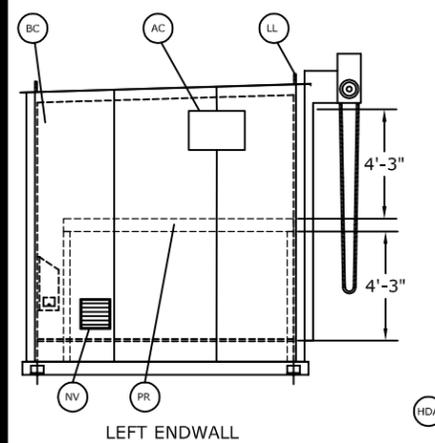
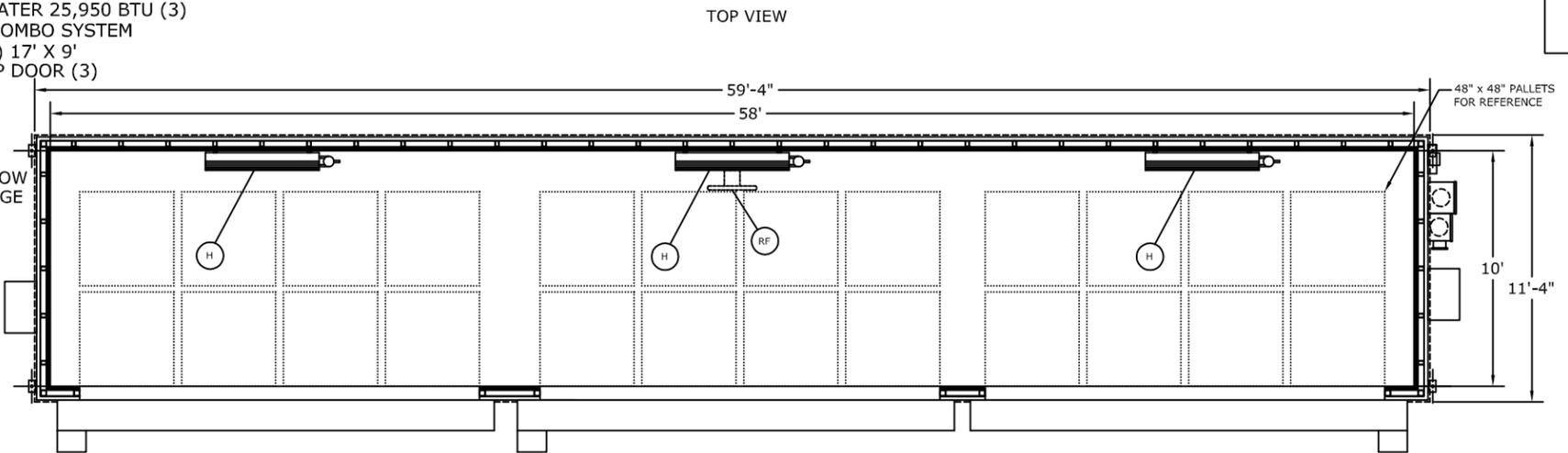
This order is subject to US Chemical Storage LLC's terms and conditions which are located in your building manual which can be downloaded from [www.uschemicalstorage.com/support/index.html](http://www.uschemicalstorage.com/support/index.html)

Customer is responsible to determine the classification and set back of the storage building depending on the type and quantity of the chemicals being stored. Local Agency may require additional equipment to be added to this unit after their plan review process. Additional equipment is not included in the quotation.

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 CORPORATE OFFICE  
 355 Industrial Park Drive  
 Boone, NC 28607  
 PHONE: 1.800.233.1480  
 MANUFACTURING FACILITY  
 1806 River Road, Hwy 268 W.  
 Wilkesboro, NC 28697  
 PHONE: 1.888.583.9823  
 FAX: 1.336.838.0045

- LEGEND**
- DOT- DEPARTMENT OF TRANSPORTATION FLIP CHART PLACARD
  - NF- NATIONAL FIRE PROTECTION ASSOCIATION 704 SIGN
  - NV- NATURAL VENTILATION WITH RAIN LOUVER (2)
  - S- SUMP INCREASE, 3263 gal CAPACITY
  - LC- LOAD CENTER, 240V 1 PHASE
  - AC- (EXPLOSION PROOF) AIR CONDITIONER 20,000 BTU (2)
  - RF- (EXPLOSION PROOF) RECIRCULATION FAN (1)
  - H- (EXPLOSION PROOF) CONVECTION HEATER 25,950 BTU (3)
  - DC- DRY CHEMICAL FIRE SUPPRESSION COMBO SYSTEM
  - D- (EXPLOSION PROOF ELECTRIC MOTOR) 17' X 9' INSULATED 4 HR FIRE RATED ROLL UP DOOR (3)
  - HDA- HOLD DOWN ANGLE (4)
  - SGC- STATIC GROUND CONNECTOR
  - FP- FORKLIFT POCKETS
  - BC- BUILDING COLOR-BLEACHED BONE
  - PR- PALLET RACK, 24 PALLET ABOVE & BELOW 48 PALLET TOTAL STORAGE
  - LL- LIFTING LUGS (8)

INSULATION: FLOOR R10  
 WALLS & CEILINGS R11



**FLAMMABLE / COMBUSTABLE**

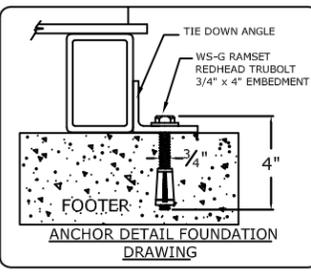
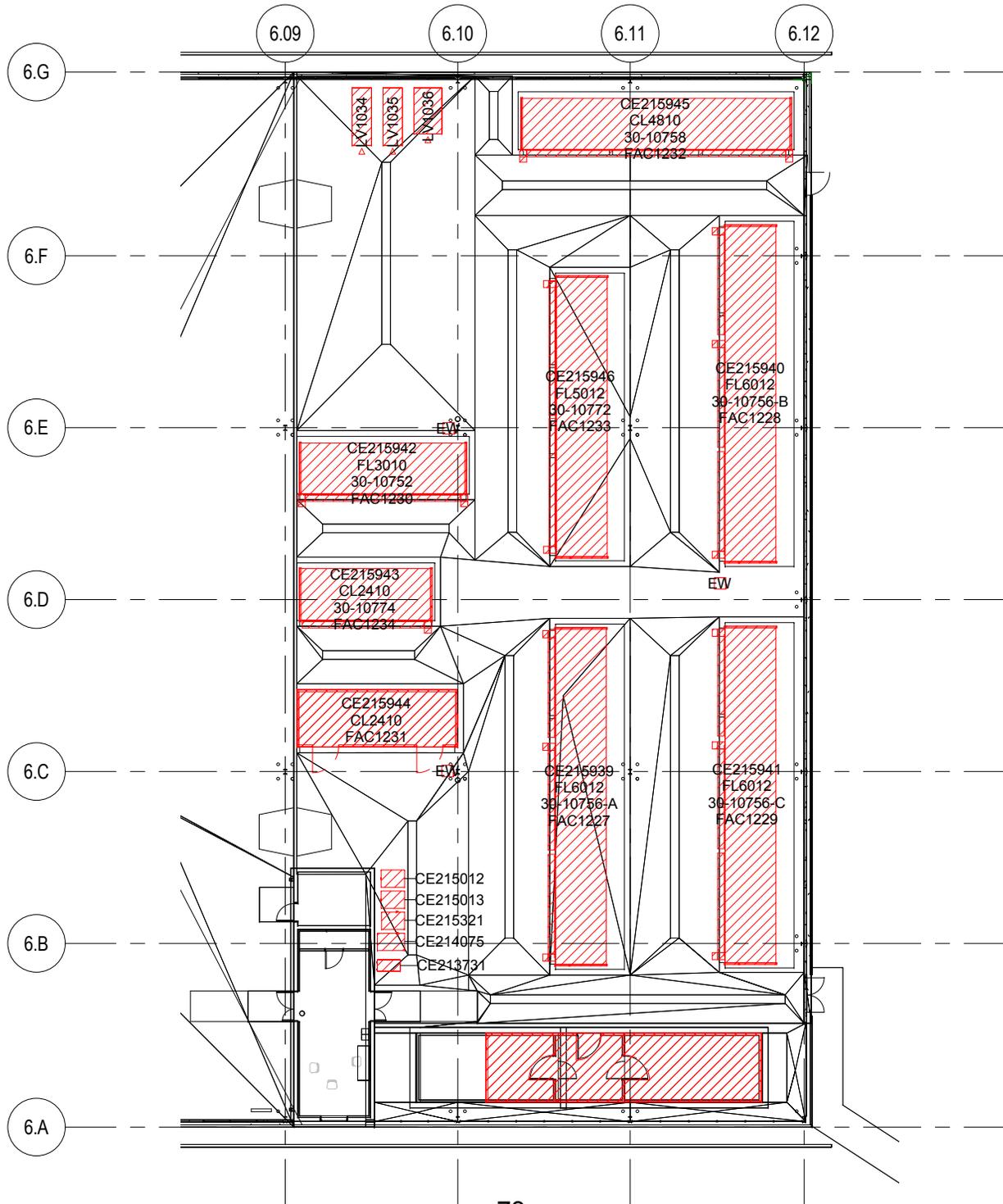


