STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF NRG CURTAILMENT SOLUTIONS, INC. FOR A DECLARATORY RULING ON THE NEED TO OBTAIN A SITING COUNCIL CERTIFICATE TO INSTALL EMERGENCY GENERATING DEVICES, AT 935 MIDDLE STREET, BRISTOL, CONNECTICUT	:	PETITION NO. 1489
	:	APRIL 1, 2022

RESPONSES OF NRG CURLTAILMENT SOLUTIONS, INC.
TO CONNECTICUT SITING COUNCIL INTERROGATORIES

On March 22, 2022, the Connecticut Siting Council ("Council") issued Interrogatories to NRG Curtailment Solutions, Inc. ("NRG"), relating to Petition No. 1489. Below are NRG's responses.

Question No. 1

What are the dimensions of the Emergency Generating Devices (EGD)?

Response

The Caterpillar G3520H dimensions are 66.88 feet (803.0 inches) in length by 21.6 feet (260 inches) in width by 24.72 feet (296.64 inches) in height.

Question No. 2

How are the EGD interconnected to the existing ESPN electrical and gas systems? For the electrical interconnection, provide the line voltage.

Response

Each of the NRG generating units has a dedicated gas lines in each of the buildings that interconnects at the exterior of the building at 60 PSI. The system reduces the pressure down to

5 PSI at each EGD. Each EGD generates at 13.8 kV to match the distribution voltage and connect to three existing utility feeds on the ESPN campus.

Question No. 3

How are the EGD installed inside the Generator Plant Buildings (ex. concrete pad, reinforced foundation)?

Response

The existing Generator Plant Buildings maintain reinforced concrete floors that are capable of supporting the NRG EGDs.

Question No. 4

What are the heights of the Generator Plant Buildings? What are the heights of the exhaust stacks? Do the stack heights include the height of the buildings?

Response

Both Generator Plant Buildings are 483 feet long by 103 feet wide and are 56 feet tall (above grade). Similar to the exhaust stacks for ESPN's existing generators, the exhaust stacks for NRG's EGDs extend approximately 32 feet above the roof of the building roof (88 feet above grade).

Question No. 5

Were the exhaust stacks determined to be aviation hazards under Federal Aviation Administration criteria? If yes, describe the type of aviation hazard marking and/or lighting on the stacks.

Response

No. Federal law requires that the FAA determine whether a structure that is proposed to be built or altered, 200 feet above ground level (AGL) or higher, or near an airport, does not pose

a hazard to airspace. As discussed in response to question no. 4 above, the exhaust stacks associated with the NRG EGDs extend to a height of only 88 feet above grade (32 feet above the roof of the buildings) and are the same height as the existing ESPN generator exhaust stacks on the roof of each Generator Plant Building. The closest airport to the ESPN Campus is Robertson Airport in Plainville, Connecticut located approximately 3.5 miles to the northeast. None of the buildings or generator exhaust stacks on the ESPN campus maintain any FAA obstruction marking or lighting. NRG does not, therefore, anticipate that the new exhaust stacks associated with its EGDs will require obstruction marking or lighting of any kind.

Question No. 6

Does ESPN have an Emergency Response Plan that includes safety protocols associated with the EGD? Does ESPN have a Spill Prevention Control and Countermeasure Plan associated with the Generator Plant Buildings and/or the EGD?

Response

Yes. In accordance with the United State Environmental Protection Agency (USEPA) Title 40 Code of Federal Regulations Part 112, ESPN has developed and maintains, on-premises, a Spill Prevention, Control, and Countermeasure Plan (SPCCP) for all buildings and uses at the ESPN campus. This plan is updated every five (5) years in accordance with USEPA requirements and will be updated again in 2024. A copy of the SPCCP and excerpts from ESPN's emergency response plan as it relates to the Generator Plant Buildings on campus are attached.

Question No. 7

Did ESPN employ the noise mitigation measures recommended in the Noise Evaluation Report behind Tab 6? If so, which mitigation measures were selected?

Response

Installation of an acoustically rated door, as recommended in the Cavanaugh Tocci Acoustic Evaluation report, is the responsibility of NRG, not ESPN. The installation of the new acoustically rated door has not yet been completed but is a part of NRG's contractor's scope of work and will be completed shortly.

Question No. 8

What is the operational service life of the EGD? How would the EGD be decommissioned at the end of the operational service life?

Response

The EDGs have an operational life of about 30 years. If, after 30 years of operation, decommissioning of the EGDs is necessary, NRG would follow the manufacturer's decommissioning protocols which include, but are not necessarily limited to: 1) disconnecting the EGD from electrical interconnections, circuit breakers, transformers and fuel sources; 2) removing electrical wiring, exhaust and muffler assemblies; 3) disconnecting and removing data center equipment; and 4) removing EGDs from the generator plant buildings and transporting the units off of the Property.

Question No. 9

What type of maintenance is required to operate the EGD? How often or at what time intervals is maintenance performed? Would routine maintenance be scheduled so that only one EGD is off-line at a time?

Response

Maintenance is performed on run hour and yearly intervals per the manufacturer's specifications. The EGD run hours do not exceed 1750 hours annually and are dispatched during

times of grid emergency. Routine maintenance is conducted on the EGDs when the units are off-line.

Question No. 10

What is the distance and direction of the closest residential property line from each Generator Plant Building?

Response

The nearest residential property line is located approximately 115 feet to the east of Generator Plant Building 1B and 465 feet to the southeast of Generator Plant Building 2. It is important to note that the property immediately east of Generator Plant Building 2 is used and zoned for industrial purposes.

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
ESPN, INC.
ESPN PLAZA AND 383 MAIN STREET
BRISTOL, CONNECTICUT 06010

Prepared for:

ESPN, Inc.
ESPN Plaza
Bristol, CT 06010

Prepared by:

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October 22, 2019

GeoInsight Project 5354

SPCC RULE CROSS-REFERENCE

This cross-reference table lists each requirement in the Final SPCC Rule, provides a description of the requirement, and the location (page number) of the provision in this SPCC Plan.

Final SPCC Rule	Description of Section	Page
§ 112.1	Applicability, definitions, and general requirements.	1
§ 112.3	Requirements to prepare and implement a Spill Prevention, Control, and Countermeasure Plan by owners/operators.	1
§ 112.5	Amendments of a Spill Prevention, Control, and Countermeasure Plan.	3
§ 112.7(a)	General requirements.	1
§ 112.7(a)(1)	Cross reference table and facilities conformance with the requirements.	i
§ 112.7(a)(2)	Deviations from the requirements.	NA
§ 112.7(a)(3)	Physical layout of the facility.	4, Fig. 4, 5, 6
§ 112.7(a)(3)(i)	Type of oil in each container and storage capacity.	7
§ 112.7(a)(3)(ii)	Discharge prevention measures.	16
§ 112.7(a)(3)(iii)	Discharge or drainage controls and procedures for control.	11
§ 112.7(a)(3)(iv)	Countermeasures for discharge, discovery, response, clean-up.	28
§ 112.7(a)(3)(v)	Methods of disposal of recovered materials.	32
§ 112.7(a)(3)(vi)	Contact list and phone numbers.	App. G
§ 112.7(a)(4)	Information and procedures to enable personnel to report a discharge.	34
§ 112.7(a)(5)	Describe procedures used when a discharge occurs.	28
§ 112.7(b)	Prediction of direction, rate, and total quantity of release that could be discharged.	Table 1
§ 112.7(c)	Secondary containment.	16
§ 112.7(d)	Explanation of why secondary containment not practicable/Oil spill plan and written commitment.	NA
§ 112.7(e)	Inspections, tests, and records.	24
§ 112.7(f)	Employee training and discharge prevention procedures.	22
§ 112.7(g)	Security (excluding oil production facilities).	18
§ 112.7(h)	Loading/unloading (excluding offshore facilities).	17
§ 112.7(i)	Brittle fracture evaluation requirements (field constructed tanks).	NA
§ 112.7(j)	Discussion of conformance with the requirements listed in more stringent guidelines (including state requirements).	NA
§ 112.8(a); § 112.12(a)	General and specific requirements.	1
§ 112.8(b); § 112.12(b)	Facility drainage.	11
§ 112.8(c); § 112.12(c)	Bulk storage containers.	7
§ 112.8(d); § 112.12(d)	Facility transfer operations, pumping, and facility process.	14
§ 112.9	Requirements for onshore production facilities.	NA
§ 112.10; § 112.11	Requirements for onshore or offshore oil drilling, production, or workover facilities.	NA

FACILITY IDENTIFICATION

Type of Facility: Cable Television Network

Name and Address of Owner and Location of Plan:
ESPN, INC.
ESPN PLAZA (MAIN CAMPUS),
205 ENTERPRISE DRIVE (ESPN DAYCARE), AND
383 MAIN STREET (NORTH CAMPUS)
BRISTOL, CONNECTICUT 06010

Designated Person Responsible for Spill Prevention (SPCC Coordinator):

Name: Dan Pivin
Title: Team Leader/Incident Commander

Secondary Person Responsible for SPCC Coordination:

Name: Gerard Arrotti
Title: Alternate Incident Commander

Emergency Contact:

Name: Global Security and Safety Department
Phone: (860) 766-2486 (24 hour)

Oil Spill History:

There have been no spills at the campus in the past five years.

SUMMARY OF REVISIONS

Revision Date	Revision to SPCC Plan	Page
January 2015	SPCC Plan 5-Year Review and Update	All
October 2019	SPCC Plan 5-Year Review and Update	All
	Added the Bright Horizons Daycare facility and associated qualifying oil storage devices	Throughout Plan
	Added a new emergency generator to be located at the North Campus	Throughout Plan
	Updated the Spill Response Policy	Throughout Plan

MANAGEMENT APPROVAL

I have the authority to implement the Spill Prevention, Control, and Countermeasure (SPCC) Plan; certify that we have the necessary personnel and equipment resources, owned or operated by the Facility, to respond to a discharge within appropriate response times;.

Signature: _____ Date: 11/11/19

Michael Heimbach
(Printed)

Title: VP Global Security & Facilities Operations

ENGINEER CERTIFICATION

I hereby certify that I have examined the Facility, either first hand or through my authorized representative, and being familiar with the provisions of 40 CFR Part 112, as amended, attest that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of 40 CFR Part 112; procedures for required inspections and training have been established; and the plan is adequate for the Facility. This certification is void unless this SPCC Plan has been endorsed and implemented by the management of the named facility.

Certification of this SPCC Plan by a registered Professional Engineer will not in any manner relieve ESPN, Inc. of its responsibility to fully implement and abide by the SPCC Plan. This SPCC Plan was written under the assumption that existing site controls are maintained and that proper operating practices will be implemented to perform and function in accordance with their designated purposes regarding the intent of this SPCC Plan.

Date: 11/13/2019

Signature, Registered Professional Engineer

Suzanne L. Pisano
Registered Professional Engineer

Registration No. 18801 State: Connecticut

CERTIFICATION OF THE APPLICABILITY OF SUBSTANTIAL HARM CRITERIA CHECKLIST

Facility Name: ESPN, Inc.
Facility Address: ESPN Plaza, Bristol, Connecticut,
205 Enterprise Drive, Bristol, Connecticut &
383 Middle Street, Bristol, Connecticut

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 aboveground 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 (as calculated using the formula in Attachment C iii, Appendix C, 40 CFR Part 112 or a compatible formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For a further description of fish and wildlife sensitive environments, see Appendix I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Environments" (Section 10, Appendix E, 40 CFR Part 112 for availability) and the applicable Area Contingency Plan.

   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 (as calculated using the appropriate formula in Attachment C iii, Appendix C, 40 CFR Part 112 or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

   Yes: _____ No: __X__

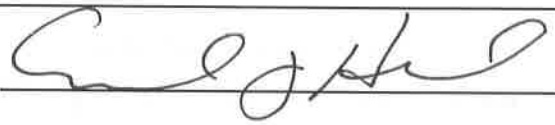
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than 10,000 gallons in the last 5 years?

   Yes: _____ No: __X__

SUBSTANTIAL HARM 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 upon my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Name: Michael Heimbach

Signature: 

Title: VP Global Security & Facilities Operations

Date: 12/11/19

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SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
ESPN, INC.
ESPN PLAZA, 205 ENTERPRISE DRIVE & 383 MIDDLE STREET
BRISTOL, CONNECTICUT 06010

1.0 INTRODUCTION

The United States Environmental Protection Agency (USEPA) Regulation Title 40 Code of Federal Regulations (CFR) Part 112 (40 CFR Part 112) requires that a Spill Prevention, Control, and Countermeasure (SPCC) Plan be prepared for a non-transportation related facility that could reasonably be expected to discharge oil into or upon a navigable body of water of the United States or adjoining shorelines and has one or more of the following:

- a total capacity of 1,320 gallons or greater within multiple aboveground storage tank(s) (ASTs); and/or
- a total capacity of 42,000 gallons or greater within underground storage tank(s) (USTs).