Figure 8.d Chemical Storage Building Locations







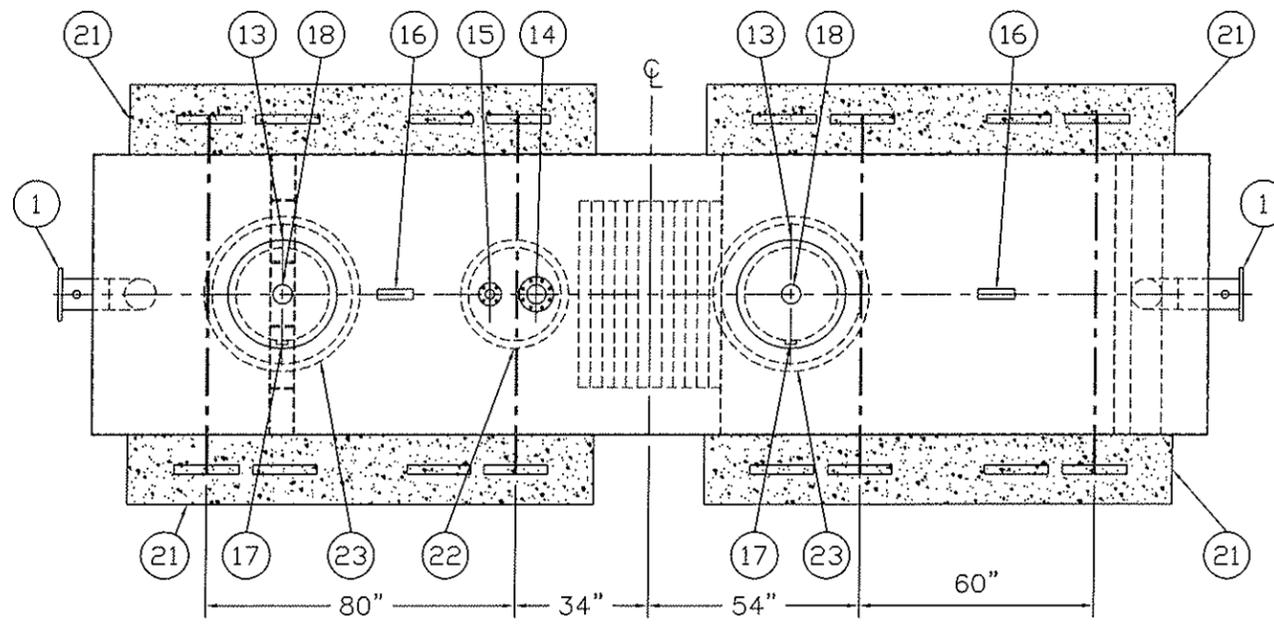


# Figure 10 - Oil Water Separator

## GENERAL SPECIFICATIONS

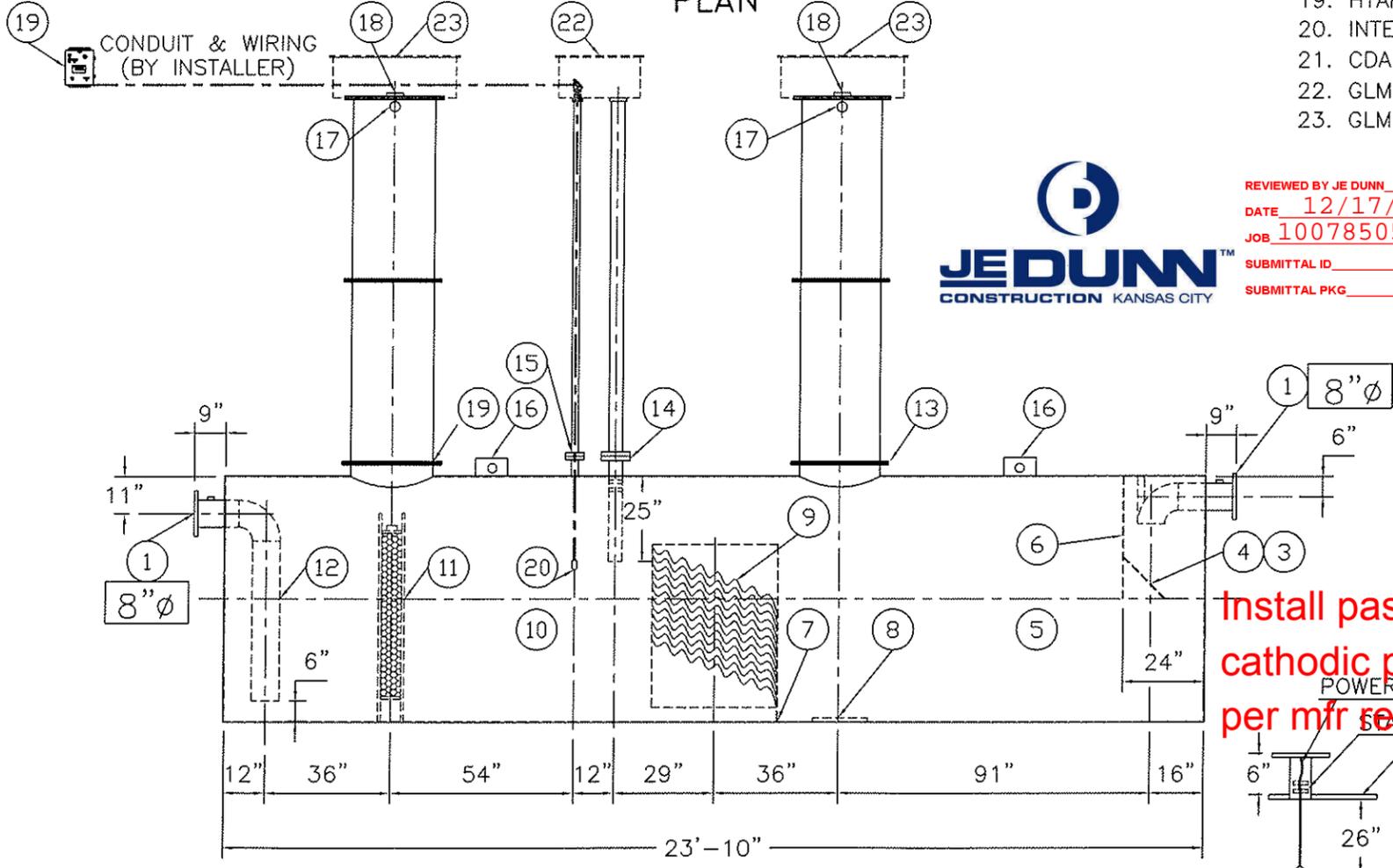
NO. REQ'D: (1)  
 CAPACITY: 5000 GALLON  
 TYPE: HTC, HIGHGUARD, SINGLE WALL  
 MATERIAL: MILD CARBON STEEL  
 FLOW RATE: 500 GPM  
 GAUGE:  
 SHELL- 5/16"  
 HEADS- 5/16"  
 (BASED ON 124" MAX. BURIAL DEPTH)  
 SURFACE PREP:  
 SSPC NO.6 BLAST ALL EXTERIOR SURFACES  
 SSPC NO.10 BLAST ALL INTERIOR SURFACES  
 COATING: MATERIAL THICKNESS  
 EXTERIOR- HIGHGUARD (75 MILS)  
 INTERIOR- POLYURETHANE (12-15 MILS)  
 CONSTRUCTION : LAP FIT & WELD ALL EXTERIOR SEAMS  
 OPERATING PRESSURE : ATMOSPHERIC

NOTES:  
 1. POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS  
 2. ALL VENT PIPING BY INSTALLER  
 3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY



(72"Ø POLYESTER HOLD DOWN STRAP SPACING, 4 REQUIRED - SHIPPED LOOSE)

## PLAN



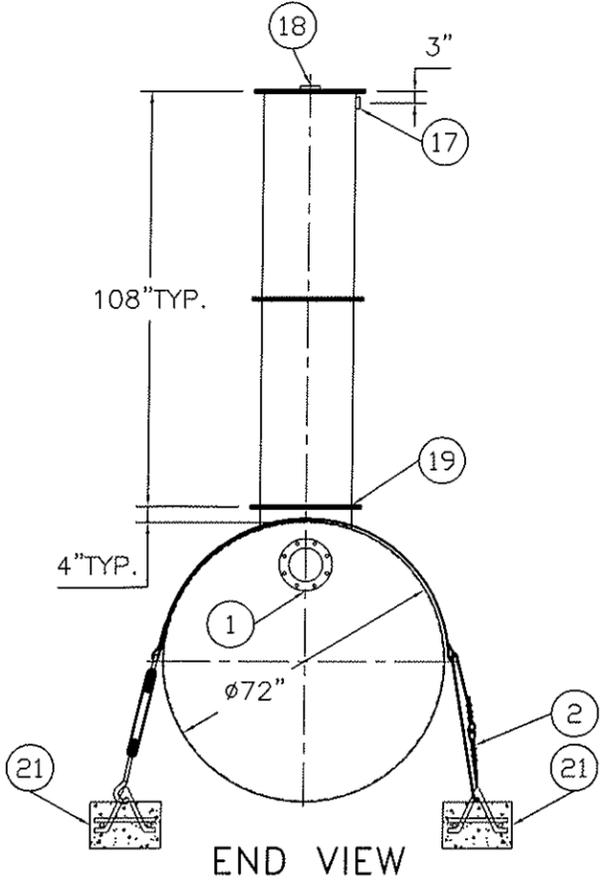
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 TOLERANCES ARE + OR - 1"

## PROVIDED EQUIPMENT

1. 150# R.F.S.O. FLANGE W/ 2" NPT FOR VENT
2. 72"Ø POLYESTER HOLD DOWN STRAPS W/ GALVANIZED TB, WIRE ROPE & CLAMPS.
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (3" PLATE SPACING)
10. OIL/WATER SEPARATOR CHAMBER
11. 6" THICK PETROSCREEN COALESCER MATERIAL INSTALLED WITH PULL ROD SHIPPED LOOSE
12. OUTLET DOWNCOMER
13. 24"Ø MANWAY WITH BOLT-ON EXTENSION SHIPPED LOOSE (EXTENSIONS SPLIT PER FABRICATION SHOP)
14. 4"Ø 150# R.F.S.O. FLANGE FOR OIL PUMPOUT W/ PVC INTERNAL PIPE INSTALLED & FLANGED RISER PIPE SHIPPED LOOSE
15. 2"Ø 150# R.F.S.O. FLANGE FOR LEVEL SENSOR W/ FLANGED RISER PIPE SHIPPED LOOSE
16. LIFTING LUG
17. 2"Ø FTG. FOR VENT TYP. BOTH MANWAYS
18. 4"Ø FTG. FOR GAUGE WITH PLUG TYP. BOTH MANWAYS
19. HTAP1 SINGLE CHANNEL ALARM PANEL (1PH-60HZ-120V)
20. INTERFACE LEVEL SENSOR
21. CDA-15 CONCRETE DEADMAN (4) REQUIRED - SHIPPED LOOSE
22. GLM-24 24"Ø GRADE LEVEL MANWAY W/ 24" SKIRT
23. GLM-36 36"Ø GRADE LEVEL MANWAY W/ 36" SKIRT



## END VIEW



REVIEWED BY JE DUNN WRT  
 DATE 12/17/10  
 JOB 10078505  
 SUBMITTAL ID \_\_\_\_\_  
 SUBMITTAL PKG \_\_\_\_\_

REVIEW

FOR THE CONTRACTOR'S USE ONLY. This drawing is a design concept and intent of Contract Documents. Contractor is solely responsible for verifying dimensions, for establishing fabrication processes, means, techniques, sequences and procedures of construction and for coordination of work of all trades. Exceptions taken and note to information shown does not authorize work resulting in contract cost revisions unless so stated in separate letter or Change Order.

Date \_\_\_\_\_

NO EXCEPTIONS  
 MAKE CORRECTIONS NOTED  
 AMEND AND RESUBMIT  
 REJECTED - SEE REMARKS  
 RECEIVED

Reviewed by: John Brummer  
 Date: Aug 09, 2011

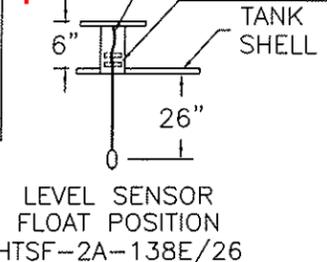
HNTB

715 Kirk Drive  
 Kansas City, Missouri 64105  
 (816) 472-2201 Fax (816) 472-4600

REVISIONS

Fabrication Will Not Begin  
 Until Approved Drawing Is  
 Received By Highland Tank

Install passive  
 cathodic protection as  
 per mfr recommendations



LEVEL SENSOR  
 FLOAT POSITION  
 HTSF-2A-138E/26

**Highland Tank**

U.S. Patent #4,722,800 Canadian Patent # 1,296,263  
 #6,606,224 # 2,389,065

5000 GALLON OIL WATER SEPARATOR  
 HTC, HIGHGUARD, SINGLE WALL

CUSTOMER: RODRIGUEZ MECHANICAL CONTRACT  
 KANSAS CITY, KS

PROJECT: NNSA NUCLEAR FACILITY  
 KANSAS CITY, MO

QUOTE NO: 263379 CHK'D BY:

SCALE: 1/4"=1'-0" DATE: 10-19-10 DWG. BY: TAM DWG. NO.: 7-1-4-1

NOTE :  
 ALL RIGHTS RESERVED. THIS DRAWING OR ANY PART THEREOF MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK.  
 HIGHLAND TANK SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE / LOCATION OF FITTINGS , ACCESSORIES & COATINGS SHOWN ON THIS DRAWING



## **APPENDICIES**

- A. OIL FILLED OPERATIONAL EQUIPMENT**
- B. CERTIFICATION OF APPLICABILITY OF SUBSTANTIAL HARM**
- C. FORM 2469 - Spill Report**
- D. DISCHARGE NOTIFICATION PROCEDURES**
- E. CROSS-REFERENCE of the SPCC REGULATIONS to the SCP, HA  
and EMERGENCY PLAN**

## **APPENDIX A**

### **OIL FILLED OPERATIONAL EQUIPMENT**

MACHINING EQUIPMENT - OIL AND / OR WATER BASED COOLANT & HYDRAULIC OIL

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
007	Machining & GTS	07423	DRILL FLR 4SP 26IN	Dril, Tap, Bore Development and WR components	D	No enclosure, 4 stations with individual spindle	None	XXX	2	
007	Machining & GTS	17598	BORER MILL JIG VERT	SIP Jig Bore - Milling, Boring Devel & Wr parts	D	No enclosure	None	XXX	2	
007	Machining & GTS	22324	BORE TURN GRIND NC LATHE TOOLROOM	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water	60		
007	Machining & GTS	22550	10X20	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water			
007	Machining & GTS	22639	GRINDER JIG PREC #3	Grinding	D	No enclosure - Fugitive Air & Dust collection	None	XXX	1	
007	Machining & GTS	22980	TABLE ROTARY 24IN	Machining accessory						
007	Machining & GTS	23441	BORER MILL JIG VERT	Precision placement of features in WR tooling	D	No enclosure - Fugitive Air & Dust collection		XXX		
007	Machining & GTS	24053	LATHE TOOLROOM 10X20	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water		0.5	
007	Machining & GTS	24335	TABLE ROTARY 24IN	Machining accessory						
007	Machining & GTS	25307	GRINDER TOOL & CUT	Grinding special design cutting tools for WR parts	D	No enclosure - Dust collection system	None	XXX		
007	Machining & GTS	33042	TABLE ROTARY 11IN	Machining accessory						
007	Machining & GTS	34251	TABLE ROTARY 17 IN	Machining accessory						
007	Machining & GTS	34899	LATHE TOOL ROOM	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water		0.5	
007	Machining & GTS	35423	TABLE ROTARY TILT TURNING & BORING MACH	Machining accessory						
007	Machining & GTS	53482	BORER JIG HORZ	Milling, Drilling, boring dev & WR tooling	D	No enclosure	None	100	2	10
007	Machining & GTS	55467	MILL KNEE VERT	Milling Development, tooling components or WR	WiNSIDE	No enclosure - Fugitive air	MWF - Water	XXX	2	15
007	Machining & GTS	55739	MILL VERT KNEE	Milling Development, tooling components or WR	WiNSIDE	No enclosure - Fugitive air	MWF - Water		1	
007	Machining & GTS	55840	LATHE ENGINE	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water		2	
007	Machining & GTS	55888	LATHE ENGINE CNC	Turning development & WR components	W	Splash Shield - Mist collector	MWF - Water	100	5	
007	Machining & GTS	55934	SAW BAND VERT	Sawing stock for devel, tooling & WR components	W	No enclosure - fugitive air	MWF - Water			
007	Machining & GTS	56000	GRINDER TOOL	Grinding & altering cutting tools for WR manuf	D	No enclosure - Dust Collection System	None	XXX		
007	Machining & GTS	56116	MILL KNEE VERT	Milling WR and development components	W	No enclosure - Fugitive air	MWF - Water		0.5	
007	Machining & GTS	56225	BOOTH SPRAY	Apply mold release to WR components	W	127 fpm and 1 qrt/hr spray	Mold release	???		

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
007	Machining & GTS	58434	TABLE ROTARY TILTING	Machining accessory						
007	Machining & GTS	60862	TABLE ROTARY	Machining accessory						
007	Machining & GTS	60925	SAW BAND VERTICAL	Sawing of material for devel, tooling and WR	W	No enclosure, fugitive air	MWF - Water		1	20
007	Machining & GTS	65266	GRINDER SURFACE HORIZ.	Grinding WR Components	W	No enclosure - Fugitive air - Water metalworking fluid	MWF - Water	50		20
007	Machining & GTS	66374	MILL HORZ PLAIN CNC 4 AXIS 60-1800RPM SPINDLE SPEE	Milling Development & WR Components	W	Full enclosure w/Mist Collector	MWF - Water	100		
007	Machining & GTS	66629	MILL VERT CNC	Milling Development & WR components	W	Partial enclosure - Fugitive Air	MWF - Water	75	2	5
007	Machining & GTS	68074	SAW TRAVERSE	Cutting sheet material for dev'l, Wr	D	Dust collector connected to machine	None	XXX	1	
007	Machining & GTS	68319	LATHE	Turning development & WR components	W	No enclosure - fugitive air	MWF - Water		1	
007	Machining & GTS	68398	MILL VERTICAL KNEE TYPE	Milling development, tooling and WR	D	No enclosure - fugitive air	None	XXX	2	
007	Machining & GTS	69086	GRINDER SURFACE HORIZONTAL SPINDLE	Grinding components for WR fixtures & gages	W	No enclosure - Dust Collection System	MWF - Water	50		
007	Machining & GTS	69087	GRINDER UNIVERSAL	Grinding cylindrical components for WR fixtures & gages	W	No enclosure - dust collection system	MWF - Water	50	1	5
007	Machining & GTS	72912	GRINDER TOOL	Grinding special design cutting tools for WR parts	D	No enclosure - Dust collection system	None	XXX		
007	Machining & GTS	80512	LATHE CNC MICRO-TURN MINITURE	Drilling miniature holes in devel & WR components	D	Fully enclosed - Fugitive air	None	XXX		
007	Machining & GTS	83837	MILL VERT CNC (WAS CE 64770)	Milling development & Wr components	W	No enclosure - Fugitive air	MWF - Water			
007	Machining & GTS	83838	MILL VERT CNN (WAS CE 55898)	Milling development & Wr components	W	No enclosure - Fugitive air	MWF - Water			
007	Machining & GTS	83840	MILL (WAS CE 59189)	Milling development & Wr components	W	No enclosure - Fugitive air	MWF - Water			
007	Machining & GTS	83982	SAW HORIZONTAL BAND HYD. MECH. ( WAS CE 113193)	Cutting up bar stock for devel, WR	W	No enclosure - Fugitive air	MWF - Water	6		30
007	Machining & GTS	113306	LATHE TOOL ROOM (000-21741-00)	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water			
007	Machining & GTS	113832	GRINDER UPGRADE CNC *WAS CE 16377*	Grinding Components for Wr gages and fixtures	W	No enclosure - Dust Collection System	MWF - Water		1	
007	Machining & GTS	113846	MICRODRILL	Drilling small holes in development , WR components	D	Full enclosure - Fugitive air	None	XXX		
007	Machining & GTS	210030	BORE CNC JIG	Precision placement of features in WR tooling	W/D	No enclosure - Dust Collection System	MWF - water	100	3	2
007	Machining & GTS	210973	MILL HORIZONTAL 5-AXIS	Milling development, tooling and WR	W	Full enclosure with mist collector	MWF - Water	130	4	20
007	Machining & GTS	211804	MACHINE CENTER 4 AXIS	Milling development, tooling and WR	W	Full enclosure with mist collector	MWF - Water	200	5	10
007	Machining & GTS	212583	JIG GRINDER CNC	Grinding fixtures & tooling for Wr Components	D	Full enclosure w/mist collector	Dry	20	3	10

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
007	Machining & GTS	213384	LATHE (MILL TURN)	Turn & Mill development & WR Components	W	Full enclosure with mist collector	MWF - Water	20	3	10
007	Machining & GTS	213392	SURFACE GRINDER	Grinding fixtures & tooling for WR Components	W	No enclosure - Dust collection system	MWF -Water	20		
007		214158(c26)	Hermle 5 axis vertical mill	Milling development & Wr components	W	Full enclosure with mist collector	water	100	1	1
007		214159(c26)	Hermle 5 axis vertical mill	Milling development & Wr components	W	Full enclosure with mist collector	water	100	1	1
007		34890(d35)	Jig bore (NSMC)						1	
007		66736(d35)	edm die sinker (NSMC)						1	
007		35368(E26)	Engine lathe (NSMC)					80	5	
007		62871(g26)	KIDDER (NSMC)						0.5	
007		55753(g26)	Hardinge Lathe (NSMC)						0.5	
007		34881(E27)	Monarch Lathe (NSMC)						0.5	
007		54605 (E30)	Bridgeport mill (NSMC)						0.5	
025	Machining & GTS	16363	LATHE TOOLROOM 10X20	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water			
025	Machining & GTS	23865	LATHE TOOLROOM 10X20	Turning development & WR components	W	No enclosure - Fugitive Air	MWF - Water			
025	Machining & GTS	49497	WELDER (RTPU)	Not being moved to new building - leave behind	D	No enclosure with exhaust stack	Filler material with cover gas	XXX		
025	Machining & GTS	51378	WELDER ELECTRON BEAM	Weld Reservoirs	D	Full enclosure - Filtered exhaust	No fill material,	XXX	0.5	
025	Machining & GTS	52750	LATHE ENGINE	Turning WR Components	D	No enclosure - Fugitive Air	None	XXX		
025	Machining & GTS	54522	LATHE CHUCKER	Turning , deburring & polish WR components	D	No enclosure - Portable dust collector	None	XXX	0.5	
025	Machining & GTS	55104	WELDER RESISTANCE	Weld Reservoirs	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	55106	WELDER RESISTANCE	Weld Reservoirs	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	55319	WELDER	Hand welder for repair of components	D	No enclosure	wire and cover gas	XXX		
025	Machining & GTS	57071	LATHE TOOLMAKER	Turning , deburring & polish WR components	D	No enclosure - Portable dust collector	None	XXX		
025	Machining & GTS	57383	LATHE CHUCKING	Turning , deburring & polish WR components	D	No enclosure - Portable dust collector	None	XXX		
025	Machining & GTS	57401	WELDER STUD	Weld Wr Components	D	No enclosure	no fill material, cover gas	XXX		
025	Machining & GTS	60983	WELDER RESISTANCE	Weld Reservoirs	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	63768	WELDER RESISTANCE SPOT 30 KVA	Weld Reservoirs	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	66481	WELDER LASER SYS	Weld squib valves	D	Full enclosure - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	71233	WELDER LASER SYS YAG 400 WATTS	Weld squib valves	D	Full enclosure - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	80375	CLEANER HAND OPERATED SPRAY	Clean WR parts	W	Spray into tank system with exhaust hood	Water and detergent			

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
			CABINET							
025	Machining & GTS	80548	WELDER PULSE ARC	Weld WR Components	D	No enclosures - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	80576	WELDER PULSE ARC	Weld WR Components	D	No enclosures - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	80577	WELDER PULSE ARC	Weld WR Components	D	No enclosures - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	81232	LATHE CNC UNIVERSAL	Turning WR Components	W	Full enclosure	MWF - Water	30		15
025	Machining & GTS	81233	LATHE CNC UNIVERSAL	Turning WR Components	W	Full enclosure	MWF - Water	30		15
025	Machining & GTS	81931	FURNACE VACUUM BAKE	Baking out WR component	D	Dry nitrogen back fill		XXX		
025	Machining & GTS	82672	WELDER PULSE-ARC	Weld WR Components	D	No enclosures - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	82673	WELDER PULSE-ARC	Weld WR Components	D	No enclosures - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	83819	GRINDER CNC CRUSHFORM *ATTACHED TO CE84005*	Grinding WR Components	W	Full enclosure with mist collector	MWF - Oil	330	1	80
025	Machining & GTS	83822	GRINDER CRUSHER (ROCKY #000-01377-00) (ICO-430)	Grinding WR Components	W	Full enclosure with mist collector	MWF - Oil	330	1	80
025	Machining & GTS	83831	LATHE TOOLROOM	Turning, deburring and polishing WR Components	D	No enclosure - Portable snorkel filter	None	XXX		
025	Machining & GTS	83832	LATHE TOOLROOM	Turning, deburring and polishing WR Components	D	No enclosure - Portable snorkel filter	None	XXX		
025	Machining & GTS	83833	LATHE TOOLROOM	Turning, deburring and polishing WR Components	D	No enclosure - Portable snorkel filter	None	XXX		
025	Machining & GTS	83922	WELDER MERRICK GTA (ROCKY #000-21499 21554 40787)	Glove box wire welding of WR Components	D	Full enclosure - exhaust through stack	SS filler material, cover gas	XXX		
025	Machining & GTS	83966	WELDER ARC	Manual Repair	D	No enclosure -	Filler wire	XXX		80
025	Machining & GTS	84148	LATHE MILL TURN CHUCKER	Turning WR Components	W	Full enclosure with mist collector	MWF - Oil	70		
025	Machining & GTS	84408	WELDER RESISTANCE FORGE (ROCKY FLATS EQUIP #000224)	Welding reservoir	D	Partial enclosure with exhaust	No fill material, cover gas	XXX		
025	Machining & GTS	84423	WELDER	Hand welder for repair of components	D	No enclosure	wire and cover gas	XXX		
025	Machining & GTS	84433	WELDER ARC	Hand welder for repair of components	D	No enclosure	wire and cover gas	XXX		
025	Machining & GTS	84443	LASER MARKING SYSTEM	marking Wr Components	D	Full enclosure - Fugitive air		XXX		
025	Machining & GTS	84658	MILL BRIDGEPORT (ROCKY FLATS #460-02087-69442)	Turning, deburring and polishing WR Components	D	No enclosure - Portable snorkel filter	None	XXX	1	
025	Machining & GTS	84697	LATHE	Turning WR Components	W	Full enclosure with mist collector	MWF - Oil	110		80