This SPCC Plan was prepared for ESPN, Inc., with locations at ESPN Plaza, 205 Enterprise Drive, and 383 Middle Street in Bristol, Connecticut (the Facility). The Facility is non-transportation related, stores more than 1,320 gallons of oil in ASTs, and there is a reasonable expectation that a spill could reach on-site storm drains.

A Facility Response Plan (FRP) is an oil pollution prevention plan that is combined with the SPCC Plan for facilities that "could cause substantial harm to the environment." As certified by the SPCC Coordinator (Page vi of this SPCC Plan), the Facility does not exceed the criteria requiring an FRP.

The intent of a SPCC Plan is to establish the procedures and equipment required to prevent discharge of petroleum products in quantities that violate applicable water quality standards, cause a sheen upon or discoloration of the surface of navigable waters or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. The SPCC Plan also establishes the activities required to mitigate

such discharges should they occur. Hazardous material spills, with the exception of waste oil, are not covered under this SPCC Plan.

This SPCC Plan was prepared for the Facility in general accordance with 40 CFR Part 112. A copy of the current 40 CFR Part 112 regulation is presented in Appendix A. A complete copy of this SPCC Plan shall be maintained in the Facilities office. This SPCC Plan will be made available to the USEPA Regional Administrator and his/her agents, upon request, for on-site review during normal working hours.

Facility personnel with responsibilities related to the storage and management of oil shall become familiar with the contents of this SPCC Plan. The SPCC Coordinator shall be responsible for implementation of emergency spill response activities. In addition, a second full-time employee shall be trained to assume the SPCC Coordinator's responsibilities in the Coordinator's absence.

2.0 PLAN REVIEW AND RECORD OF AMENDMENTS

This SPCC Plan must be reviewed and certified by a Licensed Professional Engineer at least once every 5 years and must be amended within 6 months if such review indicates that alternative control and prevention technologies or management techniques will significantly reduce the likelihood of a spill or release of oil from the Facility. In addition, this SPCC Plan shall be reviewed and/or amended, whenever:

- there is a significant change in the design, construction, operations, or maintenance of the Facility that materially affects the Facility's potential for the discharge of oil;
- the responsible persons or coordinators change; or
- the emergency equipment changes.

This SPCC Plan must be re-certified whenever there is a significant change in Facility design, construction, operation, or maintenance that affects the Facility's potential for the discharge of oil to navigable waters.

3.0 FACILITY INFORMATION

3.1 FACILITY LOCATION AND DETAILS

The ESPN main campus is located at ESPN Plaza in Bristol, Connecticut. There are eighteen (18) buildings on the 116-acre main campus. The campus is bounded to the north by Ronzo Road and commercial properties, to the west by Middle Street (Route 229), to the south by a Connecticut Light and Power (CL&P) easement and Westwood Drive, and to the east by a CL&P easement and residential properties.

The ESPN North campus is located at 383 Middle Street in Bristol, Connecticut. There are two (2) main buildings and two (2) outbuildings at the 47.5-acre North campus. The north campus is located approximately one mile north of the main ESPN campus on Middle Street. The north campus is bounded to the north by Business Park Road, to the west by Middle Street (Route 229), to the south by Redstone Hill Road, and to the east by Business Park Road and other vacant land.

Located at 205 Enterprise Drive in Bristol, Connecticut, is the Bright Horizons Early Education & Preschool (Bright Horizons Campus), which provides daycare services to ESPN employees. The 6.89-acre site has a preschool with four (4) buildings that are interconnected, which house learning centers, a gymnasium, a library, and playground equipment. The Bright Horizons Campus is located approximately 1/3 of a mile west of the main ESPN campus. The preschool campus is bounded on the north by wooded areas and commercial properties, on the east by a daycare and learning center, to the south by Enterprise Drive, and to the west by Enterprise Drive and commercial and industrial properties.

Site Locus Plans are presented as Figures 1 (ESPN main campus), 2 (North campus), and 3 (Bright Horizons campus). Figures 4 (Main Campus), 5 (North Campus), and 6 (Bright Horizons Campus) depict the locations of qualifying oil storage devices.

ESPN also operates a facility at 545 Middle Street, identified as the ESPN Distribution Service Center facility. The facility is used for mail processing and equipment storage with a small number of employees assigned to the facility. An emergency generator is located at this facility with an aboveground diesel fuel storage capacity of 400 gallons. The total oil volume at the facility is less than 1,320 gallons and therefore the facility was not included in this SPCC plan.

3.2 FACILITY OPERATIONS AND DESCRIPTION OF OIL STORAGE

Main Campus

ESPN is a cable television network. The main campus consists of 18 permanent buildings and numerous satellite dishes. The permanent buildings house ESPN's satellite broadcast, administrative, computer, library, cafeteria, generators, and maintenance centers. Permanent buildings are heated by natural gas-fired boilers.

The main campus is equipped with four double-walled 1,000-gallon aboveground day tanks, two double-walled 10,000-gallon aboveground storage tanks (ASTs), and two double-walled 20,000-gallon ASTs and associated piping. These ASTs provide diesel fuel to the campus' emergency generator plants. The generators provide electricity to the campus in the event of a power failure or an ISO New England declared emergency. A separate emergency generator with an integrated 1,000-gallon AST supplies emergency power to Building 16.

Oil-filled operational equipment on the ESPN campus include hydraulic fluid reservoirs located inside elevator rooms within Buildings 1, 2, 3, 4, 5, 11, 12, 13, Digital Center 1 (Bldg. 7), Digital Center 2 (Bldg. 8), and the Cafeteria (Bldg. 14). In addition, dielectric fluid is stored in transformers owned by ESPN and located outside Buildings 5, 6, 11,12, Generator Plant 2, and Generator Plant 1B. A transformer located east of Building 2 is a dry type transformer and has no dielectric fluid. Two hydraulic trash compactors are located outside of Buildings 2, 4, 7, 11, 12, 13, and 14. The Campus Site Plan (Figure 3) provides the locations of oil storage structures.

Per 40 CFR 112.1(d)(5), only containers or oil-filled with a capacity of 55 gallons are greater meet the SPCC definition of qualifying oil storage devices and must be included in the SPCC plan. Therefore, only containers of 55 gallons or greater are listed in Table 1, Summary of Storage Tanks and Containers.

North Campus (383 Middle Street)

The North Campus consists of two permanent buildings. The permanent buildings house computer, media storage, cafeteria, and maintenance centers. Permanent buildings are heated by natural gas-fired boilers.

The North Campus is equipped with four diesel-powered emergency backup generators. The generators provide electricity to the campus in the event of a power failure or an ISO New England declared emergency. Fuel storage tanks are integrated as part of the generator equipment and are double wall steel AST's with capacities of 2,500 gallons, 2,000 gallons, 1,600 gallons, and 400 gallons.

Oil-filled operational equipment at the ESPN North Campus include one transformer located north of the main building, four hydraulic trash compactors located outside of the building, and one hydraulic fluid tank associated with the building elevator.

ESPN will be installing a fifth emergency generator at the North Campus, adjacent to the two northern generators by the end of 2019. This generator will utilize an integrated 2,500-gallon double-walled AST belly tank.

The North Campus Site Plan (Figure 5) provides the locations of qualifying oil storage devices.

Bright Horizons Campus (205 Enterprise Drive)

The Bright Horizons Campus consists of four permanent interconnected buildings used for the day to day activities associated with a learning center. The building is heated with

natural gas.

The Bright Horizons Campus is equipped with one diesel-powered emergency backup generator. The generator provides electricity to the campus in the event of a power failure or an ISO New England declared emergency. The fuel storage tank is integrated as part of the generator equipment and is a double-walled steel AST with a capacity of 2,260 gallons. The Bright Horizons Campus Site Plan (Figure 6) provides the locations of qualifying oil storage devices.

3.2.1 Bulk Storage Containers

Bulk storage containers include ASTs and containers (i.e., drums, carboys, etc.) that are used to store oil and are not classified as oil-filled equipment (see Section 3.2.2). The bulk storage containers that must be provided with secondary containment (or environmental equivalent) and tested/inspected in accordance with industry standards. The qualifying bulk oil storage containers at the Facility include:

Main Campus

- ASTs Associated with Emergency Generators – Generator Plant 1B
  There are two 20,000-gallon double-walled steel diesel fuel ASTs located outdoors to the east of the Generator 1B plant on a concrete pad. The fuel tanks, associated with double-wall fuel piping, and the floor area around the generators are continuously monitored by an electronic monitoring system.

- Day Tanks Associated with Emergency Generators – Generator Plant 1B
  There are two 1,000-gallon double-walled steel diesel fuel AST located inside the Generator Plant 1B building. The ASTs are day tanks associated with the Facility's emergency generators. The day tanks, associated double-wall fuel piping, and the floor area around the tanks are continuously monitored by an electronic monitoring system.

- ASTs Associated with Emergency Generators – Generator Plant 2
  There are two 10,000-gallon double-walled steel diesel fuel ASTs located outdoors to the east of the Generator 2 plant on a concrete pad. The fuel tanks, associated with

double-wall fuel piping, and the floor area around the generators are continuously monitored by an electronic monitoring system.

- Day Tanks Associated with Emergency Generators – Generator Plant 2
  There are two 1,000-gallon double-walled steel diesel fuel AST located inside the Generator Plant 2 building. The ASTs are day tanks associated with the Facility's emergency generators. The day tanks, associated double-wall fuel piping, and the floor area around the tanks are continuously monitored by an electronic monitoring system.

- AST Associated with Emergency Generators – Building 16
  There is a 1,000-gallon double-walled steel diesel fuel storage tank associated with the Building 16 generator. The tank is integrated into the generator unit as a belly tank and located just outside of the south entrance.

North Campus (383 Main Street)

- AST Associated with Emergency Generator – Generator #1
  There is a 2,000-gallon double-walled steel diesel fuel storage tank associated with Generator #1. The tank is integrated into the generator unit as a belly tank and located just outside of the north entrance.

- AST Associated with Emergency Generator – Generator #2
  There is a 2,500-gallon double-walled steel diesel fuel storage tank associated with Generator #2. The tank is integrated into the generator unit as a belly tank and located just outside of the north entrance.

- AST Associated with Emergency Generator – Generator #3
  There is a 1,600-gallon double-walled steel diesel fuel storage tank associated with Generator #3. The tank is integrated into the generator unit as a belly tank and located just outside of the south entrance.

- AST Associated with Emergency Generator – Generator #4 (to be installed late 2019)
  There will be a 2,500-gallon double-walled steel diesel fuel storage tank associated with Generator #4. The tank will be integrated into the generator unit as a belly tank and located just outside of the north entrance.

- ASTs Associated with Emergency Generators – Rear of Building
  There is a 400-gallon double-walled steel diesel fuel storage tank associated with the generator located east of the building. The tank is integrated into the generator unit as a belly tank.

- AST Associated with Emergency Generator – West Side of Building
  There is a 2,260-gallon double-walled steel diesel fuel storage tank associated with the Emergency Generator. The tank is integrated into the generator unit as a belly tank and is located on the west side of the building.

Refer to Section 3.5 for additional information on the inventory of bulk storage containers, including spill scenarios and containment and overfill prevention measures.

3.2.2 Oil-Filled Equipment

Oil-filled equipment includes devices in which the oil is present solely to support the function of the apparatus or device. The oil-filled equipment container is not considered a bulk storage container, as outlined in Section 3.2.1. In lieu of providing secondary containment, the Facility may list the equipment in the SPCC Plan and provide a written commitment of manpower, equipment, and materials to quickly control and remove discharged oil.

Hydraulic fluid reservoirs are located inside elevator rooms within buildings 1, 2, 3, 4, 5, 11, 12, 13, Digital Center 1 (Bldg. 7), Digital Center 2 (Bldg. 8), Main Campus Cafeteria (Bldg. 14), and the North Campus main building. The reservoirs range in size from 100 to 215 gallons. Since fluid is not typically transferred in or out of the system, overflow from product transfer is unlikely. Hydraulic oil reservoirs will be inspected on a monthly basis using the checklist found in Appendix E. In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the building. With the exception of the elevator room located in Building 3, there are no floor drains or any other means of transport out of the building in the vicinity of the elevator rooms. The elevator room in Building 3 is located inside of the building's boiler room. A floor drain is located inside the boiler room. The floor drain allows water to flow to the sanitary sewer system in case of boiler malfunction. The Building 3 elevator room contains a 127-gallon hydraulic fluid reservoir. The elevator room is equipped with a berm to prevent a release of hydraulic fluid from exiting the elevator

room. If the hydraulic oil reservoir were to rupture and the berm breached, the fluid could make its way to the floor drain.