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
025	Machining & GTS	84699	WELDING SYS	Weld Reservoirs	D	Full enclosure - Filtered exhaust	No fill material,	XXX		
025	Machining & GTS	84700	WELDING SYS	Weld Reservoirs	D	Full enclosure - Filtered exhaust	No fill material,	XXX		
025	Machining & GTS	90589	WELDER RESISTANCE	Weld Reservoirs	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	92372	WELDER RESISTANCE	Weld Reservoirs	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	96661	WELDER ARC	Weld WR Components	D	No enclosures - exhaust through stack	No filler material, cover gas	XXX		
025	Machining & GTS	107405	SYNCHROWAVE MILLER							
025	Machining & GTS	107406	SYNCHROWAVE MILLER							
025	Machining & GTS	113708	LATHE CNC SLANTBED	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30	1	10
025	Machining & GTS	113709	LATHE CNC SLANTBED	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30	1	10
025	Machining & GTS	113710	LATHE CNC SLANTBED	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30	1	10
025	Machining & GTS	113711	LATHE CNC SLANTBED	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30		10
025	Machining & GTS	113712	LATHE CNC SLANTBED	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30	1	
025	Machining & GTS	113713	LATHE CNC SLANTBED	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30	1	10
025	Machining & GTS	113819	FURNACE VACUUM BAKE	Heat treat Devel & WR components	D	Full enclosure	Assist gas	XXX		
025	Machining & GTS	113833	LATHE CNC UNIVERSAL	Turning WR Components	W	Full enclosure	MWF - Water	30		
025	Machining & GTS	210069	LATHE (ROCKY EQUIP #000-20634-00)							
025	Machining & GTS	210158	LATHE CNC HARDINGE	Turn WR Components	W	Full enclosure with mist collector w/exhaust filter	MWF - Water	30	1	10
025	Machining & GTS	210183	LATHE TRACER ATTACHMENT TO HARDINGE	Machining accessory						
025	Machining & GTS	210278	CENTER CNC 5-AXIS MACHINING	Milling reservoir components	W	Full enclosure with mist collector w/exhaust filter	MWF - Oil	210	1	30
025	Machining & GTS	210279	CENTER CNC 5-AXIS MACHINING	Milling reservoir components	W	Full enclosure with mist collector w/exhaust filter	MWF - Oil	210	1	30
025	Machining & GTS	210525	LATHE SLANT BED	Turning WR Components	W	Full enclosure with mist collector	MWF - Water	30	1	10
025	Machining & GTS	210909	CENTER CNC 3-AXIS VERTICAL MACHINING	Milling WR components	W	Full enclosure with mist collector	MWF - Oil	110	1	5
025	Machining & GTS	211774	WELDER PERCUSSIVE ARC	Weld devel & WR components	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	211775	WELDER PERCUSSIVE ARC	Weld devel & WR components	D	No enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	211777	WELDER INERTIA FRICTION	Weld Wr component	D	Full enclosure, exhaust	No filler material, cover gas	XXX		

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
025	Machining & GTS	211912	MACHINE PRECISION GUNDRILLING	Drilling deep small diameter holes	W	Full enclosure with mist collector	MWF - Oil	110	1	
025	Machining & GTS	211938	SAW DO ALL BAND	Sawing bar stock into blanks for WR components	W	No enclosure - Fugitive air	MWF - Water			
025	Machining & GTS	211999	WELDER LASER (LOS ALAMOS EQUIPMENT USED AT FM&T)	Welding WR Components	D	Full enclosure -	No fill material, cover gas	XXX		
025	Machining & GTS	212002	LATHE CNC SLANTBED	Turning WR Components	W	Full enclosure - Mist Collector	MWF - Water			20
025	Machining & GTS	212143	WELDER ULTRASONIC METAL SPOT	Spot welding WR Components	D	No enclosure - Fugitive air	No fill material	XXX		
025	Machining & GTS	212165	OVEN VACUUM BAKE OUT	Bake out cleaned WR components to remove moisture	D	Full enclosure	Dry nitrogen	XXX		
025	Machining & GTS	212173	MACHINE LAPPING	Lapping WR materials	D	No enclosure	Water based fluid	XXX		
025	Machining & GTS	212281	MACHINE DEEP HOLE DRILLING	Make entream deep small dia holes in WR components	W	Full enclosure	MWF - Oil	60	0.5	
025	Machining & GTS	212286	WELDER LASER	Weld WR and development components	D	Full enclosure	No fill material, cover gas	XXX		
025	Machining & GTS	212298	WELDER ELECTRON BEAM	Weld Reservoirs	D	Full enclosure - Filtered exhaust	No fill material,	XXX		
025	Machining & GTS	212651	OVEN VACUUM BAKE OUT	Bake out cleaned WR components to remove moisture	D	Full enclosure	Dry nitrogen	XXX		
025	Machining & GTS	212658	WELDER ELECTRONIC BEAM	Weld Reservoirs	D	Full enclosure - Filtered exhaust	No fill material,	XXX		
025	Machining & GTS	212659	WELDER ELECTRONIC BEAM	Weld Reservoirs	D	Full enclosure - Filtered exhaust	No fill material,	XXX		
025	Machining & GTS	212660	HORIZONTAL MILL CNC 5-AXIS	Milling Reservoir Components	W	Full enclosure - Filtered exhaust	MWF - Oil	210	2	30
025	Machining & GTS	212765	DEEP HOLE DRILL TWIN SPINDLE	Drilling small deep holes in WR components	W	Full enclosure - Mist collector	MWF - Oil	110		15
025	Machining & GTS	213284	LASER MARKER	Mark WR components	D	Full enclosure		XXX		
025	Machining & GTS	213287	GRINDER	Grinding Wr components	W	Full enclosure with 2 mist collectors	MWF - Oil	330	1	80
025	Machining & GTS	213446	CNC UNIVERSAL SLANTED LATHE	Turning WR Components	W	Full enclosure with mist collector	MWF - Water			
025	Machining & GTS	213780	WELD HEAD	Welder Accessory		NA				
093	Machining & GTS	35393	MACHINING CENTER 5AXIS	Replacement will machine metals, plastics, composites	W	Replacement will be enclosed w/mist collector w/HEPA	Replace 35393,50208 63977 w/one machine			
093	Machining & GTS	50208	MACHINING CENTER 5 AXIS	Replacement will machine metals, plastics, composites	W	Replacement will be enclosed w/mist collector w/HEPA	Replace 35393,50208 63977 w/one machine			
093	Machining & GTS	50744	LATHE N/C	Turn larger WR Components		Slash Shield/partial enclosure - Mist Collector w/HEPA	MWF - Water	100		
093	Machining & GTS	51427	LATHE	Turning WR Components and machinability testing		Fugitive - Proposed mist collector	MWF - Water	80		
093	Machining & GTS	51561	LATHE	Turning WR Components and machinability testing		Fugitive - Proposed mist collector	MWF - Water	35		
093	Machining & GTS	53055	LATHE TURRET	Manual turning, deburring, reworking WR Components	W	No enclosure, No mist collection	Dry			

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
093	Machining & GTS	53480	LATHE ENGINE N/C (REPORTED AT STORES CRIBM ROW44	Turn larger WR Components	W	Slash Shield/partial enclosure - Mist Collector w/HEPA	MWF - Water	80		
093	Machining & GTS	54097	LATHE CHUCKING	Turning Small WR Components		Fully enclosed with proposed mist collector w/HEPA	MWF - Oil	35		
093	Machining & GTS	54943	LATHE CHUCKER	Turn WR Components	W	Full enclosure - Planned Mist Collector w/HEPA	MWF - Oil	35		
093	Machining & GTS	55977	LATHE (CONTROL ONLY MANIFEST #13130) (RTPU 8	Turning WR Components and machinability testing		Full enclosure with Mist collector w/HEPA	MWF - Oil	35		
093	Machining & GTS	56165	LATHE	Manual Turning Small WR Components & Fixtures		No enclosure, No mist collector	MWF - Water			
093	Machining & GTS	56202	GRINDER UNIV	Cylindrically grind WR Components	W	No enclosure - Mist Collection System w/HEPA 90% eff	MWF - Oil	30		
093	Machining & GTS	56677	GRINDER	Cylindrically grind WR Components	W	No enclosure - Mist Collection System w/HEPA 90% eff	MWF - Oil	30		
093	Machining & GTS	58234	DRILL GUN HORZ	Drilling very deep holes in Wr product	W	No enclosure - Fugitive air - Oil metalworking fluid	MWF - Oil	60		
093	Machining & GTS	63977	MACHINING CENTER CNC 5-AXIS	Replacement will machine metals, plastics, composites	W	Replacement will be enclosed w/mist collector w/HEPA	Replace 35393,50208 63977 w/one machine			
093	Machining & GTS	73356	DEBURRER HARPERIZER	Deburring WR Components	W	Fugitive air containing water vapor	MWF - Water			
093	Machining & GTS	83185	OVEN INERT GAS	Dry aqueous cleaned parts in dry nitrogen atmosphere	D	Water vapor	Nitrogen	XXX		
093	Machining & GTS	84774	CENTER CNC 4-AXIS MACHINING	Milling WR Components	W	Full enclosure - Mist Collector w/HEPA	MWF - Water	110		
093	Machining & GTS	113622	CENTER CNC 4-AXIS MACHINING	Milling WR Components	W	Full enclosure - Mist Collector w/HEPA	MWF - Water	110		
093	Machining & GTS	113623	CENTER CNC 4-AXIS MACHINING	Milling WR Components	W	Full enclosure - Mist Collector w/HEPA	MWF - Water	110		
093	Machining & GTS	210284	CENTER 4-AXIS MACHINING CENTER	Milling Med Size WR Components		Full enclosure w/HEPA	MWF - Oil	110		
093	Machining & GTS	210441	MACHINE BENCHTOP LAPPING	Lapping WR material & Components	W	Fugitive air containing water vapor	MWF - Water			
093	Machining & GTS	210442	MACHINE BENCHTOP LAPPING	Lapping WR material & Components	W	Fugitive air containing water vapor	MWF - Water			
093	Machining & GTS	210443	MACHINE BENCHTOP LAPPING	Lapping WR material & Components	W	Fugitive air containing water vapor	MWF - Water			
093	Machining & GTS	210473	MACHINE CNC 5-AXIS WIRE-CUT EDM 2030SI	Electrically cutting WR shapes in material	W	Fugitive air containing water vapor	Water -DI	250		
093	Machining & GTS	210693	LATHE CNC UNIVERSAL SLANTBED	Turn WR Components	W	Full enclosure with Mist Collector	MWF - Water	35		
093	Machining & GTS	210882	SYSTEM ULTRASONIC CLEANING & RINSING (9 TANK)	Aqueous Cleaning WR product per PES w/WR cleaners	W	Mainly water vapor with surfactants	Water & Cleaner			
093	Machining & GTS	210883	SYSTEM ULTRASONIC CLEANING & RINSING (4 TANK)	Aqueous Cleaning WR product per PES w/WR cleaners	W	Mainly water vapor with surfactants	Water & Cleaner			
093	Machining & GTS	212179	MACHINING CENTER CNC VERTICAL SPINDLE	Milling WR Components	W	Full enclosure - Mist Collector w/HEPA	MWF - Oil	60		

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
093	Machining & GTS	212180	MACHINING CENTER CNC VERTICAL SPINDLE	Milling WR Components	W	Full enclosure - Mist Collector w/HEPA	MWF - Oil	60		
093	Machining & GTS	212649	LATHE CNC PRECISION SLANT BED	Mill - Turn WR Components	W	Full enclosure - With mist Collector	MWF - Water			
093	Machining & GTS	212655	LATHE CNC SWISS STYLE	Mill - Turn WR Components	W	Full enclosure - With mist Collector w/HEPA	MWF - Oil	120		
093	Machining & GTS	212914	GRINDER PRECISION SURFACE	Grinding WR Components	W	No enclosure - Mist Collection System w/HEPA 90% eff	MWF - Water			
093	Machining & GTS	213281	5-AXIS VERTICAL MACHINING CENTER	Milling Small to med sized WR Components		Full enclosure w/Mist Collector	MWF - Oil	60		
093	Machining & GTS	213286	MACHINE CNC 5-AXIS WIRE-CUT EDM -6050 TW	Electrically cutting WR shapes in material	W	Fugitive air containing water vapor	Water -DI	250		
093	Machining & GTS	213403	LASER MARKING SYSTEM	Mark WR product per print requirement	D	Fugitive air	Air	XXX		
094	Machining & GTS	214132	Plunge EDM	Electro Discharge Machine - Cut hole shape of electrode	W	Enclosure, Mist Collector - HEPA	EDM - Oil (low viscosity)	150		
048M	Machining & GTS	16566	SAW BAND HYDRAMATIC	Cutting stock and WR components	D	No enclosure fugitive air	None	XXX		
048M	Machining & GTS	24244	MILL HORZ RISE AND FALL	Milling WR Components	D	No enclosure fugitive air	None	XXX		
048M	Machining & GTS	25512	SAW BAND CONTOUR	Cutting stock and WR components	D	No enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	34419	LATHE TOOL ROOM	Turn WR Components	D	No enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	34906	TABLE ROTARY	Machining Accessory	D	NA	None	XXX		
048M	Machining & GTS	56021	LATHE	Turn WR Components	D	No enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	56119	MILL KNEE VERT	Milling WR Components	D	No enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	56734	LATHE ENGINE	Turn WR Components	D	No enclosure - Dust Collector System	None	XXX		
048M	Machining & GTS	56835	MILL HORZ #4	Milling WR Components	D	No enclosure - Dust Collector System	None	XXX		
048M	Machining & GTS	62209	LATHE ENGINE	Turn WR Components	D	No enclosure - Fugitive air	None	XXX		
048M	Machining & GTS	210400	SYSTEM 5-AXIS CNC LASER MACHINING LOC FT31 1/2	Cut WR Components	D	Full enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	210910	CENTER CNC 4-AXIS VERTICAL MACHINING	Milling WR Components	D	Full enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	212009	LATHE CNC SLANTBED	Turn WR Components	D	Full enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	212010	LATHE CNC SLANTBED	Turn WR Components	D	Full enclosure - Dust Collection System	None	XXX		
048M	Machining & GTS	212205	MACHINING HEAD FOR CORTLAND	Machining Accessory	D	NA	None	XXX		
048M	Machining & GTS	212661	HORIZONTAL MILL CNC 5-AXIS	Milling WR Components	D	Full enclosure - Dust Collection System	None	XXX		

Dept	Function	Prop_Num	Prop_Description	Purpose	Wet/Dry	Equipment Description	Metalworking Fluid Type/Comment	Sump Cap Gal	Way Oil Gal	Hydraulic Oil Gal
	Machining & GTS	215400	MILL CNC 5-AXIS	Milling WR Components	W	Full enclosure with Mist Collector	MWF - Water			32

**EQUIPMENT WITH HYDRAULIC FLUID > 55 GALLONS**

ASSET NUM	LOCATION	DESCRIPTION	VOLUME (gal)
54222	3.C100	PRESS, HYDRAULIC MOLDING	50
54224	3.C100	PRESS, HYDRAULIC	50
55756	2.R110	PRESS, HYDRAULIC	120
57454	3.C100	PRESS, HYDRAULIC	75
57455	3.C100	PRESS, HYDRAULIC	75
57456	3.C100	PRESS, HYDRAULIC	75
62904	3.C130	MIXER, ROTARY INTENSIVE, FARREL BANBURY	48
65698	3.C100	PRESS, HYDRAULIC	40
84137	7.A100	COMPACTOR, TRASH	72
210913	2.T345	SHREDDER	300
212007	2.R101	PRESS, HYDRAULIC	55
212008	2.R101	PRESS, HYDRAULIC	55
214917	2.S101	Lathe, Traub	170
215855	2.G101	PRESS, VACUUM LAMINATION	60
216158	3.F105	HYDROFORM*	400

\*Secondary containment provided. Drain clean outs in the room also equipped with mechanical plug.

**Miscellaneous Oil Filled Operational Equipment**

ASSET NUM	LOCATION	DESCRIPTION	VOLUME (gal)
216124	2.D201	Dye Penetrant Line (50% soln of food grade oil)	~80 gal
113313	2.B101	Electron Beam Welder	55
113484	2.S180	Electron Beam Welder	49
210006	2.S101	Electron Beam Welder	157
113575	Bldg 3 Poly production	D (210466) Reactor oil heat skid	70
212298	2.S101	Electron Beam Welder	157
212658	2.S101	Electron Beam Welder	49
212659	2.S130	Electron Beam Welder	49
212007 / 212243	2.R101	Compression press and Sterelco unit	>55
212008 / 212244	2.R101	Compression press and Sterelco unit	>55
216134	Bldg 3 Poly production	A (216132) & B (216133) Reactor oil heat skid	>55

## **APPENDIX B**

### **CERTIFICATION OF APPLICABILITY OF SUBSTANTIAL HARM**

## CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

U.S. DEPARTMENT OF ENERGY, KANSAS CITY PLANT  
2000 EAST 95TH STREET, KANSAS CITY, MO 64131-3095

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes \_\_\_\_\_ No   **X**  

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any above ground oil storage tank area?

Yes \_\_\_\_\_ No   **X**  

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes \_\_\_\_\_ No   **X**  

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

Yes \_\_\_\_\_ No   **X**  

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes \_\_\_\_\_ No   **X**  

### CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

\_\_\_\_\_  
D. J. Fitzpatrick, Director HS&E and Security

\_\_\_\_\_  
Date

## **APPENDIX C**

FORM 2469 – SPILL REPORT



## **APPENDIX D**

**DOE / HONEYWELL DISCHARGE NOTIFICATION PROCEDURES**

**IP Number:** 028  
**IP Title:** How to Maintain Emergency Response Organization (ERO) Staff, Develop and Conduct Drills and Exercises, and Generate Lessons Learned  
**Contact:** Clyde Hicks  
**Extension:** 2262  
**Effective Date:** July 19, 2013

**Overview:**

**When to use:**

1. Establish a new Emergency Response Organization (ERO) Staff position an employee is needed to replace/fill a vacant position in the ERO.
2. Develop and conduct a drill or exercise.
3. Complete a lessons learned following a drill, exercise or actual emergency.

**Critical Data:**

Information necessary to complete the tasks associated with this procedure.

<b>Step/Action Table</b>							
<ul style="list-style-type: none"> <li>• NSC steps are performed by the NSC Administrator II HS&amp;E responsible for Emergency Management.</li> <li>• KO steps are performed by the KO Engineer Sr. Environmental Compliance responsible for Emergency Management.</li> </ul>							
Step	What Happens						
1	Identify any position needing filled. (NSC - see appendix A of the NSC Emergency Plan, KO- see Table 2-1 and 2-2 of the KO Emergency Action Plan).						
	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">If....</th> <th style="text-align: left;">Then....</th> </tr> </thead> <tbody> <tr> <td>being vacated</td> <td> <ul style="list-style-type: none"> <li>➤ Contact the individual vacating the position for a recommendation to fill the position</li> <li>➤ IF individual has NO recommendations, Contact individuals of the ERO for recommendations to fill the new position</li> </ul> </td> </tr> <tr> <td>new to the ERO</td> <td>Contact individuals of the ERO for recommendations to fill the new position</td> </tr> </tbody> </table>	If....	Then....	being vacated	<ul style="list-style-type: none"> <li>➤ Contact the individual vacating the position for a recommendation to fill the position</li> <li>➤ IF individual has NO recommendations, Contact individuals of the ERO for recommendations to fill the new position</li> </ul>	new to the ERO	Contact individuals of the ERO for recommendations to fill the new position
If....	Then....						
being vacated	<ul style="list-style-type: none"> <li>➤ Contact the individual vacating the position for a recommendation to fill the position</li> <li>➤ IF individual has NO recommendations, Contact individuals of the ERO for recommendations to fill the new position</li> </ul>						
new to the ERO	Contact individuals of the ERO for recommendations to fill the new position						
	Contact the individual to brief them of their responsibilities (see Section 2 of the NSC Emergency Plan, KO training provided by the KO Engineer Sr. Environmental Compliance).						

2	<ul style="list-style-type: none"> <li>➤ NSC - provide individual the required NSC Incident Command training. <ul style="list-style-type: none"> <li>○ Develop drill or exercise package using Appendixes 1-5 as guides. Using sections of the appendixes for the type and magnitude of the drill or exercise. Not all sections of the appendixes are required for a drill or exercise.</li> <li>○ File completed exercise package in RIDS file (Drill and Exercise History packets, RIDS file 260B2).</li> <li>○ Develop Messages as needed (Controller and Contingency) using Appendix 2 – <b>Message Examples</b> as guidance.</li> <li>○ Develop exercise evaluation criteria using Appendix 5 – <b>Exercise Evaluation Criteria</b>.</li> <li>○ Organize evaluator and controller groups, if needed. Provide instruction using Appendix 3 – <b>Controller and Evaluator Instructions</b> as guidance.</li> <li>○ Conduct exercise briefing using Appendix 1 section XI and Appendix 4 <b>Example</b></li> </ul> </li> </ul>
---	--

	<p><b>and Controller Briefing</b> as guidance.</p> <ul style="list-style-type: none"> <li>○ Conduct drill and/or exercise.</li> <li>○ Conduct critique session(s) per step below</li> <li>○ Prepare and distribute exercise lessons learned report from critique information per steps below.</li> </ul>												
3	<p>➤ NSC &amp; KO conduct a critique session(s), with the drill, exercise, or real event responders, immediately after a training drill, an annual drill, exercise or real event. Critique sessions can be conducted at each location or a combined session can be conducted.</p> <ul style="list-style-type: none"> <li>○ Document information provided at each exercise critique session. Critiques shall focus on "What went well" and "What didn't go well".</li> <li>○ For training drills: <ul style="list-style-type: none"> <li>▪ collect the critique notes</li> <li>▪ develop a list of action items to be followed until completed</li> <li>▪ store action items in the annual drill/exercise lessons learned file</li> </ul> </li> </ul> <p><b>NOTE:</b> Destroy all critique information after the lessons learned report is completed.</p>												
4	<p>➤ NSC &amp; KO compile a list of lessons learned from the critique session Reference Appendix 6.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 5px;">If....</th> <th style="text-align: left; padding: 5px;">Then....</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Lessons learned is a finding demonstrating a failure to meet requirements.</td> <td style="padding: 5px;">Classify it as a deficiency.</td> </tr> <tr> <td style="padding: 5px;">Lessons learned is a finding which indicates an inability to meet evaluation criteria.</td> <td style="padding: 5px;">NOTE: A weakness DOES degrade the demonstration of a standard.  Classify it as a weakness.</td> </tr> </tbody> </table> <p>➤ Assign number(s) to the identified lessons learned action items.</p> <p>➤ Prepare the lessons learned report within 30 days of the conclusion of the exercise, and/or event per Appendix 1, or within 20 working days following receipt of outside evaluator's reports.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 5px;">Actions If ...</th> <th style="text-align: left; padding: 5px;">Then ...</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Lessons learned is classified as a deficiency, weakness, or improvement item.</td> <td style="padding: 5px;">Send to the SPOC for entry into the electronic Corrective Action Tracking System (eCATS).</td> </tr> <tr> <td style="padding: 5px;">Lessons learned is classified as an improvement item.</td> <td style="padding: 5px;">Document corrective action taken in the lessons learned report.</td> </tr> </tbody> </table> <p>➤ Track and document action items through closure.</p> <p>➤ File lessons learned report in RIDS.</p>	If....	Then....	Lessons learned is a finding demonstrating a failure to meet requirements.	Classify it as a deficiency.	Lessons learned is a finding which indicates an inability to meet evaluation criteria.	NOTE: A weakness DOES degrade the demonstration of a standard.  Classify it as a weakness.	Actions If ...	Then ...	Lessons learned is classified as a deficiency, weakness, or improvement item.	Send to the SPOC for entry into the electronic Corrective Action Tracking System (eCATS).	Lessons learned is classified as an improvement item.	Document corrective action taken in the lessons learned report.
If....	Then....												
Lessons learned is a finding demonstrating a failure to meet requirements.	Classify it as a deficiency.												
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Lessons learned is classified as an improvement item.	Document corrective action taken in the lessons learned report.												

<b>Supporting Information</b>	
<b>Forms:</b>	None
<b>References:</b>	None
<b>Revisions:</b>	1

## Appendix 1 - Drill and/or Exercise Development

### DRILL/EXERCISE PLANNING CHECKLIST

I. DRILL/EXERCISE PACKAGE DEVELOPMENT Drill/Exercise Date: \_\_\_\_\_

Purpose and scope

Objectives

Scenario – descriptive/conclusive to drive the desired emergency response; describes the anticipated emergency categorization/classification level.