Additionally, dielectric fluid is stored in transformers owned by ESPN located outside buildings 5, 6, 11, 12, 13, Generator Plants 1B and 2, and North Campus main building. Fluid volumes associated with these units range from 230 to 550 gallons. In the event of a leak, dielectric fluid would flow from the transformer to areas of lower topography. Figures 3 and 5 depict spill flow directions.

The transformers are located in gravel, grass, or mulched areas, where leaks may seep into the soil, rather than flow to catch basins. If flow toward a catch basin were to occur, spill response equipment is located in the vicinity of each transformer. Magnetic catch basin covers would be placed over catch basins in the area and sorbents would be used to absorb any spill. In the case of a larger release, a contractor would be called to clean up any spills that may occur.

3.2.3 Non-Qualifying Containers

Non-qualifying containers are oil-storage containers that have a capacity of less than 55 gallons, but still have a potential for a release to the environment. The non-qualifying containers at the Facility include 5-gallon containers of vegetable oil. The cafeteria floor drains are equipped with grease traps, which would capture any spilled vegetable oil. Vegetable oils are typically handled in 5-gallon containers by cafeteria personnel and are not listed in Table 1 because of their de minimis container size.

Hydraulic fluid is stored in trash compactor hydraulic systems located outside of Main Campus Buildings 2, 4, 7, 11, 12, 13, 14. Hydraulic trash compactors are also located on the North Campus. Fluid volumes associated with this equipment vary but is typically 30 gallons per compactor. The compactors are located in paved areas typically outside of loading docks. In the event of a leak, hydraulic fluid would flow or be sprayed from the system onto the surrounding area and could flow towards a catch basin. Sorbents could be

used to adsorb small spills; a contractor would be called to clean up larger releases or releases which reach catch basins.

According to 40 CFR 112, oil stored in non-qualifying containers does not get counted towards the Facility-wide oil storage volume. Non qualifying containers do not have to be provided with secondary containment and do not have to be tested/inspected.

3.3 SURFACE DRAINAGE

Topography at the main campus is generally flat over most of the campus with the exception of the east side of the property. On the eastern most portion of the property, where the generator buildings are located, the property is elevated and slopes down from east to west. In the event of a spill, the spill would flow generally to the west. Impervious surface areas, roofs, and parking lots are provided with storm drains.

Topography at the North Campus is generally flat with the majority of site surface drainage flowing to the northeast into a wooded area with lower elevation. A grassy area south of the main building adjacent to the access road is topographically depressed and serves to collect stormwater during rain events. Impervious surface areas, roofs, and parking lots are provided with storm drains.

Topography at the Bright Horizons Campus is generally flat with the majority of the site's surface drainage flowing to the southwest onto the curbed parking areas, where it is collected by storm drains located throughout the site. The roofs of the buildings are also provided with storm drains.

3.4 STORMWATER MANAGEMENT

On the main campus, there are several infiltration basins which collect stormwater during rain events, capture sediment, and allow for infiltration. The basin locations are shown on

Figure 4. Stormwater from the vicinity of Generator Plant 1B and Generator Plant 2 flows to infiltration basins. Basin outlets are controlled by overflow structures. The basins would serve to capture oil in the event of a release from either generator plant.

The North Campus property in general drains to the northeast where it flows into an infiltration pond located in a wooded area on the northeast corner of the property. Site drainage from parking and roadways on the north side of the building flows south via a drainage channel on the east side of the parking area which then eventually flows northeast via pavement and a second drainage channel and piping to a wooded area and infiltration basin. The infiltration basin is shown on Figure 5.

Additional north campus infiltration basins (not shown on the facility plan) are located on the southern end of the property adjacent to the facility access driveway. These basins serve parking areas and roadways on the south side of the property as well as roof drainage. The grassy, depressed area surrounding the infiltration basins would also serve to collect stormwater during larger rain events and allow for infiltration. In the event of a release from the generator on the south side of the building, oil flow would be to the retention basins adjacent to the access road. Releases from generators on the north or east side of the building would flow to the retention basin located in the wooded area in the northeast corner of the property.

The Bright Horizons Campus has storm drains located throughout the site. Site drainage from the parking area flows in a southwest direction to the closest storm drain (shown on Figure 6). Site drainage in the playground area on the north side of the site infiltrates into the ground. In the event of a release from the emergency generator located on the west side of the building, oil would flow towards the stormwater drain located directly west of the Generator.

3.5 OIL SPREAD DISTANCE CALCULATION

An analysis of the potential spill spread (i.e., spill radius) and discharge velocity/flow rate from the bulk storage containers at the Facility is presented in Appendix B. The results of these calculations are presented in Table 1. As required by 40 CFR Part 112, the spill spread and flow rate evaluations were completed assuming that the Facility does not have secondary containment.

CONTAINER AND OIL-FILLED EQUIPMENT INVENTORY, SPILL SCENARIOS, AND CONTAINMENT MEASURES

NAME (Location)	Storage Volume (gallons)	Maximum Quantity Potentially Spilled (gallons)	Product	Surface Type (oil thickness at zero flow)	Height of Tank (m)	Flow Rate (assuming friction) (gal/min)	Spill Radius (ft)	Spill Scenario	Containment Measures
MAIN CAMPUS									
Emergency Generator Diesel Tanks (Gen 1B)	40,000	20,000	Diesel	Impervious (0.02 ft zero-flow)	3.05	342	286	In the absence of secondary containment, a release from the tank would flow onto the crushed stone surrounding the concrete slab and into the paved area beyond. The release could reach the nearest storm drain, which is approximately 5 feet away. Storm drains flow into local storm water infiltration basins which drain into a culverted stream.	The tanks and piping are provided with secondary containment and are inspected monthly. TLS-350 Plus Veeder-Root fuel monitoring system located inside each of the Generator Plant Buildings. The Veeder-Root system is designed to provide continuous tank inventory monitoring, 0.1 gallons per hour (gph) in-tank leak detection without tank shutdown, electronic line leak detection, interstitial and piping sump leak sensing for ASTs. With this system, ESPN has both a high liquid level visual and audible alarm programmed to relay information to Security. The covers to the fill pipes are locked when not in use.
Emergency Generator Diesel Day Tank (Gen 1B)	2,000	1,000	Diesel	Impervious (0.02 ft zero-flow)	1.22	216	64	In the absence of secondary containment, a release from the tank would flow onto the concrete floor in the containment room.	The tanks and piping are provided with secondary containment and are inspected monthly. The tanks are equipped with continuous release detection monitoring sensors connected to visual and audible alarms. The day tanks are also equipped with a high-level alarm in case of an overfill occurrence.
Emergency Generator Diesel Tanks (Gen 2)	20,000	10,000	Diesel	Impervious (0.02 ft zero-flow)	2.44	306	202	In the absence of secondary containment, a release from the tank would flow onto the crushed stone surrounding the concrete slab and into the paved area beyond. The release could reach the nearest storm drain, which is approximately 10 feet away. Storm drains flow into local storm water retention basins which drain into a culverted stream.	The tanks and piping are provided with secondary containment and are inspected monthly. TLS-350 Plus Veeder-Root fuel monitoring system located inside each of the Generator Plant Buildings. The Veeder-Root system is designed to provide continuous tank inventory monitoring, 0.1 gallons per hour (gph) in-tank leak detection without tank shutdown, electronic line leak detection, interstitial and piping sump leak sensing for the ASTs. With this system, ESPN has both a high liquid level visual and audible alarm programmed to relay information to Building Two's security booths. The covers to the fill pipes are locked when not in use.
Emergency Generator Diesel Day Tank (Gen 2)	2,000	1,000	Diesel	Impervious (0.02 ft zero-flow)	1.22	216	64	In the absence of secondary containment, a release from the tank would flow onto the concrete floor in the containment room.	The tanks and piping are provided with secondary containment and are inspected monthly. The tanks are equipped with continuous release detection monitoring sensors connected to visual and audible alarms. The day tanks are also equipped with a high-level alarm in case of an overfill occurrence.

CONTAINER AND OIL-FILLED EQUIPMENT INVENTORY, SPILL SCENARIOS, AND CONTAINMENT MEASURES

NAME (Location)	Storage Volume (gallons)	Maximum Quantity Potentially Spilled (gallons)	Product	Surface Type (oil thickness at zero flow)	Height of Tank (m)	Flow Rate (assuming friction) (gal/min)	Spill Radius (ft)	Spill Scenario	Containment Measures
Emergency Generator Diesel Tank (Building #16)	1,000	1,000	Diesel	Impervious (0.02 ft zero-flow)	0.61	153	64	In the absence of secondary containment, a release from the tank would flow onto the grassy area surrounding the concrete slab and onto the paved area beyond. The release could reach the nearest storm drain, which is approximately 90 feet away. Storm drains flow into local storm water infiltration basins.	The tank is provided with secondary containment and is inspected monthly. The tank is provided with leak detection as well as level monitoring. An indicator panel is located inside of each generator enclosure. The panel indicates a tank leak (fuel in secondary containment) as well as tank low level and tank high level, 90% full. The tank is provided with normal and emergency venting in accordance with NFPA 30.
125 gal. AST Hydraulic Fluid	125	125	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Building 1
102 gal. AST Hydraulic Fluid	102	102	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Building 1
100 gal. AST Hydraulic Fluid	100	100	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Building 2
(2) 183 gal. AST Hydraulic Fluid	183	183	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Buildings 2 & 5
127 gal. AST Hydraulic Fluid	127	127	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside building 3. Berm inside Elevator Room protects spill from entering floor drain located just outside of the Elevator Room.
(2) 140 gal. AST Hydraulic Fluid	140	140	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Building 4
(2) 215 gal. AST Hydraulic Fluid	215	215	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Digital Center
(2) 108 gal. AST Hydraulic Fluid	108	108	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Cafeteria
(4) 149 gal. AST Hydraulic Fluid	149	149	Hydraulic Fluid	---	---	---	---	In the event of a tank rupture or leak of a hydraulic reservoir, spills would be contained within the small room or larger building.	Inside Buildings 11 & 12
AST Dielectric Fluid	400	400	Dielectric Fluid	---	---	---	---	In the event of a release the spill would move in a northwestern direction. The transformers are located in gravel or mulched areas; thus, leaks may seep into the soil, rather than flow to catch basins.	Bollard, daily security visits, transformer is outside, north of Building A. CB is within 100 feet.
AST Dielectric Fluid	550	550	Dielectric Fluid	---	---	---	---	In the event of a release the spill would move in a northwestern direction. The transformers are located in gravel or mulched areas; thus, leaks may seep into the soil, rather than flow to catch basins.	Raised and stored on gravel surface, daily security visits, transformer is outside, north of Building B. CB is within 30 feet.
(3) AST Dielectric Fluid	(2) 304 (1) 275	(2) 304 (1) 275	Dielectric Fluid	---	---	---	---	In the event of a release the spill would move in a southwest direction. The transformers are located in gravel or mulched areas; thus, leaks may seep into the soil, rather than flow to catch basins.	Raised and stored on gravel or mulched surface, daily security visits, transformers are outside, west of Building 5. CB is 15 feet away.
AST Dielectric Fluid	230	230	Dielectric Fluid	---	---	---	---	In the event of a release the spill would move in a western direction. The transformers are located in gravel or mulched areas; thus, leaks may seep into the soil, rather than flow to catch basins.	Bollard, daily security visits, transformer is outside west of Building 6.

CONTAINER AND OIL-FILLED EQUIPMENT INVENTORY, SPILL SCENARIOS, AND CONTAINMENT MEASURES

NAME (Location)	Storage Volume (gallons)	Maximum Quantity Potentially Spilled (gallons)	Product	Surface Type (oil thickness at zero flow)	Height of Tank (m)	Flow Rate (assuming friction) (gal/min)	Spill Radius (ft)	Spill Scenario	Containment Measures
NORTH CAMPUS									
Emergency Generator Diesel Tank (North Campus Generator #1)	2,000	2,000	Diesel	Impervious (0.02 ft zero-flow)	0.91	186	101	In the absence of secondary containment, a release from the tank would flow onto the grassy area surrounding the concrete slab and onto the paved area beyond. The release could reach the nearest storm drain, which is approximately 140 feet away. Storm drains flow into local storm water infiltration basins.	The tank is provided with secondary containment and is inspected monthly. The tank is provided with leak detection as well as level monitoring. An indicator panel is located inside of each generator enclosure. The panel indicates a tank leak (fuel in secondary containment) as well as tank low level and tank high level, 90% full. The tank is provided with normal and emergency venting in accordance with NFPA 30.
Emergency Generator Diesel Day Tank (North Campus Generator #2)	2,500	2,500	Diesel	Impervious (0.02 ft zero-flow)	0.76	171	90	In the absence of secondary containment, a release from the tank would flow onto the grassy area surrounding the concrete slab and onto the paved area beyond. The release could reach the nearest storm drain, which is approximately 140 feet away. Storm drains flow into local storm water infiltration basins.	The tank is provided with secondary containment and is inspected monthly. The tank is provided with leak detection as well as level monitoring. An indicator panel is located inside of each generator enclosure. The panel indicates a tank leak (fuel in secondary containment) as well as tank low level and tank high level, 90% full. The tank is provided with normal and emergency venting in accordance with NFPA 30.
Emergency Generator Diesel Tank (North Campus Generator #3)	1,600	1,600	Diesel	Impervious (0.02 ft zero-flow)	0.91	186	81	In the absence of secondary containment, a release from the tank would flow onto the crushed stone surrounding the concrete slab and onto the paved area beyond. The release could reach the nearest storm drain, which is approximately 100 feet away. Storm drains flow into local storm water infiltration basins.	The tank is provided with secondary containment and is inspected monthly. The tank is provided with leak detection as well as level monitoring. An indicator panel is located inside of each generator enclosure. The panel indicates a tank leak (fuel in secondary containment) as well as tank low level and tank high level, 90% full. The tank is provided with normal and emergency venting in accordance with NFPA 30.
Emergency Generator Diesel Tank (North Campus Generator #4)	2,500	2,500	Diesel	Impervious (0.02 ft zero-flow)	0.76	171	90	In the absence of secondary containment, a release from the tank would flow onto the crushed stone surrounding the concrete slab and onto the paved area beyond. The release could reach the nearest storm drain, which is approximately 100 feet away. Storm drains flow into local storm water infiltration basins.	The tank will be provided with secondary containment and will be inspected monthly. The tank will be provided with leak detection as well as level monitoring. An indicator panel will be located inside of the generator enclosure. The panel will indicate a tank leak (fuel in secondary containment) as well as tank low level and tank high level, 90% full. The tank will be provided with normal and emergency venting in accordance with NFPA 30.
Emergency Generator Diesel Tank (North Campus Rear Building)	400 gallons	400 gallons	Diesel	Impervious (0.02 ft zero-flow)	0.46	132	29	In the absence of secondary containment, a release from the tank would flow onto the grassy area surrounding the concrete slab and onto the paved area beyond. The release could reach the nearest storm drain, which is approximately 140 feet away. Storm drains flow into local storm water infiltration basins.	The tank is provided with secondary containment and is inspected monthly. The tank is provided with leak detection as well as level monitoring. The tank is provided with normal and emergency venting in accordance with NFPA 30.
BRIGHT HORIZONS CAMPUS									
Emergency Generator Diesel Tank (West side of site)	2,260 gallons	2,260 gallons	Diesel	Impervious (0.02 ft zero-flow)	0.86	182	96	In the absence of secondary containment, a release from the tank would flow onto the paved parking area surrounding the enclosure. The release could reach the nearest storm drain, which is approximately 45 feet away. Storm drains flow into local storm water infiltration basins.	The tank is provided with secondary containment and is inspected monthly. The tank is provided with leak detection as well as level monitoring. The tank is provided with normal and emergency venting in accordance with NFPA 30.

3.6 SPILL CONTAINMENT

See Table 1 for a summary of the spill containment measures used for the oil storage containers at the Facility. Qualifying bulk storage containers are provided with adequate secondary containment (i.e., double-walled tanks).

3.7 POTENTIAL FOR SPILLS

One of the major objectives of this SPCC Plan is to prevent the release of oil. The potential for spills related to storage is low. Tanks and associated pipes are double walled and equipped with spill detection devices. This section describes potential releases that have a reasonable chance of occurring at the Facility.

1. A release of diesel fuel to the Site's storm water drainage system could take place if a fueling hose ruptured during filling; or

2. A release of diesel fuel to the Site's storm water drainage system could take place if a tank was overfilled (e.g., due to operator error).

The Facility will address these two release scenarios by implementing the filling procedures described in Section 3.8 of this SPCC Plan, inspecting the ASTs on a set schedule, and making spill response materials available in the vicinity of the ASTs.

3.8 FUEL TRANSFER POLICY

To minimize the potential for a release of product during fuel transfer, the following procedures will be followed by the Facility. In addition, ESPN has developed a fuel transfer policy for the delivery of fuel to Generator Plant 2 and Generator Plant 1B. A copy of this fuel transfer policy is found in Appendix C.

3.8.1 Supplies

Spill kits are readily available at ESPN and are found in buildings, 1, 4, 12, 13, 14, Generator Plant 1B, Generator Plant 2, North Campus logistics area, and the Bright Horizons boiler

room. In addition, each campus security and maintenance vehicle are provided with a spill kit.

- spill kits vary and may include Magnetic storm drain covers, oil-absorbent material (e.g., Speedi-Dri™ and oleophilic pads), salvage drum, plastic sheeting, and spill containment socks; and
- shovel and broom to facilitate construction of temporary berms and clean-up of possible releases.

3.8.2 Fueling Procedures

The following procedures shall be followed during transfer of product from bulk trucks to stationary storage tanks:

- product loading and unloading procedures will meet minimum requirements and regulations established by 40 CFR 112;
- signs must be posted at the fuel transfer areas that remind drivers to chock wheels, ground/bond their vehicles, shut off engines, check connections for tightness, check that tank valves are shut off prior to disconnecting transfer piping, and not to smoke;
- following transfer, product and product-impacted water collected in drip pans must be transferred to a waste product tank for storage, and drips or other minor spills that are not contained must be cleaned up immediately;
- dispensing hoses (from delivery trucks) must be fitted with breakaway couplings that would allow a safe break of the hose from the dispenser in the event of the vehicle driving away with the nozzle still in the fuel tank;
- if a spill (of any amount) occurs, immediate steps must be taken to contain the spill, obtain help, report the incident to the SPCC Coordinator (see Sections 6.0 and 7.0), and implement appropriate incident response procedures;
- bulk product deliveries to the Facility will be scheduled, directed, and confirmed by Facility personnel and will take place during normal working hours;
- the normal fill level for each tank will be prominently displayed next to the respective tank gauge;
- prior to product receipt, the tank will be gauged to confirm that adequate capacity

is available for the volume of product ordered;

- adherence to the sample "Notice to Tank Truck Drivers" found in Appendix C, which summarizes actions to be followed by tank truck drivers during delivery;

- storm drains in the immediate vicinity of the ASTs will be covered or otherwise protected prior to product transfer;

- an interlocking brake system, physical barriers or warning lights and/or signs will be used to prevent tank truck departure before a complete disconnect from transfer lines has occurred; and

- ESPN personnel are present to supervise deliveries during all transfer operations

3.9 SECURITY

The ESPN main campus and north campus is monitored by security on a 24-hour basis, seven days a week by the Global Security and Safety Department. Visitors to the main campus must check in at security to obtain passes and or escorts prior to proceeding on campus. Global Security operates a fleet of security vehicles and personnel who make regular rounds on both campuses. In addition, all three locations are equipped with monitored security cameras, building door alarms, and equipment alarms. The Facility is adequately illuminated to allow for the discovery of spills and for security reasons.

4.0 EMERGENCY PERSONNEL AND TRAINING

4.1 EMERGENCY PERSONNEL RESPONSIBILITIES

Responsibilities for spill response duties are assigned to individuals; however, responsibilities are designated primarily by position/title/descriptions. If individuals are not available because of vacations, trips, transfers, terminations, etc., the person filling the position automatically assumes the responsibility associated with that position.

The Spill Prevention and Response Team, listed on Appendix G of this SPCC Plan, are the designated personnel accountable for oil spill prevention at the Facility. Additional campus personnel, such as repair/maintenance personnel, may assist the Spill Prevention and Response Team with implementation of spill prevention measures. It should be noted that in the event of a spill, ESPN personnel are taught defensive measures only such as protect people, property, or drains. ESPN personnel would not assist directly with spill clean-up. Spill clean-up, if required, would be performed by the outside service provider, Clean Harbors.

ESPN's training program will provide the Team with techniques to prevent or recognize existing or potential spills, spill containment and response procedures, and the appropriate notification required in the event of a spill. Training includes a combination of on-the-job and classroom training that discusses:

1. the contents of the SPCC Plan;
2. understanding the risk and safety hazards associated with the products stored on-site;
3. training in the operation and maintenance of equipment to prevent the discharge of oil or hazardous substances;
4. familiarization with campus discharge procedure protocols and SOP's;
5. familiarization with applicable pollution control laws, rules, and regulations;

6. familiarization with ESPN's spill response equipment (sorbent materials, etc.) and the use of available containment equipment;

7. general campus fire-fighting equipment operation; and

8. familiarity with hazardous waste pollution control laws, rules, and regulations regarding spill cleanup and proper disposal.

The Spill Prevention and Response Team is instructed to:

1. exercise care in the unloading of all products;

2. never leave a transfer operation unattended;

3. cover catch basins near the diesel ASTs prior to beginning a product transfer;

4. keep a close watch on storage tank levels and product pipelines while conducting unloading operations; and

5. As a general rule, do not wait for problems to occur. Anticipate problems and take precautionary measures to prevent them.

The Team conducts informal spill prevention briefings focusing on known spill events, malfunctioning equipment, and recently developed prevention measures. The team is trained that care and good judgment are the best means of preventing a spill. Training and meeting records are maintained in the Disney Development Connection Learning Management System (LMS). The date of the trainings or meeting sessions, the names of those personnel attending the sessions, a summary list of the topics discussed, and any actions taken will be maintained. A training log to document SPCC training sessions completed at ESPN is included in Appendix D. The Disney Development Connection LMS will be utilized for the tracking of training courses.

In accordance with 40 CFR 112.7(f), oil handling personnel will at a minimum be trained at least annually in the operation and maintenance of equipment to prevent the discharge of oil.

4.1.1 Management

Management and supervisory personnel should review this SPCC Plan annually to ensure that they are familiar with its contents.

4.1.2 SPCC Coordinator

The SPCC Coordinator will receive training on applicable federal and state regulations and Facility policies. The SPCC Coordinator will direct and coordinate the emergency plan or release response activities and will advise management and Facility officers as to the extent of the emergency and possible consequences. The SPCC Coordinator will be familiar with environmental controls and devices (e.g., spill kits) and hazard response firms/teams. The SPCC Coordinator is also responsible for coordinating first aid assistance to injured persons.

The SPCC Coordinator will establish liaison and communications, as necessary, with appropriate agencies and allocate resources necessary to carry out the duties of this SPCC Plan. He or she shall also direct emergency maintenance, utility, and electrical work to prevent injury and minimize damage to property, product, and the environment.

Maintenance personnel are responsible for assisting the SPCC Coordinator and for the safe shutdown of the Facility. After the emergency or release event is under control, the SPCC Coordinator will direct recycling and salvage activities and then restart operations, if appropriate. The SPCC Coordinator will approve information released to the news media, as applicable.

If the SPCC Coordinator is unavailable the Secondary SPCC Coordinator will be contacted. The Secondary SPCC Coordinator shall have equivalent training as the SPCC Coordinator and shall be authorized to contact the emergency contractors and outside agencies.

4.1.3 Maintenance Employees

Individuals are responsible for notifying the SPCC Coordinator of changes in home or office telephone numbers and position so that the call list can be updated. Personnel who handle oil shall implement the oil handling procedures listed in the plan and conduct defensive actions under the direction of the SPCC Coordinator.

4.2 SPILL PREVENTION TRAINING

The Facility personnel described in Section 4.2.1 and 4.2.2 will be trained annually on spill and emergency response procedures, including the requirements of this SPCC Plan. The SPCC Coordinator will ensure that personnel are trained as required.

The initial and annual SPCC training shall include: an introduction to pollution control laws; reporting, stopping, containing, recovering, and disposing spilled materials; and evacuation, fire control, and emergency communications. Training records will be maintained on the Disney Development Connection LMS. Supervisors may conduct training for Facility personnel after the initial training by the SPCC Coordinator (or designee) is completed. Suggestions for improvement or modifications to the SPCC Plan should be directed to the SPCC Coordinator for review and possible inclusion in the next plan revision.

4.2.1 Permanent Personnel

The following training will be required for permanent personnel that have oil-handling responsibilities.