Limitations

Scenario Events List – contingency messages will ensure desired actions occur

Controller messages – determine the duration of the exercise to allow response activities to play out real time to test procedures and interfaces

Plant data developed – use onsite meteorological (wind speed and direction) data (from onsite sources) if possible

Facility concerns identified

Security concerns identified  Special

data developed

Medical

Security

Personnel

Media/public/political/other Federal agency inputs

Evaluation criteria

Controller/evaluator instructions

Review/approval

Derivative Classifier

Exercise coordinator  FM&T

management

Kansas City Field Office (KCFO)  Federal

Complex participants

Kansas City MO participants

CPZ and contractor participants  State

participants

### II. SAFETY

Safety plan

Arrange for emergency backup services (required if the exercise involves emergency resources [security/medical] and planning must be completed to ensure backup resources are available)

### III. SECURITY

Security plan

Badging

Escorts

Clearance transfer

Arrange for backup emergency resources (required if the exercise involves emergency resources, planning must be completed to ensure backup resources are available)

**IV. MEDIA** (required if the exercise will generate off-site interest)

- Public information plan
- Video/audio [
- Press badges
- Validate phone numbers for media calls [
- Coordinate actual media attendance
- Press release announcing exercise

**V. ADMINISTRATION**

- Exercise participants identified and notified [
- KCFO
- Security
- Industrial Hygiene [
- Spill Response
- Emergency response organization [
- Logistics support
- Medical services [
- Federal Complex [
- Local agencies
- Kansas City Fire/Hazardous Materials [
- Kansas City Police Department
- KCFD Ambulance
- Hospital(s)
- Local Emergency Planning Committee
- State Agencies (Missouri Department of Natural Resources (MDNR) State Emergency Management Agency (SEMA))
- DOE-HQ
- Exercise exemptions

**VI. LOGISTICS**

- Meeting rooms (responder exercise briefing; controller, evaluator, facility critiques; exit briefings) [
- Special weather needs (if checked, reference safety plan)
- Portable generator [
- Extension cords
- Control cell
- Current emergency call lists (including any required modifications due to simulations)
- Scheduled facility/site tours that impact exercise
- Exercise activity schedule [
- Meeting schedule
- Special instructions
- Overtime issues resolved and approved

**VII. SIMULATION AIDS**

- Smoke generator
- Shipping containers
- Barricade signs/tape/rope
- Injury/medical indicators [
- Dry ice
- Spill simulations (dyed water, straw)
- Permits (burning, smoke, release of liquids, etc.)

**VIII. EXERCISE**

- Controller locations identified.
- Emergency response facilities [
- Incident Management System

- Press Center [
- ] Other
- Event scene
- Medical facilities
- Security operations
- Barricades/road blocks
- Staging area/accountability locations [
- ] Controllers identified
- Radio
- Cellular telephone [
- ] Property passes
- Recharge batteries
- Test radios/radio maintenance
- Identify additional communication equipment
- Scenario tour
- Exercise package provided

**IX. EXERCISE  
EVALUATION [ ]**

- Evaluation locations  
identified [ ] Evaluators
- Scenario tour
- Exercise package provided
- Plans and procedures

**X. OBSERVERS**

- List of observers developed and approved [
- ] Escorts identified as needed
- Observer instructions developed
- Observers briefed on observer limitations and instructions

**XI. TRAINING**

- Facility orientation [
- ] Player briefing
- Pre-exercise briefing developed
- Pre-exercise briefing conducted
- Participation documented
- Controller
- Training requirements specified
- Training lesson plan developed [
- ] Training conducted
- Participation documented [
- ] Evaluator
- Training requirements specified
- Training lesson plan developed [
- ] Training conducted
- Participation documented [
- ] Observer
- Observer pre-exercise briefing conducted
- Participation documented

This checklist was developed using the Training Material provided by the Department of Energy in their training course "Drills and Exercises".

## Appendix 2 - Message Examples

### Incident Commander Controller Message #2

- - - - - THIS IS AN EXERCISE MESSAGE - - - - -

From: Incident Commander Controller To: Incident  
Commander

Time: +08

Subject: Wind direction change

The wind direction has changed from being out of the west heading east to out of the northwest heading southwest. Please announce this to players within the Incident Command System.

- - - - - THIS IS AN EXERCISE MESSAGE - - - - -

## Appendix 3 - Controller and Evaluator Instructions Example

Be located in your emergency response facility at least 30 minutes prior to the start of the exercise. If you are not assigned to a specific facility, be in place to meet the emergency responders at least 15 minutes prior to their activation.

Obtain or locate necessary telecommunications equipment, and test it to ensure satisfactory communications between controllers and the lead controller.

Wear controller identification, such as the required badge, arm band, or vest.

Review the exercise objectives for your area of responsibility.

Highlight the specific messages you will be responsible for delivering. Do

not enter into a personal conversation with any exercise player.

Deliver the messages you have been assigned to deliver at the time indicated. (CAUTION: If the information to be delivered is dependent on some action to be taken by the exercise player, do not deliver the message until the action has been taken.)

When you deliver a message, notify the lead controller with the message number and the time delivered, if needed.

Begin and end exercise communications over the radio or telephone with the phrase "This is an exercise message."

If you are to deliver specific data, deliver it as directed on the message instructions.

Record activities and the time in your evaluator or controller log. Do not write opinions; rather, write about specific actions.

If your team/player does not perform as expected and a contingency message is not provided, notify your lead controller

immediately and ask for directions. No unplanned simulations will be allowed without the lead controller's approval. This differs from free play, which is action taken by a player to solve a problem in a unique way.

Do not prompt a player to a specific response unless a contingency message directs you to do so. Clarify information, as long as it does not provide coaching.

Ensure that observers stay out of the exercise activity. If you need assistance, notify the lead controller or security.

Do not provide information to the participants regarding scenario event progress or resolution of problems being encountered by the participants. Players are expected to obtain information through their own resources.

Do not provide directions/information to the exercise players that have not been included in exercise planning without approval.

Pick up player timelines, logs, and pertinent documentation at the post exercise facility debriefing and critique. Give the lead controller this information.

You will be notified by the lead controller when the exercise has been terminated.

At exercise termination, summarize your notes and prepare for the on-scene critique. Have the summary ready to turn over to the lead controller. The facility lead controller shall provide this documentation to the area/site lead controller. Provide exercise packages and documentation to the lead controller following the evaluator and controller debriefing.

THANK YOU VERY MUCH FOR YOUR HELP.

## **Appendix 4 - Example Evaluator and Controller Briefing**

**TO:** Exercise Evaluators and Controllers

**FROM:** Exercise Coordinator

**SUBJECT:** REVIEW OF EXERCISE, HANDOUTS AND INSTRUCTIONS, APPLICABLE EMERGENCY PLANS AND PROCEDURES

NOTE: Emergency Management staff will be available at the briefings to answer any questions pertaining to the exercise, emergency response facilities, or any other aspects of the KCFO/FM&T Emergency Management Program.

### **General Briefing:**

- Introduction
  
- Responsibilities
  1. Maintain exercise continuity
  2. Exercise timeline
  3. No unplanned simulation without approval
  4. Communications links
  5. Exercise safety
  6. Participant instructions, including telephone directory
  
- Controller organization
  
- Scenario and activity boundary

- Exercise scenario package

1. Exercise date and time
2. Exercise scope
3. Limitations
4. Scenario
5. Timeline
6. HAZMAT information
7. Meteorology
8. Controller instructions
9. Evaluation criteria

- Logistics

1. Check-in
2. Badges or other identification
3. Identification of locations of rest rooms, food, water, and smoking areas
4. Communication
5. Reporting to assigned location
6. Completion of pre-exercise setup

- Critique schedule

1. Critique immediately following exercise
2. Area debriefings or one overall debriefing can be conducted

## **Appendix 5 - Exercise Evaluation Criteria**

As a minimum, evaluation criteria and critique sheets shall be developed to support the following bullets below:

- Contain detailed instructions supporting the exercise objectives and scenario.
- Focus on performance.
- Establish standards for each section of the evaluation sheet.
- Allow for initial observation and first impressions of personnel performance.
- Allow for maintaining a time chronology of events.
- Allow for the evaluation of procedures, facilities, and equipment.

### **CATEGORIZATION OF FINDINGS**

General Findings will be divided into three categories; associated criteria for each are described below.

#### Deficiency

A "Deficiency" is a finding demonstrating a failure to meet the requirement (s) of a standard pertaining to emergency management, or the failure to meet evaluation criteria, resulting in an inadequate demonstration of the standard.

Deficiencies are the highest priority for the purpose of expediting corrective actions and tracking them to closure. The evaluated organization will document their interim and final corrective action for each deficiency and transmit the report to the evaluating organization.

#### Weakness

A "Weakness" is a finding which indicates an inability to meet evaluation criterion/criteria which degrades the demonstration of a standard.

Weaknesses must be addressed by the evaluated organization for corrective action. Corrective actions must be transmitted to the evaluating organization.

### Improvement Item

An "Improvement Item" is an observation citing deviations or concerns regarding a particular criterion. An improvement item, by itself, does not degrade the adequate demonstration of a standard.

Improvement items do not need to be addressed by the evaluated organization, rather they are to be considered as a suggested means to improve their program.

## **EVALUATION CRITERIA**

### **EMERGENCY RESPONSE ORGANIZATION (ERO)**

Standard An emergency response organization, with clearly specified authorities and responsibilities for emergency response and termination, is established and maintained for each facility. The emergency response organization has overall responsibility for the initial and ongoing response to and termination of an emergency. Criteria A single individual is in charge of the overall response and has the authority to use necessary resources to terminate the emergency.

The lead individual responsible for the emergency response demonstrates knowledge in the following:

The affected facility and its operations

The emergency response team and its mission

The availability of resources necessary to terminate the emergency event.

Each member of the emergency response organization demonstrates their roles and functions, and proper use of emergency equipment/facilities.

A succession list of management personnel responsible for managing the emergency in the absence of the primarily designated emergency manager is documented.

Check activities against emergency plan, process description, and work instructions requirements.

### **OFF-SITE RESPONSE INTERFACES**

Standard Interface and coordinate with federal, state, and local agencies and organizations responsible for off-site emergency response and for protection of the health, safety and environment, of the public are demonstrated.

#### Criteria

Information exchange between the emergency response organization and off-site officials is demonstrated by:

Mutual understanding of capabilities, especially the command and control/direction system.

An effective working relationship between the off-site officials and their emergency response organization counterparts.

Successful identification and exchange of information necessary to carry out an integrated response. Information given off-site is correct and timely. —

Telephone circuits and/or radio channels are available and allow for effective communication. Provisions for backup communications exist and are utilized, if necessary.

Interfaces with off-site political, technical, security (e.g., local law enforcement) and emergency services officials are accomplished by an individual (s) with the responsibility, authority, knowledge, and training.

Check activities against emergency plan, process description, and work instructions requirements.

## **NOTIFICATIONS AND COMMUNICATIONS**

Standard Events categorized/classified as emergencies are reported within the required time to the correct organizations. Follow-up notifications are made.

### Criteria

Initial notifications for emergencies are made as soon as crucial information is available for categorization.

The formally established reporting and notification chain is properly followed including communications to and among:

Facility Manager (Contractor Management)

KCSO –

DOE HQ Operations Center Local, and state off-site

authorities –

Facility emergency response personnel (e.g., off hours calls to facility staff)

Proper and accurate follow-up notifications are made when conditions change or when the emergency classification designation is upgraded.

Classified information is handled in accordance with established requirements.

Installed communications systems are adequate to accomplish the notification process.

Notifications are documented.

Check activities against emergency plan and work instructions requirements.

## **PROTECTIVE ACTIONS**

Standard Specific, predetermined actions are taken in response to emergency conditions to protect on-site personnel and the public.

### General Criteria

Pre-determined Protective Actions are utilized in protective action decision making.

Protective action recommendations, such as sheltering and/or evacuation, for affected areas are made in a conservative and timely manner to authorities/organizations.

The emergency response organization monitors the protective actions that organizations are implementing.

Check activities against emergency plan, process description, and work instructions requirements.