- Facility personnel will participate in annual training that informs them how to perform their duties in a manner that prevents the discharge of harmful quantities of oil. This training will include familiarization with safety data sheets (SDSs) applicable to the job assignment, emergency response procedures, policies, equipment, and systems;

- Facility personnel will be trained to understand how spills may occur, where they may travel, and how to manage potential release scenarios. Personnel will be

made aware of sensitive environments and receptors at or near the Facility;

- Facility personnel will be instructed annually regarding their responsibilities for compliance with the requirements of the spill laws and emergency response regulations applicable to the Facility; and

- this SPCC Plan will be used as the basis for training of permanent employees to facilitate instruction on the use and location of appropriate spill prevention and control measures, locations and use of fire control equipment, and health and safety precautions.

Personnel associated with oil-handling activities will be trained prior to commencing oil-handling activities.

4.2.2 Transient Personnel

Transient personnel that may be involved with oil-handling activities will be advised of applicable spill prevention measures upon entering the Facility. These personnel may include contractors, subcontractors, and hired temporary personnel.

4.2.3 Tank Truck Drivers

Tank truck drivers loading/unloading materials at the Facility shall be made aware of and adhere to this SPCC Plan. A notice to tank truck drivers will be posted near all tanks. A sample notice is included in Appendix C.

5.0 FACILITY INSPECTIONS

5.1 REQUIRED INSPECTIONS AND INSPECTION SCHEDULE

Qualifying bulk storage containers must be inspected to ensure that they comply with the requirements of this SPCC Plan and applicable regulations.

Diesel fuel storage tanks, day tanks, and fuel piping associated with Generator Plants 1B and 2 are continuously monitored.

ESPN performs documented monthly inspections of elevators, transformers, and the hydraulic trash compactor systems.

Tanks must also be tested in accordance with integrity inspection standards established by the Steel Tank Institute (STI) and American Petroleum Institute (API). Inspections and testing help to prevent discharges by verifying the strength and imperviousness of containers and ensuring they are suitable for continued service under current and anticipated operating conditions (e.g., product, temperature, pressure). Testing may also help determine whether corrosion has reached a point where repairs to or replacement of the container is needed, and thus avoid unplanned interruptions in Facility operations.

ESPN utilizes a paperless system called Maximo to document inspections. The required inspections are summarized in Table 2 of this section.

TABLE 2
SUMMARY OF REQUIRED CONTAINER INSPECTIONS

Name (Location)	Monthly Visual Inspection	Annual Visual Inspection	20-year STI External Inspection
Emergency Generator Diesel Tanks (Gen 1B)	X	X	X
Emergency Generator Diesel Day Tanks (Gen 1B)	X	X	
Emergency Generator Diesel Tanks (Gen 2)	X	X	X
Emergency Generator Diesel Day Tanks (Gen 2)	X	X	
Hydraulic ASTS (Elevators and Compactors)	X		
ASTS Dielectric Fluid (Transformers)	X		
Emergency Generator Diesel Tank (North Campus Generator #1)	X	X	
Emergency Generator Diesel Tank (North Campus Generator #2)	X	X	
Emergency Generator Diesel Tank (North Campus Generator #3)	X	X	
Emergency Generator Diesel Tank (North Campus Generator #4)	X	X	
Emergency Generator Diesel Tank (North Campus Rear of Building)	X	X	
Emergency Generator Diesel Tank (Bright Horizons Campus)	X	X	

5.1.1 Monthly Bulk Container and Equipment Inspections

Qualifying bulk storage containers should be properly maintained to prevent oil leaking from bolts, gaskets, rivets, seams, and any other part of the container. The SPCC Coordinator or designated employee shall inspect the Facility monthly for malfunctions, deterioration, operator errors, and discharge that may be causing or may lead to spills of oil.

ESPN Electricians perform monthly visual inspections of elevators and transformers which maximize the chances of identifying problems in time to correct them before a spill occurs. During these monthly inspections, personnel will inspect the integrity of the equipment and note visible oil leaks that may be present. If leaks are identified, they will be noted on the inspection form and immediately reported to the SPCC Coordinator. Leaks should be repaired at once. In some cases, the product in the container may require removal. Inspection forms are included in Appendix E.

5.1.2 Annual SPCC / STI Inspections

Annual inspections are performed for ASTs. These inspections are intended to identify the condition of and changes to each container and require a more thorough check than the monthly inspections. During these inspections, the shell, containment, and foundation of each tank will be reviewed to ensure that they are undamaged, and the inspector will ensure that the leak detection system is functioning properly. Vents, valves, piping, and other auxiliary equipment will also be inspected to ensure that they are functioning properly. An inspection form is included in Appendix E.

5.1.3 STI External Inspections (Every 20 years)

The diesel ASTs associated with the emergency generators qualify as Category 1 tanks in accordance with the requirements of the STI Standard for Inspection of In-Service Shop Fabricated ASTs for Storage of Combustible and Flammable Liquids (SP001-05). STI Category 1 tanks with a capacity of more than 5,000 gallons are subject to formal external

inspections, conducted by an STI-certified inspector. Therefore, the (4) emergency generator storage tanks must undergo an STI-certified external inspection every twenty years. These inspections include a visual evaluation to ensure that the tops, bottoms, and walls of tanks are sufficiently strong and structurally sound.

STI Category 1 tanks with a capacity of less than 5,000 gallons are not subject to formal external inspections conducted by an STI-certified inspector.

5.2 INSPECTION RECORDS

Records of the inspections described in Section 5.1 will include the type of inspection performed, inspector's name and signature, date of inspection, and noted deficiencies. The completed inspections are maintained in the Facility's computer system for a minimum of five years.

6.0 EMERGENCY PROCEDURES/SPILL RESPONSE

6.1 GENERAL

This SPCC Plan is designed to prevent and control spills of oils and fuels. Hazardous material spills, with the exception of waste oil, are not covered under this SPCC Plan.

USEPA regulations define a spill event as the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities. Harmful quantities are defined as a discharge that violates applicable water quality standards or causes a sheen upon, or discoloration of, the surface of the water or the adjoining shorelines. Impacted groundwater that may also have the potential to seep, leach, or flow into navigable water would be included in this definition.

An important facet of an effective response procedure to be implemented during an oil release incident is to keep the oil separated from the water to minimize potential migration and the resulting potential increase in human and environmental exposure. Every effort should be made to prevent spills and emphasize containment at the source.

6.2 DISCOVERY OF A RELEASE

The Facility personnel discovering a release of material from a container, tank, or operating equipment should initiate the following activities immediately.

- **Eliminate sources of ignition.** Until the material is identified to be nonflammable and noncombustible, all potential sources of ignition in the area should be removed. Vehicles should be turned off. If the ignition source is stationary, attempt to move spilled material away from the ignition source. Avoid sparks and movement that might create static electricity.

- **Attempt to stop the release at its source**. Take precautions to minimize potential danger to human health from the release. Simple procedures (e.g., turning valves, plugging leaks, etc.) may be attempted if there is no significant health or safety hazard and there is a reasonable certainty of the origin of the leak. Efforts to control leaks must be under the supervision of the SPCC Coordinator.

- **Initiate spill notification and reporting procedures.** Report the incident immediately to the SPCC Coordinator. If there is an immediate threat to human life (e.g., a fire in progress or fumes overcoming workers), an immediate alarm should be sounded to evacuate the building and the fire department should be called. Request the assistance of the fire department's hazardous materials response team and/or an environmental remediation contractor if an uncontrollable spill has occurred and/or if the spill has migrated beyond the Facility boundaries (see Section 7.0).

6.3 SPILL CONTAINMENT

If material is released outside a containment area, it is critical that the material is accurately identified, and appropriate control measures are taken in the safest possible manner. Consult the SDS. To contain a release, the following general procedure should be followed.

- **Contain the material released into the environment.** Following proper safety procedures, the spill should be contained by absorbent materials and temporary dikes using shovels and brooms. Spill kits that include absorbent materials, containment socks, rags, and salvage drums are located at the Facility. Consult applicable SDS for material compatibility, safety, and environmental precautions.

- **Continue the notification procedure.** Obtain outside contractors to clean up the spill, if necessary. Make notifications as required to the Connecticut Department of Energy and Environmental Protection (CTDEEP), USEPA Region 1, and the National Response Center (NRC). See the notification information presented in Section 7.0.

- **Initiate documentation of spill.** Begin the incident report form (see Appendix E) and collect photos of the spill showing all phases of the spill and clean-up.

6.4 SPILL RESPONSE

6.4.1 General

The following actions will be taken by the Facility in response to spills or accidental discharges of oil (Spill response procedures are included in Appendix G):

- the source of the release will be identified, and immediate corrective actions will be taken to stop the discharge of oil (Sections 6.2 and 6.3);
- immediate steps will be taken to prevent spilled oil at the Facility from reaching the storm drainage system;
- the first personnel to arrive at the spill location will respond to the spill using available spill response equipment and materials in a manner commensurate with their training. Immediate measures will be taken to prevent the release from entering catch basins. Countermeasures may include placing spill mat(s) over catch basins and placing spill booms or absorbents in the path of the release. Sorbent materials will be used to the maximum extent possible to contain and remove oil;
- if the release reaches the storm drainage basins or any associated wetlands, the Facility will be responsible for having immediate steps taken to contain the oil in as small an area as possible. The oil will then be removed and disposed of in a manner approved by the CTDEEP to minimize pollution;
- Facility personnel will immediately call an environmental spill response company for implementation of containment measures when a release reaches the waters of Connecticut and/or if clean-up is beyond the scope of Facility personnel training and capabilities;
- if the release occurs during a transfer operation, the transfer will be immediately stopped and measures to stop the release and contain the oil will commence immediately. Notification procedures will be initiated as soon as possible; and
- if released oil saturates the surrounding area, an environmental spill response company will be notified at the discretion of the SPCC Coordinator to remove the released oil and oil-impacted debris.

6.4.2 Small Spills (<10 gallons)

For small spills, the following procedures will be followed:

- notify the emergency SPCC Coordinator or the secondary SPCC Coordinator;
- mobilize spill clean-up crew;
- locate the source of spill and immediately stop discharge, if possible;
- block off the area to prevent traffic flow from entering the spill area;
- notify people in the immediate area;
- notify the CTDEEP of a spill or release of any amount of oil to the environment;
- deploy spill clean-up materials (e.g., sorbent boom, sorbent pads, granular adsorbent material, etc.) as appropriate; and
- prepare an internal spill report to document the cause of the spill and possible ways to prevent a future similar spill.

6.4.3 Large Spills (≥10 Gallons)

For large spills, the following procedures will be followed:

- mobilize the spill clean-up crew and notify the SPCC Coordinator;
- locate the source of the spill and immediately stop the discharge, if possible;
- if there is a potential for fire, call the Bristol Fire Department immediately;
- notify and mobilize a spill clean-up contractor;
- block off the area to prevent traffic flow from entering the spill area;
- deploy spill clean-up materials (e.g., sorbent boom, sorbent pads, granular adsorbent material, etc.) as appropriate, and try to contain the spill until the spill contractor arrives;
- notify the CTDEEP of a spill or release of any amount of oil to the environment;

- notify the NRC if the spill can enter a waterway; and
- prepare an internal spill report to document the cause of the spill and possible ways to prevent a future similar spill.

6.5 SPILL CLEAN-UP AND DISPOSAL PROCEDURES

Spill clean-up activities would be performed by a third-party spill clean-up vendor such as Clean Harbors. Containment and clean-up operations shall be performed in accordance with safe work practices. Personnel shall utilize appropriate personal protective clothing and equipment when required. Clean-up of the oil and debris should include the following precautions and procedures:

- Once a spill has been contained, and the leak repaired, clean-up crews may begin to remove the released oil using oil sorbent materials. On permeable surfaces, this will include removing the affected surface material around the spill site. The oil spill area will be cleaned up as required by the CTDEEP.
- Clean-up materials, including protective clothing (if impacted with oil) will be placed in standard Department of Transportation (DOT) open-top drums. Drums should be filled with enough adsorbent material to eliminate free liquids.
- Full drums should be covered with the appropriate lid and ring. The drum should be labeled with material name, hazard identification, and the date of generation.

If an environmental spill response company has responded to the spill, the oil and oil-impacted material will be removed from the Facility by the contractor and brought to a licensed disposal facility. The recovered oil and oil-impacted debris will be transported by a licensed transporter and disposed of at a licensed disposal facility authorized to receive such material. Upon completion of the spill clean-up, the SPCC Coordinator will document and report the incident to the appropriate agencies, as necessary. Personnel responding to a release of oil are authorized to use whatever resources are necessary to control the spill. Emergency response contractors may also supply equipment and materials necessary to control and clean up a spill.

6.6 SENSITIVE RECEPTORS

To the greatest extent possible, response actions will be taken to ensure the protection of sensitive receptors such as wetlands, streams, lakes, rivers, or aquifer protection zones.