### Accountability Criteria

Accountability of facility personnel is completed.

A search and rescue operation is promptly initiated, when necessary.

Affected personnel (i.e., on-site or facility personnel) are continuously accounted for during the emergency response.

### Evacuation/Sheltering Criteria

Facility personnel are evacuated in a timely manner. The ability to evacuate individuals is demonstrated by:

Use of specified evacuation routes

Pre-designated assembly areas

Organizational ability and resources necessary to control traffic evacuation flow and to control access to evacuated and assembly areas are demonstrated.

## **PUBLIC INFORMATION**

Standard An emergency public information program is demonstrated and integrated into the facility emergency management program.

### Criteria

Authority for approving media releases is assigned to in a single individual or designee.

Information released to the news media regarding the emergency is accurate, timely, and relevant.

Information released to the news media is coordinated with DOE and other federal, state, and local response organizations.

A designated spokesperson and support staff are available to assess emergency information and exchange information with representatives of federal, state, and local organizations and the media.

Emergency facilities, staff, and communications equipment are available and activated in a timely manner to manage public inquiries and rumor control. Accurate information disclaiming rumors is incorporated in future media briefings and releases.

Access of the news media to the site, affected facility and site/facility personnel is controlled.

Check activities against emergency plan, job aids, and work instructions requirements.

## **EMERGENCY RESPONSE STAFF ACTIVITIES**

Standard The emergency response organization responds to emergencies in an effective and timely manner to terminate the consequences and bring the emergency situation under control. The specific indicators necessary to continually assess the consequences of emergency events and to monitor safety, health, environmental and security conditions which affect or intensify the emergency are monitored and evaluated by the emergency response organization.

### Staffing and Activation of Emergency Facilities and Teams Criteria

The emergency facilities and teams are staffed with emergency response personnel designated by name, title, or position.

The emergency response organization is functionally staffed to address the event in a timely manner as outlined in the approved Bannister Federal Complex NSC Emergency Plan and NNSA NSC NSC Emergency Plan. Key emergency facilities are to be staffed within an hour after declaration of an emergency.

Procedures and/or checklists which describe the major response activities of key members of the emergency response organization are utilized.

Emergency response staff demonstrate knowledge of the tasks they are expected to perform.

Emergency facility and team activation meet the following requirement:

Communication systems used to activate both on-shift and off-shift emergency response personnel are adequate and reliable. Emergency response personnel are notified in the required time period. Check activities against emergency plan, process description, and work instructions requirements.

#### Emergency Response Staff Functions Criteria

Information is accurately transmitted in an orderly and documented manner throughout the chain of command. Mutual understanding exists of acronyms, code words, convention and/or technical terminology.

The emergency response staff is briefed periodically on the status of the emergency and current response priorities and activities.

When priority actions are identified, tasking is clearly made to emergency response staff, and actions are followed through to completion.

Specialty groups supporting the emergency response staff are functionally organized and properly managed to provide timely information to the decision-making process.

Emergency response staff analysis of information is concise and directly in support of termination of the incident.

The emergency response staff functions in an efficient, effective, and timely manner in the support of the crisis resolution.

Analysis of facility conditions leads to implementation of proper corrective actions.

Information exchange, the decision-making process, and implementation actions are to ensure the success of corrective actions.

Emergency facilities are stocked with drawings, reference material, procedures, and other "tools" for use by those performing analyses.

Check activities against emergency plan, process description, and work instructions requirements.

#### **MEDICAL**

Standard Medical support is provided for personnel on-site and coordinated with off-site facilities.

#### Criteria

Immediate on-site first aid and emergency medical treatment for workers is demonstrated.

On-site personnel who respond to a medical emergency demonstrate first aid or emergency medical treatment training.

The medical team demonstrates the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

Transportation of injured on-site personnel to on-site or off-site medical facilities is accomplished in a timely manner.

Proper contamination control procedures are demonstrated.

Crew communicates with the receiving medical facility while in route. Communications are adequate for the ambulance to communicate with the receiving medical facility.

Proper emphasis is placed on medical treatment for contaminated/injured personnel.

Check activities against emergency plan, process description, and work instructions requirements.

#### Fire and Rescue Criteria

Fire/rescue personnel and equipment are assembled and deployed to the scene of the emergency in a timely manner.

Personnel take necessary precautions for contamination, exposure, heat, and personal safety.

The fire is extinguished in a timely manner based upon the response observed.

Search and rescue operations are carried out in an efficient coordinated manner.

Medical and health physics personnel coordinate their efforts. Injured personnel are properly immobilized and moved.

When responding off-site fire personnel are outfitted with the specialized equipment and supplies specific to the on-site hazards (e.g., respiratory protection equipment, and toxic gas sampling equipment).  
Check activities against emergency plan, process description, and work instructions requirements.

#### Repair and Maintenance Criteria

Facility field repair and maintenance activities are carried out in a timely and efficient manner.

Simulation of repair activities is realistic enough to provide confidence that the activity could have been performed during a real emergency.  
Check activities against emergency plan, process description, and work instructions requirements.

### **SECURITY MEASURES**

Standard Protective Force personnel and equipment provide effective support in emergency situations.

#### Criteria

Effective command and control of protective force personnel and equipment in response to an emergency are demonstrated.

Determination/implementation of the access and egress control measures for the plant site, site areas, and facilities is demonstrated.

The timely accountability and protection for critical assets under emergency conditions are demonstrated (e.g., an administrative check is made immediately upon re-entering the area, such as a limited lock-down or full scale verification).

Local law enforcement who augment on-site security forces are outfitted with specialized equipment and supplies specific to the on-site hazards (e.g., respiratory protection equipment and toxic gas sampling equipment).  
Check activities against emergency plan, job aids, process description, and work instructions requirements.

### **EMERGENCY FACILITIES AND EQUIPMENT**

Standard Facilities and equipment are adequate to support emergency response.

#### Criteria

Activation of the emergency facility and the operation of emergency facility equipment follow approved procedures.

The intended functions of a particular emergency facility or piece of equipment is capable of supporting the emergency response.  
Check activities against emergency plan, process description, and work instructions requirements.

### **RECOVERY AND RE-ENTRY**

Standard Adequate recovery from an emergency and re-entry into the affected facility is demonstrated.

Criteria

Recovery demonstrates:

Decision making and communications associated with termination of an emergency. The organizational authority, as outlined in the emergency plan and/or procedures, declares the recovery phase is to be entered.

Dissemination of information to federal, state, and local organizations regarding the emergency and relaxation of public protective actions.

Establishment of a recovery organization.

The establishment of general criteria for resumption of normal operations.

Check activities against emergency plan, process description, and work instructions requirements.

**CONDUCT OF EXERCISE**

Standard Exercises emphasize facility-specific emergency events, response activities, and minimize the use of generic, nonspecific simulations.

Scenario Criteria

The scenario is technically accurate in terms of operations.

The scenario sets clear measurable objectives for participating organizations. The

scenario is descriptive/conclusive to drive the desired emergency response.

Controller and evaluator instructions are provided.

The scenario employs a challenging sequence of events with provisions for realistic free play. Players should treat exercise play as real unless a controller injects other information.

Simulations (versus actual performance or walk-throughs) are held to a minimum, commensurate with actual safe facility operations.

Message injects (i.e., contingency messages) are prepared to cause actions to occur in the event that player action does not meet exercise objectives requirements.

Check activities against emergency plan, job aids, process description, and work instructions requirements.

Control Criteria

A controller organization is established. The number of controllers, evaluators and observers are determined such that elements to be evaluated are covered but do not interfere with, limit, or impede response by players.

Controllers are readily identifiable and separate from players. The

lead controller and other controllers are assigned by name.

Functional activity controllers are knowledgeable and trained in the technical requirements of the activities they are controlling. Event

time lines are prepared by the control organization to assist in scheduling and tracking activities to meet exercise objectives.

Controller training is conducted prior to the exercise.

Controllers have communication equipment available to meet their needs. Controllers demonstrate ability to respond to unforeseen problems.

Controllers perform their responsibilities and functions (i.e., messages are given correctly, accurately, and timely.) Check activities against emergency plan, process description, and work instructions requirements.

### Critique and Self-Assessment Criteria

Meaningful initial critiques, providing participants (e.g., players, controllers, and evaluators) an open forum in which discussions regarding positive and/or negative aspects of the exercise are held. These critiques address:

Overall exercise performance (e.g., review of scenario events, shortcomings of the scenario and exercise conduct, and anticipated versus actual player actions).

Assessment of participant performance.

Adequacy of emergency response procedures/other documentation. Adequacy of facilities and equipment.

The self-assessment process analyzes critique issues to determine root cause of the identified weaknesses/problems and documents them for corrective actions.

Check activities against emergency plan and work instruction requirements

## **Appendix 6 – KO & NSC Lessons Learned Report**

Prepare the lessons learned report as follows:

- Concise for clarity
- Summary format
- Describe the type of drill, exercise, or event
- Who was involved (examples: Security, FBI, Environmental Operations, Kansas City Missouri Fire Department, Kansas City Police Department, Albuquerque Fire Department)
- Action Item Number
- Finding Description and classification (deficiency, weakness or improvement item)
- Root Cause, if deficiency
- Recommended corrective action/solution
- Estimated Completion date

Input corrective action items in the eCATS

Monitor lessons learned report until corrective action items have been completed.

- Document closure of corrective action items in the eCATS.  
Responsible FM&T/KC Manager or KO employee.
- Distribute to the following:

KCFO Emergency Management Representative FM&T/KC  
Emergency Management Coordinator NSC Emergency Response  
Organization  
NSC Building Operations Center Manager KO  
Emergency Action Team

## **End of Document**

**IP Number:** 032  
**IP Title:** Event Notification, Classification, and Reporting to OSHA, Honeywell, and DOE  
**Contact:** Linda Taylor  
**Extension:** 3747  
**Effective Date:** 4/08/2011

**Overview:**

**When to use:** Use when reporting an HS&E incident.

**Critical Data:**

This internal procedure establishes the minimum requirements that shall be met. In addition to complying with this internal procedure, all applicable national, state, and local regulations shall be met.

Conformance to this internal procedure will ensure all required Health, Safety, Environmental and Security related events are reported to the appropriate contacts and systems in an established period of time.

This internal procedure establishes the requirements for completing and posting an annual summary of the prior year's recordable safety events from February 1 through April 30.

Data entry into the Department of Energy Computerized Accident / Incident Reporting System (CAIRS) and the Honeywell Event Tracking System requires a user password. Use of CAIRS requires training and approval by the DOE System Administrator. Prior to first use of the Honeywell Event Tracking System, users shall register for access by completing the on-line Event Tracking Registration form.

A list of definitions and Tier criteria can be found in [HSEMS 703, Event Reporting Procedure](#).