All three campuses are surrounded primarily by commercial properties (restaurants, businesses, etc.) as well as some wooded areas. Wooded areas are located to the east and southwest of the main campus, to the north and east of the North campus, and to the north and south of the Bright Horizons campus. The nearest sensitive receptors are local wetlands, groundwater, and local streams. The nearest storm sewer is located approximately five feet from the generator plant ASTs at the main campus ,100 feet from the ASTs at the north campus, and approximately 50 feet from the Emergency Generator at the Bright Horizons campus.

6.7 COMMUNICATIONS

In case of a fire, spill, or other emergency, cell phones, two-way radio communication, and/or overhead pagers can be used to contact personnel. The Global Security and Safety Department has contact phone numbers for plan coordinators as well as key personnel who can assist with spill response and or mitigation.

6.8 SPILL, FIRE, AND SAFETY EQUIPMENT

Portable fire extinguishers, and first aid kits are located throughout the Facilities. A copy of an ESPN PowerPoint slide set, which shows locations of spill kits, fire extinguishers, AEDs, and first aid kits is provided in Appendix F.

7.0 REPORTING PROCEDURES/EMERGENCY CONTACTS

7.1 INTRODUCTION

In the event of an accident or oil spill at the Facility, the SPCC Coordinator or Secondary SPCC Coordinator will be contacted by the person that discovers the release as soon as practical after the incident has occurred. If a spill discharge to surface waters is imminent, the regulatory agencies should also be notified as outlined below. Emergency contacts and a spill response procedure are included in Appendix G.

7.2 INTERNAL REPORTING

In the event of a spill the following internal contacts shall be made:

Global Security Command Post (24 Hours)
Facility Phone: 860-766-2486

Spills that are regulated under this SPCC Plan must be documented in an official report. The report shall be prepared by the SPCC Coordinator or his/her designee.

At a minimum, the report will document the following items:

- date, time, and duration of release;
- source location, material(s) released, and total volume (best estimate) of the release;
- spill clean-up procedures;
- personnel who discovered and/or participated in the spill response;
- equipment used during the clean-up;
- wastes generated and associated disposal method(s); and

- unusual events, injuries, or agency inspections.

7.3 REPORTING TO OUTSIDE AGENCIES

The SPCC Coordinator (or designee) will report to outside agencies when required.

7.3.1 Federal

If oil discharges in harmful quantities into water, including wetlands, streams, lakes, ponds, sanitary or storm sewer, the NRC will be notified by the SPCC Plan Coordinator immediately. A harmful quantity of oil is defined as a discharge of oil that violates applicable water quality standards, causes a sheen or discoloration upon the surface of the water, or causes a sludge or emulsion to be deposited beneath the surface of the water.

If the spill results in the discharge of more than 1,000 gallons of oil into or upon navigable waters of the United States, or if it is the second spill event of 42 gallons or more of oil into waters within a twelve-month period, the SPCC Coordinator will submit a written report to the Regional Administrator of the USEPA as specified in Section 7.6, Post Spill Reporting Procedures, within sixty days of the event.

National Response Center
(800) 424-8802

USEPA, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912
Phone: (888) 372-7341

7.3.2 State

All releases of oil that occur within Connecticut must be reported to the CTDEEP. The following information must be reported:

- the location;
- the quantity and type of substance, material, or waste;
- the date and the cause of the incident;
- the name and address of the owner; and
- the name and address of the person making the report and his relationship to the owner.

CTDEEP Spill Hotline
1-800-424-3338

7.3.3 Emergency Response Contractor

The following is a licensed clean-up contractor that can be contacted to assist in emergency spill situations:

Clean Harbors
(800) 645-8265 (24-hour emergency)
(860) 583-8917 (Bristol, CT office)

7.3.4 Local

The Facility will immediately notify the local fire department if there is a potential for fire (e.g., in the event of a leak from one of the tanks because they hold combustible substances). The SPCC Coordinator will also determine the need to contact the local police or other local emergency planning or response organizations.

Bristol Fire Department
(860)-584-7964 or 911

Bristol Police Department
(860) 584-3011 or 911

7.4 REPORTING PROCEDURES

The following information shall be communicated in reporting to outside agencies:

- name, title, telephone number, and address of person reporting release;
- name, telephone number, and address of Facility/spill;
- time, type, and amount of materials involved;
- extent of injuries/illness, if known;
- possible hazards to human health and environment;
- any body of water involved;
- the cause of accident/spill; and
- the action taken or proposed by the Facility personnel.

7.5 OTHER EMERGENCY CONTACTS

The following other emergency contacts will be contacted, as needed:

Bristol Hospital
41 Brewster Road, Bristol CT 06010
Phone: (860)-585-3000

Connecticut State Police
911

Poison Control Center
(800) 222-1222

7.6 POST-SPILL REPORTING PROCEDURES

The following post-spill reporting procedures will be conducted by the SPCC Coordinator. Whenever there is a discharge of more than 1,000 gallons of oil in a single release, or upon

navigable waters, or adjoining shorelines, or whenever there are two discharges of 42 gallons or more within a twelve-month period into or upon navigable waters or adjoining shorelines, the following information will be simultaneously submitted to the administrator of the USEPA and to the CTDEEP:

- name and location of the Facility;
- name of owner or operator of the Facility;
- date and year of initial facility operation;
- maximum storage or handling capacity of the Facility and normal daily throughput;
- description of the facility, including maps, flow diagrams, and topographical maps;
- a complete copy of this SPCC Plan, with any amendments;
- the causes(s) of the spill, including a failure analysis as appropriate;
- the corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;
- additional preventive measures taken or contemplated to minimize the possibility of recurrence; and
- other information that the USEPA Regional Administrator may reasonably require.

8.0 RECORDKEEPING

8.1 DOCUMENTATION

This Section refers to the documents and inspection records that must be retained on file for a minimum of three years as required in this SPCC Plan:

- maintenance and inspection activities, as described in Section 5.0;
- spill reports and documents, as described in Section 7.0; and
- documentation related to the implementation of Facility improvements summarized in Section 9.0.

8.2 DISTRIBUTION OF PLAN TO OUTSIDE AGENCIES

Copies of this SPCC Plan will be submitted to the local fire department, police department, and hospital upon request. In addition, familiarization sessions will be held with personnel from these organizations, if requested. It is important that personnel responding to an oil-related emergency be familiar with materials used, the possibilities for releases, and the location of the response equipment.

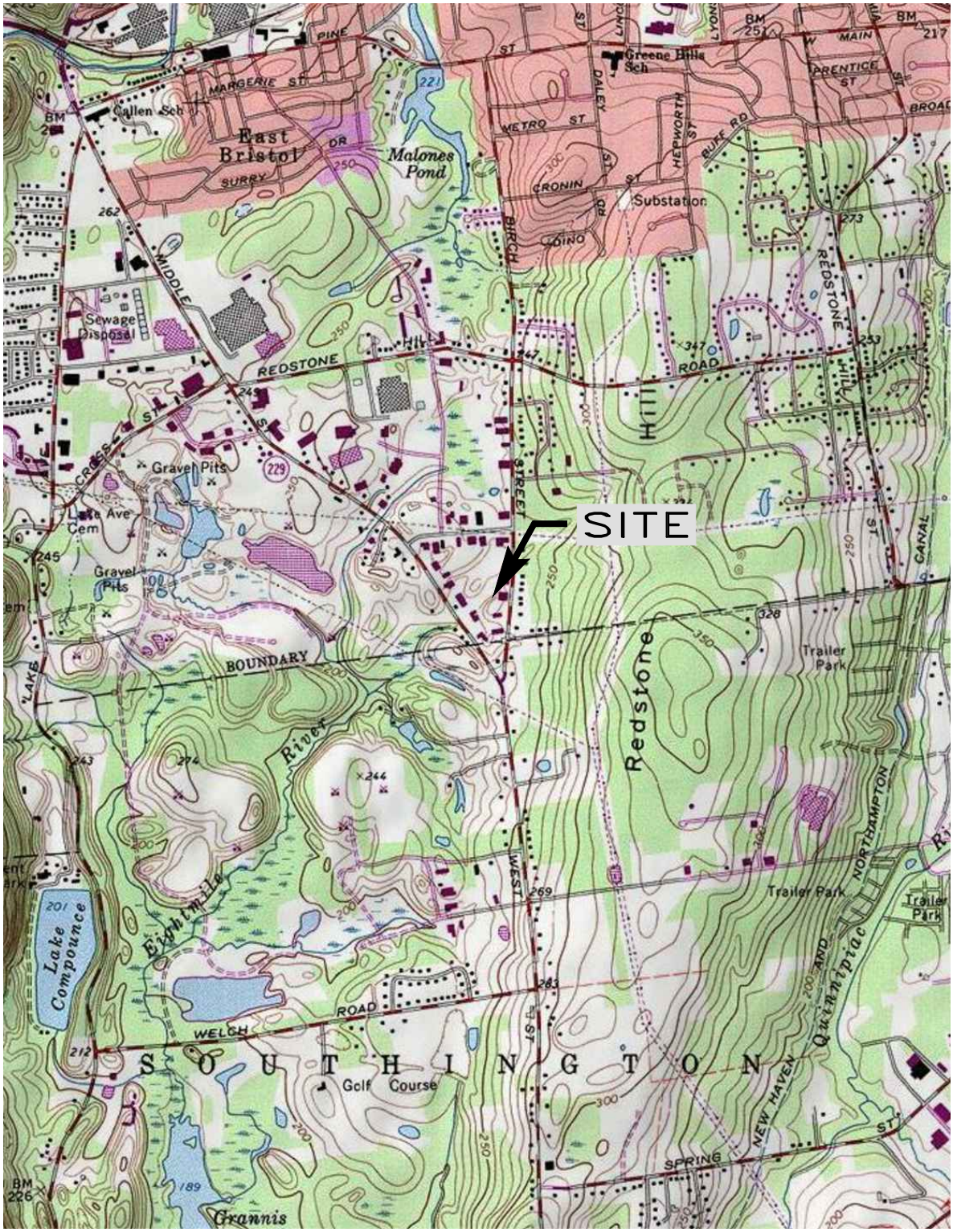
9.0 FACILITY IMPROVEMENTS

9.1 RECOMMENDED IMPROVEMENTS

The Facility should consider implementing the following improvements and modifications as best management practices:

- Posting emergency contact information, such as a printout of Appendix G of this SPCC Plan, near the tanks (e.g., near spill kits or inside generator enclosures).

FIGURES



SOURCE:

USGS BRISTOL, CONNECTICUT
TOPOGRAPHIC QUADRANGLE DATED 1982

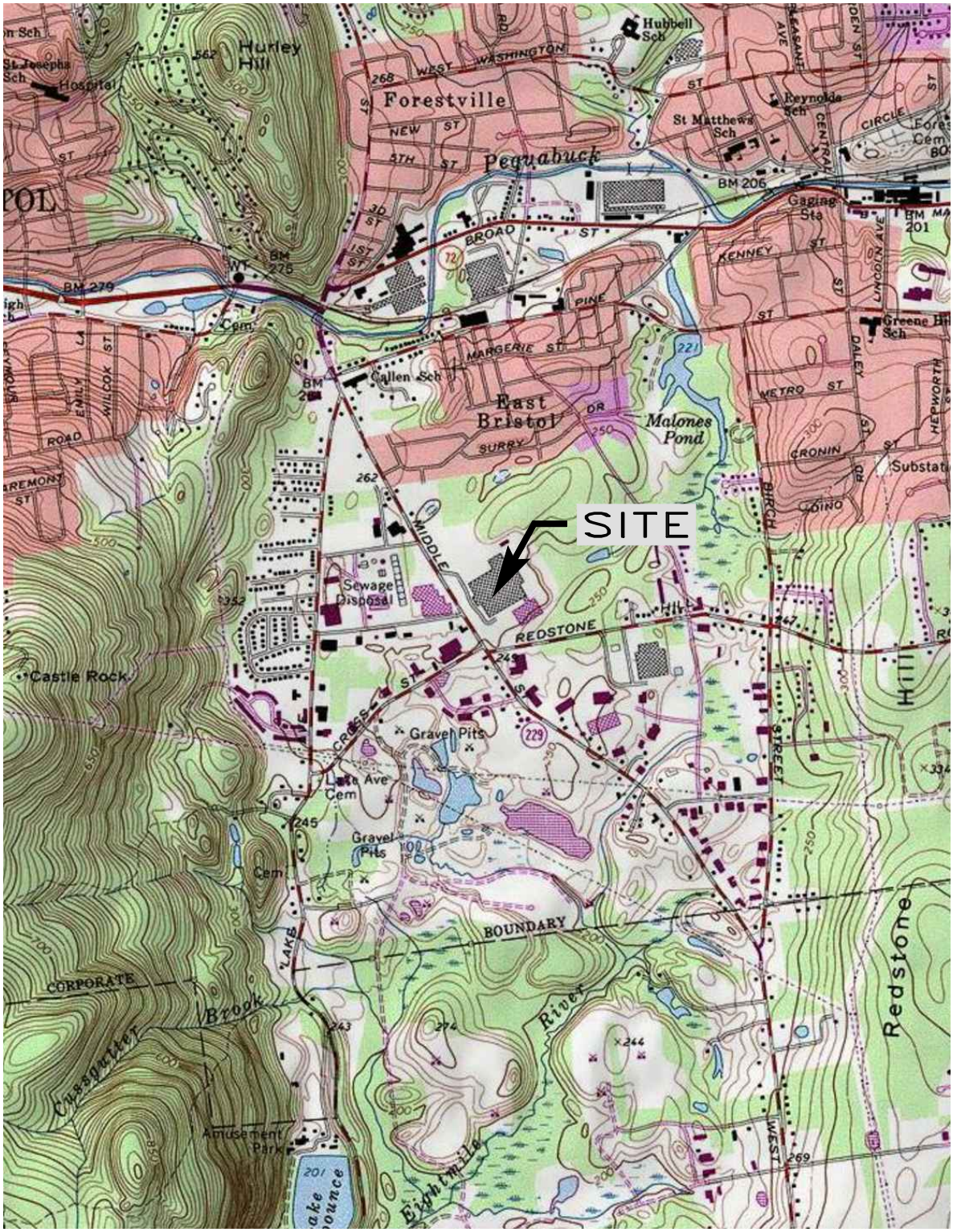
CONTOUR INTERVAL: 10 FEET

0 2000 4000

APPROX. SCALE IN FEET

CLIENT: ESPN, INC.				
PROJECT: 2019 SPCC PLAN UPDATE				
TITLE: SITE LOCUS – MAIN CAMPUS				
DESIGNED: MTL	DRAWN: TSS	CHECKED: JJC	APPROVED: TWK	GeoInsight *Practical in Nature*
SCALE: 1" = 2000'	DATE: 10/10/19	FILE NO.: 5356-LOCUS	PROJECT NO.: 5354	FIGURE NO.: 1

PLOT DATE: 10-11-19
FILE: C:\Users\Doreen Local\Documents\GeoInsight\5356 CT SPCC\10-11-2019 by Scott that I created PDFs for\5356-LOCUS.dwg



SOURCE:

USGS BRISTOL, CONNECTICUT
TOPOGRAPHIC QUADRANGLE DATED 1982

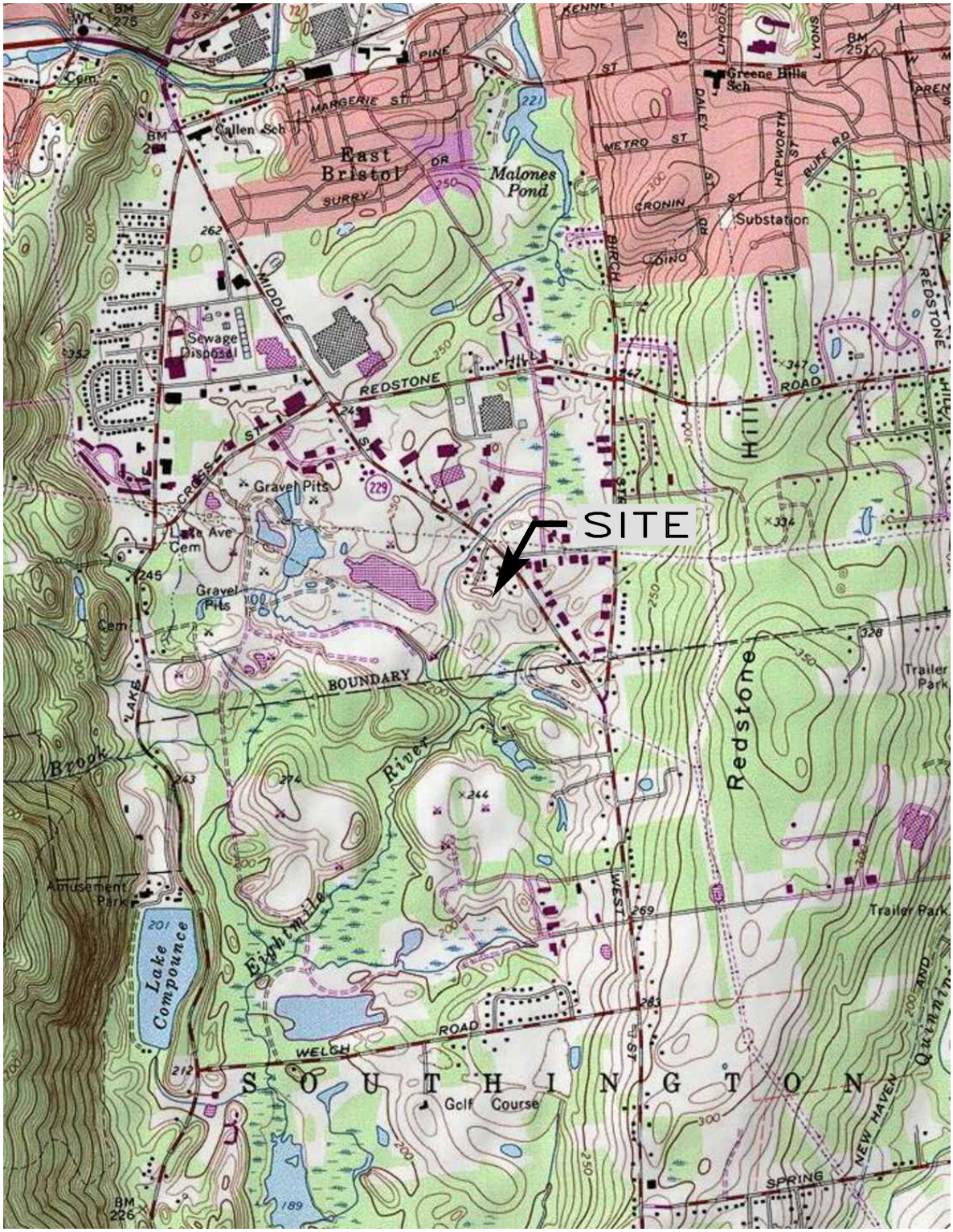
CONTOUR INTERVAL: 10 FEET

0 2000 4000

APPROX. SCALE IN FEET

CLIENT: ESPN, INC.				
PROJECT: 2019 SPCC PLAN UPDATE				
TITLE: SITE LOCUS – NORTH CAMPUS				
DESIGNED: MTL	DRAWN: TSS	CHECKED: JJC	APPROVED: TWK	GeoInsight Practical in Nature
SCALE: 1" = 2000'	DATE: 10/10/19	FILE NO.: 5356-LOCUS	PROJECT NO.: 5354	FIGURE NO.: 2

PLOT DATE: 10-11-19
FILE: C:\Users\Doreen Local\Documents\GeoInsight\5356 CT SPCC\10-11-2019 by Scott that I created PDFs for\5356-LOCUS.dwg



SOURCE:

USGS BRISTOL, CONNECTICUT
TOPOGRAPHIC QUADRANGLE DATED 1982

CONTOUR INTERVAL: 10 FEET

0 2000 4000

APPROX. SCALE IN FEET

CLIENT: ESPN, INC.				
PROJECT: 2019 SPCC PLAN UPDATE				
TITLE: SITE LOCUS – BRIGHT HORIZONS				
DESIGNED: MTL	DRAWN: DMR	CHECKED: JJC	APPROVED: TWK	GeoInsight Practical in Nature
SCALE: 1" = 2000'	DATE: 10/10/19	FILE NO.: 5356-LOCUS	PROJECT NO.: 5354	FIGURE NO.: 3

PLOT DATE: 10-11-19
FILE: C:\Users\Doreen Local\Documents\GeoInsight\5356 CT SPCC\10-11-2019 by Scott that I created PDFs for\5356-LOCUS.dwg

STORAGE LOCATION DETAILS

LOCATION	NO. OF TANKS	MATERIAL	SIZE OF TANKS
1	2	DIESEL FUEL	10,000 GAL.
2	2	DIESEL FUEL	20,000 GAL.
3	2	DIESEL FUEL	1,000 GAL.
4	2	DIESEL FUEL	1,000 GAL.
5	1	DIESEL FUEL	1,000 GAL.
ELEVATORS	16	HYDRAULIC FLUID	100 GAL.
TRANSFORMERS	6	DIELECTRIC FLUID	228 GAL. EACH
COMPACTORS	16	HYDRAULIC FLUID	30 GAL.

LEGEND

- DAY TANK
- SPILL EQUIPMENT
- TRANSFORMER
- ABOVEGROUND STORAGE TANK
- HYDRAULIC OIL STORAGE TANK
- ESTIMATED DIRECTION OF STORMWATER FLOW
- ① STORAGE LOCATION
- Ⓔ ELEVATOR LOCATION
- Ⓣ TRANSFORMER OIL FILL LOCATION
- COMPACTORS
- CB CATCH BASIN

NOTES:

1. THIS FIGURE WAS BASED UPON A COMPILATION OF SURVEYED AS-BUILT CONDITIONS AND DESIGN DOCUMENTS PROVIDED BY ESPN.
2. DIRECTION OF STORMWATER FLOW ESTIMATED BASED UPON LOCAL TOPOGRAPHY.

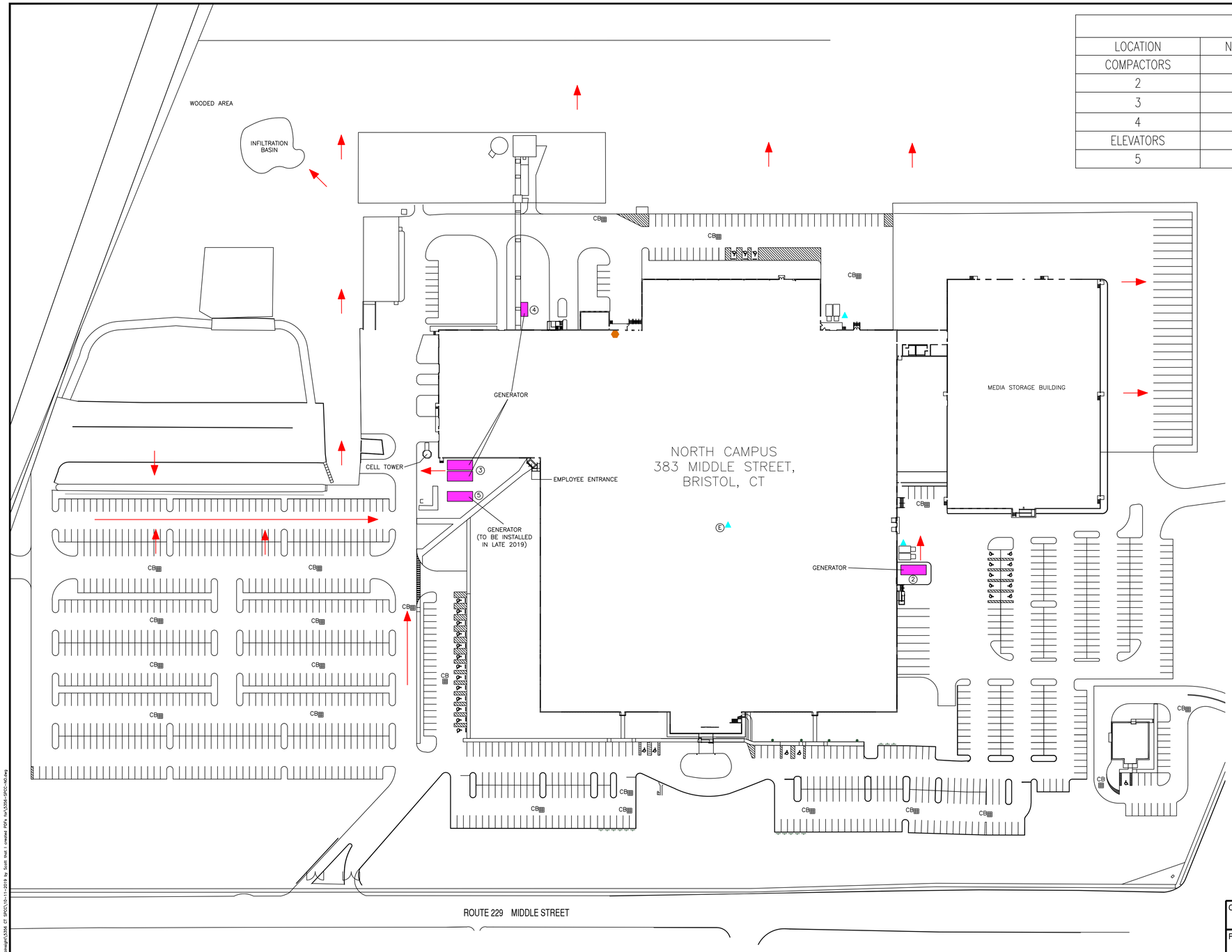
CLIENT:	ESPN, INC.
PROJECT:	2019 SPCC PLAN LOCATION OF OIL / CHEMICAL STORAGE
TITLE:	FACILITY PLAN MAIN CAMPUS

DESIGNED:	DRAWN:	CHECKED:	APPROVED:
MTL	MRC	JJC	TWK

SCALE:	DATE:	FILE NO.:	PROJECT NO.:	FIGURE NO.:
AS SHOWN	10/10/19	5356-SPCC-MN	5354	4

GeoInsight
Practical in Nature

STORAGE LOCATION DETAILS			
LOCATION	NO. OF TANKS	MATERIAL	SIZE OF TANKS
COMPACTORS	2	HYDRAULIC OIL	30 GAL.
2	1	DIESEL FUEL	2,500 GAL.
3	2	DIESEL FUEL	2,000 GAL. / 1,600 GAL.
4	1	DIESEL FUEL	400 GAL.
ELEVATORS	1	HYDRAULIC OIL	100 GAL.
5	1	DIESEL FUEL	2,500 GAL.