<b>Step/Action Table</b>			
<b>Step</b>	<b>Who Does It</b>	<b>What Happens</b>	
1	Incident Analysis Process Leader	Ensure required notifications of an accident, excursion, incident, or near-miss occurs. <ul style="list-style-type: none"> <li>- For Honeywell Tier 1, Tier 2, and Tier 3 criteria, reference <a href="#">HSEMS 703, Event Reporting Procedure</a>, Section 8, Definitions.</li> <li>- For clarification of FM&amp;T reporting guidelines, <a href="#">FM&amp;T Guidelines for Honeywell Event Tracking System Entry</a></li> <li>- For DOE criteria, reference DOE M 231.1-1A, Environment, Safety and Health Reporting Manual, Change 1, dated 9-9-04, and DOE O 225.1A, Accident Investigations, 11/26/1997.</li> <li>- For OSHA criteria, reference 29 CFR 1904, 1/1/02.</li> </ul>	
		<b>If....</b>	<b>Then....</b>
		Tier 1, Type A or B, Level 4	Immediate, based on initial assessment of event. <ul style="list-style-type: none"> <li>▪ Kansas City Site Office</li> <li>▪ FM&amp;T management</li> <li>▪ Law Department</li> <li>▪ Communications</li> <li>▪ Honeywell corporate management per <a href="#">Honeywell Corporate Call List</a></li> </ul>
		Tier 2 Event, Type C, Level 2 or 3	Within 1 day of event, based on initial assessment of event. <ul style="list-style-type: none"> <li>▪ HS&amp;E Management</li> <li>▪ Manager of involved employee</li> <li>▪ Incident investigator</li> </ul>

			<ul style="list-style-type: none"> <li>▪ 24-Hour Notification List</li> </ul>
		Tier 3 Event, First Aid, Level 1	<p>As appropriate, based on initial assessment of event.</p> <ul style="list-style-type: none"> <li>▪ HS&amp;E Management</li> <li>▪ Manager of involved employee</li> <li>▪ Incident investigator</li> <li>▪ 24-Hour Notification List</li> </ul>
		Contact Emergency Management Specialist to ensure ORPS requirement are evaluated, if necessary. See WI 01.06.10.00.10.	
		Provide Toxic Substances Control Act (TSCA) coordinator with information on events involving potential chemical exposure.	
		Determine initial recordability classification, e.g., OSHA recordable, first aid, near-miss. References: OSHA Recordkeeping Handbook, The Regulation and Related Interpretations for Recording and Reporting Occupational Injuries and Illnesses, the DOE M 231-1-1A, Environment, Safety and Health Reporting Manual, and the Honeywell Global Recordkeeping Requirements.	
		Document initial risk level in accordance with input from Incident Analysis Coordinator.	
		Notify Incident Analysis Coordinator of changes in classification status of injuries / illnesses. Update any initial documentation, if necessary.	
		Schedule Incident Review Team (IRT) meeting if event requires case management or discussion to determine classification or risk level. Use PC3108 to document decisions. The Honeywell Global Recordkeeping Coach is also used for classification of events.	
		Activate Workers' Compensation Program for Honeywell employees when required medical care services exceed the capability of Medical Care Services. See <a href="#">WI 5.12.5</a> , Workers' Compensation.	
		<b>If....</b>	<b>Then....</b>
		Honeywell Tier 1	<p>Ensure SBG Leader or designee notifies Corporate using the Corporate Call List. A voicemail message or e-mail notification is not an acceptable means of notification.</p> <p>Call within 2 hours, enter known data into Honeywell Event Tracking System within one business day. Include pertinent factual details known at time report is entered into Event Tracking System.</p> <p>Update as required. Updates shall continue until event is considered closed with all corrective actions completed.</p>
		Honeywell Tier 2 Event	<p>Within 1 business day, enter known data into Honeywell Event Tracking System. Include all pertinent factual details known at time report is entered into system.</p> <p>Update as required. Updates shall continue until event is considered closed with all corrective actions completed.</p>
		Honeywell Tier 3 Event	<p>Within 7 calendar days, enter known data into Honeywell Event Tracking System. Update as required.</p> <p>The exception to this is Honeywell Aerospace Root Cause Analysis (RCA) Reviews. These reviews are distributed by Honeywell Aerospace and a response is required in the Honeywell ETS within 10 business days.</p>
		<b>If...</b>	<b>Then...</b>

	An employee or contractor employee injury or illness is initially assessed as “Not Recordable,”	the Recordkeeping Coach shall be used to evaluate the classification.
	The Recordkeeping Coach indicates that the injury or illness is likely “Recordable,”	Enter the case as a Recordable Tier 1 or Tier 2 Event.
	A recordability exemption is desired,	The HS&E should complete Recordability Exemption form and forward it to the SBG HSE leader.
	The SBG HSE Leader agrees with the request for recordability exemption	SBG HSE leader forwards form to the Chair of the Recordkeeping Review Committee for review by the Committee.
	The Recordkeeping Review Committee agrees that case is not recordable	SBG leader and site HSE leader will be notified and Event Tracking System entry can be updated to reflect proper classification
	The Recordkeeping Review Committee agrees that case is recordable	SBG leader and site HSE leader will be notified.
	If the SBG leader and site HSE leader request further review,	Case will be sent to Honeywell’s External Recordkeeping Consultant for review, decision will be communicated to SBG and site HSE leader and will be binding.
	Record work-related injuries and illnesses on OSHA 300 log with 7 days of determining that recordability threshold has been met.	
	<b>If</b>	<b>Then</b>
	Injury or illness meets privacy case criteria (injury to intimate body part or reproductive system; injury or illness resulting from sexual assault; mental illness; HIV infection, hepatitis, or tuberculosis; needle stick injuries and cuts from sharp objects contaminated with another person’s blood or other potentially infectious material; other illnesses, if employee voluntarily requests that his or her name not be entered on the log.	Use Privacy Case # feature to protect employee’s identify on OSHA 300. Maintain a separate confidential list of case number and employee names for privacy concern cases.
	Submit required data to CAIRS in accordance with DOE M 231.1-1A, Change 2, dated 6/12/07.	
	<b>If ...</b>	<b>Then...</b>
	Single incident results in multiple items that qualify as reportable events	Each reportable event must be entered into the Event Tracking System as a unique entry and subsequent entries should reference event number of initial entry.
	<b>If....</b>	<b>Then....</b>
	New Report	Submit 5484.3 information for receipt on or before the 15 <sup>th</sup> of the month and the last working day of the month. Initial reports will include the actual time lost as of the date the report is submitted.
	Update	Perform at least quarterly quality checks of information to verify it is consistent with information in local records. Complete quarterly revisions to lost work time or report information by the 10 <sup>th</sup> of the month following the end of the calendar quarter until the case is closed. The updates are due April 10 <sup>th</sup> , July 10 <sup>th</sup> , October 10 <sup>th</sup> , and January 10 <sup>th</sup> .

		Hours Worked	Complete 5484.4 by the 10 <sup>th</sup> of the month following the end of the quarter. The work hours are due April 10 <sup>th</sup> , July 10 <sup>th</sup> , October 10 <sup>th</sup> , and January 10 <sup>th</sup> . Work hours cannot be electronically submitted until updates are completed for open cases. Notify DOE-HQ when quarterly update is complete.
			Complete OSHA 300A, Summary of Work-Related Injuries and Illnesses.
			Ensure Site Leader signs DOE F 5484.3 for all OSHA recordables and above for
			Ensure Site Leader signs OSHA 300A (annual summary of recordable safety events) and recognizes events are recorded as per <a href="#">HSEMS 703</a> and the summary is true,
			Post OSHA 300A on federal bulletin boards from February 1 to April 30 of the year following the year covered by the form. This must be posted even if no Tier 1 or Tier 2 safety events occurred in the previous year. After annual posting period, place in secure
			Mail copies of OSHA 300A, Summary of Work-Related Injuries and Illnesses, to off-site employees in
			Maintain records as required by the Incident Analysis procedure in accordance with federal, DOE, and
			Maintain privacy of records by storing in a location (physical or virtual) that is secure and not accessible except to those who have a legitimate reason to see the records.
			Perform a documented annual evaluation and communicate results to appropriate levels of management. The evaluation should include the procedure; accident reports, insurance records, regulatory required accident and first aid logs, training and availability of records. Provide results to HSE Leader for inclusion in HSEMS Management Review.
			Analyze injury and illness experience and HS&E Concerns / Near Miss data for trends.
2	Incident Analysis Coordinator		Advise process owner of any changes which may impact recordability or risk classification..
			Document incident review in accordance with classification and risk level requirements.

<b>Supporting</b>	
<b>Forms:</b>	OSHA 300 (log); OSHA 301 (injury and illness report); OSHA 300A (annual summary); e-2836 Concern / Near Miss
<b>References:</b>	<a href="#">WI 5.12.5</a> , Workers' Compensation <a href="#">HSEMS 703, Event Reporting Procedure</a> <a href="#">FM&amp;T Guidelines for Honeywell Event Tracking System Entry</a>
<b>Revisions:</b>	Added FM&T Guidelines for Honeywell Event Tracking System Entry

## **APPENDIX E**

### **CROSS-REFERENCE OF THE SPCC REGULATIONS TO THE SCP, HAZARD ASSESSMENT AND EMERGENCY PLAN**

**Applicable 40 CFR Part 112 Requirements  
As Part of the Spill Control Plan, Hazard Assessment,  
And the Emergency Plan**

112.3(a) –If such a facility (excluding oil production facilities) becomes operational after November 10, 2011, and could reasonably be expected to have a discharge as described in [§112.1\(b\)](#), you must prepare and implement a Plan before you begin operations.– The NSC is in compliance with this requirement. The SCP was initially prepared and implemented December of 2012 prior to the start of operations during January 2013. Contingency plan requirements under RCRA 40 CFR Part 264 are satisfied by preparation and implementation of the following:

- Spill Control Plan
- Hazard Assessment
- Emergency Plan

112.3(d) – A Professional Engineer must review and certify the Plan. The certification must be prepared in accordance with good engineering practice, applicable industry standards and with this part. – The SCP meets this requirement and is certified by a professional engineer. Below is the applicable section:

- SCP – Management Approval Page ix

112.4(a) – Whenever the facility discharges more than 1000 gallons of oil in a single discharge, or discharges more than 42 U.S. gallons of oil in each of two discharges in any 12 month period, the facility must submit within 60 days the following information:

- Name of facility
- Your name
- Location of facility
- Maximum storage or handling capacity
- Corrective actions taken and description of equipment repairs and replacements
- Description of facility, maps, flow diagrams, and topographic maps as necessary
- The cause of such a discharge, including failure analysis
- Additional preventive measures to minimize reoccurrence
- Other information required by the Regional Administrator.

Below is the applicable section:

- SCP Section 2.0

112.5(a) – Amend the SPCC plan with any change in facility design, construction, operation, or maintenance that materially affects its potential discharge. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but no later than six months following preparation of the amendment. Below is the applicable section:

- SCP Section 2.2

112.5(b) – Complete a review and evaluation of the SPCC plan at least once every five years and implement as soon as possible, but no later than six months following the review. Below is the applicable section:

- SCP Section 2.2

112.7(7) – General requirements shall have a cross-reference of the regulations to the location in the SCP. Below is the applicable section:

- SCP Sec 2.3

112.7(a)(3) – Provide a physical layout of the facility including a facility diagram. Below are the applicable sections:

- (i) Type of oil in each container and its capacity. SCP Sec 2.4.1.1
- (ii) Discharge prevention measures including routine handling of products (loading and unloading). HA Section 2.15 and SCP 2.4.1.2
- (iii) Discharge of drainage controls such as secondary containment, equipment, and procedures for the control of a discharge. Emergency Plan Section 11.0 and SCP Sec 2.4.1.3
- (iv) Countermeasures for discharge discovery, response and cleanup (facility and contractor). EP Section 11.0 and SCP Section 2.4.1.4
- (v) Methods of disposal of recovered materials. SCP Section 2.4.1.5
- (vi) Contact list and phone numbers for the facility response coordinator, NRC, cleanup contractors, State, Local and Fed agencies. SCP Section 2.4.1.6

112.7(a)(5) – Describe procedures readily available in an emergency, provide supporting material as appendices. Below are the applicable sections:

- HA
- SCP Section 2.6

112.7(b) – Where experience indicates a reasonable potential for equipment failure (such as loading, unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of discharge), include in the Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure. Below are the applicable sections:

- SCP Section 2.4
- SCP Figures 1 and Figure 2

112.7(c) – Provide appropriate containment and/or diversionary structures to prevent a discharge. Below is the applicable section:

- SCP Section 2.8

112.7(e) – Inspection, tests, and records. Conduct inspections and tests required by this part in accordance with written procedures that the certified engineer developed for the facility. Below are the applicable sections:

- SCP Section 2.10
- SCP Section 2.18.6, Ultrasonic testing found in RIDS 1020B2 SPCC

112.7(f)(1) – At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges. Below are the applicable sections:

- SCP Section 2.11.1
- EP Section 12.0

112.7(f)(2) – Schedule and conduct discharge prevention briefings for you oil-handling personnel at least once a year to assure adequate understand of the SPCC Plan. Below is the applicable section:

- SCP Section 2.11.3

112.7(g) – Security. (1) Fully fence facility, handling and processing areas.

- (2) Ensure the master flow and any other valves permitting direct flow of the container out of the containment area, remain in the closed position.
- (3) Lock the starter control on each oil pump and locate it at a site accessible only to authorized personnel.
- (4) Securely cap or blank-flange the loading/unloading connections of oil piping or facility piping when not in service for extended periods of time.
- (5) Provide facility lighting commensurate with the type and location of the facility to assist in the:
  - (i) Discovery of discharges occurring during hours of darkness.
  - (ii) Prevention of discharges occurring through acts of vandalism.

Below is the applicable section:

- SCP Section 2.12