LEGEND

- (E) ELEVATOR LOCATION
- SPILL EQUIPMENT
- ABOVEGROUND STORAGE TANK
- HYDRAULIC OIL STORAGE TANK
- ESTIMATED DIRECTION OF STORMWATER FLOW
- (1) STORAGE LOCATION
- COMPACTORS
- CB CATCH BASIN

NOTES:

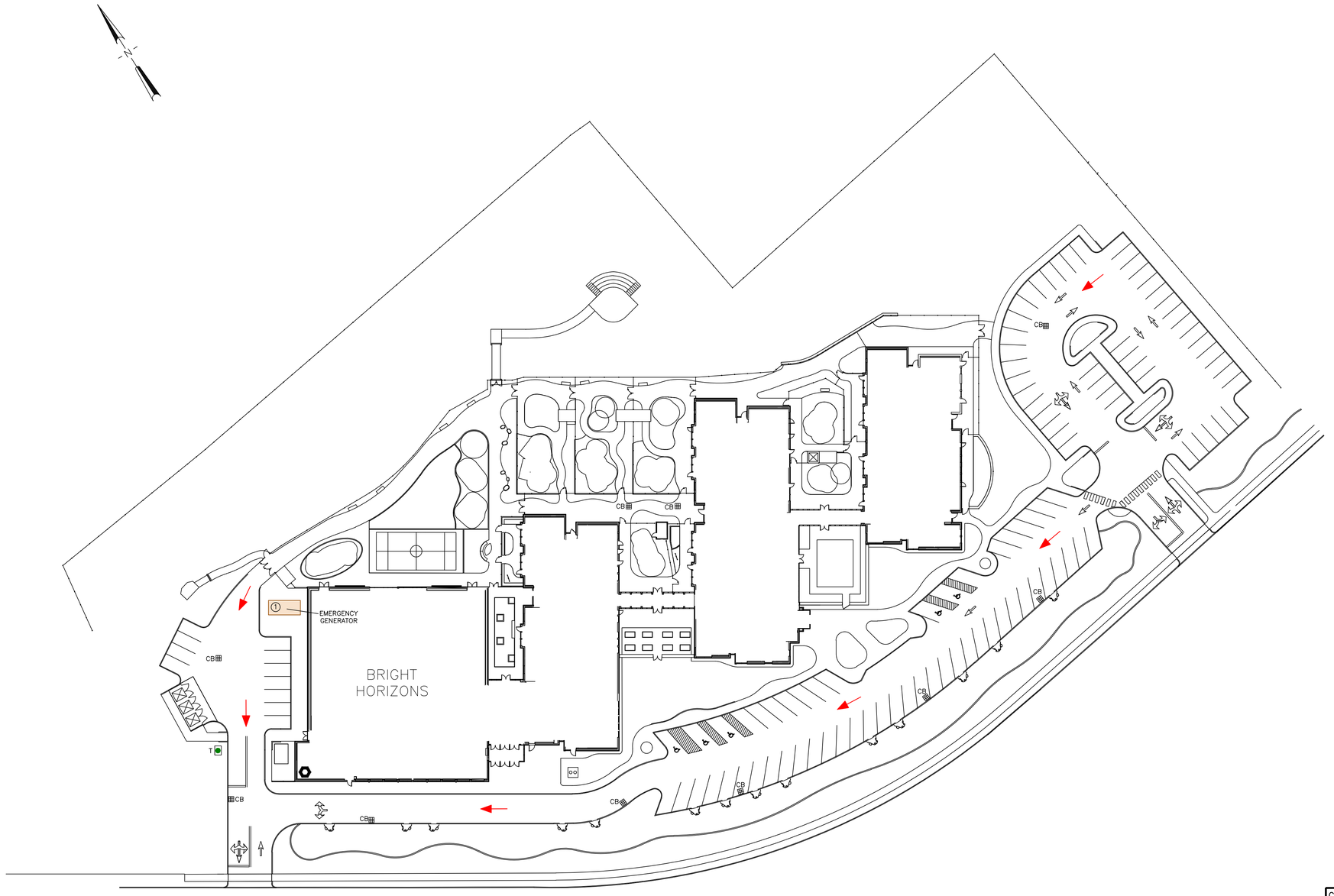
1. THIS FIGURE WAS BASED UPON A COMPILATION OF SURVEYED AS-BUILT CONDITIONS AND DESIGN DOCUMENTS PROVIDED BY ESPN.
2. DIRECTION OF STORMWATER FLOW ESTIMATED BASED UPON LOCAL TOPOGRAPHY.

CLIENT: ESPN, INC.				
PROJECT: 2019 SPCC PLAN LOCATION OF OIL / CHEMICAL STORAGE				
TITLE: FACILITY PLAN NORTH CAMPUS				
DESIGNED: MTL	DRAWN: DMR	CHECKED: JJC	APPROVED: TWK	
SCALE: NTS	DATE: 10/10/19	FILE NO.: 5356-SPCC-NO	PROJECT NO.: 5354	FIGURE NO.: 5

GeoInsight
Practical in Nature

PLOT DATE: 10-11-19
FILE: C:\Users\Owner Local\Documents\Geoinsight\5356 CT SPCC\10-11-2019 by Scott that I created PDFs for\5356-SPCC-NO.dwg

STORAGE LOCATION DETAILS			
LOCATION	NO. OF TANKS	MATERIAL	SIZE OF TANKS
1	1	DIESEL FUEL	2,260 GAL.



LEGEND

- TRANSFORMER
- ESTIMATED DIRECTION OF STORMWATER FLOW
- (1) STORAGE LOCATION
- CB CATCH BASIN
- SPILL EQUIPMENT
- ABOVEGROUND STORAGE TANK

NOTES:

1. THIS FIGURE WAS BASED UPON A COMPILATION OF SURVEYED AS-BUILT CONDITIONS AND DESIGN DOCUMENTS PROVIDED BY ESPN.
2. DIRECTION OF STORMWATER FLOW ESTIMATED BASED UPON LOCAL TOPOGRAPHY.

CLIENT: ESPN, INC.				
PROJECT: 2019 SPCC PLAN LOCATION OF OIL / CHEMICAL STORAGE				
TITLE: FACILITY PLAN BRIGHT HORIZONS CAMPUS				
DESIGNED: MTL	DRAWN: DMR	CHECKED: JJC	APPROVED: TWK	GeoInsight *Practical in Nature*
SCALE: NTS	DATE: 10/10/19	FILE NO.: 5356-SPCC-BH	PROJECT NO.: 5354	FIGURE NO.: 6

PLOT DATE: 10-11-19
PLOT BY: C:\Users\Steve Lucas\Documents\Geoinsight\5356 CT SPCC\10-11-2019 by Scott that I created PDFs for\5356-SPCC-BH.dwg

APPENDIX A

SPCC REGULATIONS

engine on a public vessel) and any discharges of such oil accumulated in the bilges of a vessel discharged in compliance with MARPOL 73/78, Annex I, as provided in 33 CFR part 151, subpart A;

(b) Other discharges of oil permitted under MARPOL 73/78, Annex I, as provided in 33 CFR part 151, subpart A; and

(c) Any discharge of oil explicitly permitted by the Administrator in connection with research, demonstration projects, or studies relating to the prevention, control, or abatement of oil pollution.

[61 FR 7421, Feb. 28, 1996]

§ 110.6 Notice.

Any person in charge of a vessel or of an onshore or offshore facility shall, as soon as he or she has knowledge of any discharge of oil from such vessel or facility in violation of section 311(b)(3) of the Act, immediately notify the National Response Center (NRC) (800–424–8802; in the Washington, DC metropolitan area, 202–426–2675). If direct reporting to the NRC is not practicable, reports may be made to the Coast Guard or EPA predesignated On-Scene Coordinator (OSC) for the geographic area where the discharge occurs. All such reports shall be promptly relayed to the NRC. If it is not possible to notify the NRC or the predesignated OCS immediately, reports may be made immediately to the nearest Coast Guard unit, provided that the person in charge of the vessel or onshore or offshore facility notifies the NRC as soon as possible. The reports shall be made in accordance with such procedures as the Secretary of Transportation may prescribe. The procedures for such notice are set forth in U.S. Coast Guard regulations, 33 CFR part 153, subpart B and in the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR part 300, subpart E.

(Approved by the Office of Management and Budget under control number 2050–0046)

[52 FR 10719, Apr. 2, 1987. Redesignated and amended at 61 FR 7421, Feb. 28, 1996; 61 FR 14032, Mar. 29, 1996]

PART 112—OIL POLLUTION PREVENTION

Sec.

AUTHORITY: 33 U.S.C. 1251 *et seq.*; 33 U.S.C. 2720; E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

SOURCE: 38 FR 34165, Dec. 11, 1973, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to part 112 appear at 65 FR 40798, June 30, 2000.

Subpart A—Applicability, Definitions, and General Requirements for All Facilities and All Types of Oils

SOURCE: 67 FR 47140, July 17, 2002, unless otherwise noted.

§ 112.1 General applicability.

(a)(1) This part establishes procedures, methods, equipment, and other requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act).

(2) As used in this part, words in the singular also include the plural and words in the masculine gender also include the feminine and vice versa, as the case may require.

(b) Except as provided in paragraph (d) of this section, this part applies to any owner or operator of a non-transportation-related onshore or offshore facility engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil and oil products, which due to its location, could reasonably be expected to discharge oil in quantities that may be harmful, as described in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) that has oil in:

(1) Any aboveground container;

(2) Any completely buried tank as defined in §112.2;

(3) Any container that is used for standby storage, for seasonal storage, or for temporary storage, or not otherwise ''permanently closed'' as defined in §112.2;

(4) Any ''bunkered tank'' or ''partially buried tank'' as defined in §112.2, or any container in a vault, each of which is considered an aboveground storage container for purposes of this part.

(c) As provided in section 313 of the Clean Water Act (CWA), departments, agencies, and instrumentalities of the Federal government are subject to this part to the same extent as any person.

(d) Except as provided in paragraph (f) of this section, this part does not apply to:

(1) The owner or operator of any facility, equipment, or operation that is

not subject to the jurisdiction of the Environmental Protection Agency (EPA) under section 311(j)(1)(C) of the CWA, as follows:

(i) Any onshore or offshore facility, that due to its location, could not reasonably be expected to have a discharge as described in paragraph (b) of this section. This determination must be based solely upon consideration of the geographical and location aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and must exclude consideration of manmade features such as dikes, equipment or other structures, which may serve to restrain, hinder, contain, or otherwise prevent a discharge as described in paragraph (b) of this section.

(ii) Any equipment, or operation of a vessel or transportation-related onshore or offshore facility which is subject to the authority and control of the U.S. Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of EPA, dated November 24, 1971 (Appendix A of this part).

(iii) Any equipment, or operation of a vessel or onshore or offshore facility which is subject to the authority and control of the U.S. Department of Transportation or the U.S. Department of the Interior, as defined in the Memorandum of Understanding between the Secretary of Transportation, the Secretary of the Interior, and the Administrator of EPA, dated November 8, 1993 (Appendix B of this part).

(2) Any facility which, although otherwise subject to the jurisdiction of EPA, meets both of the following requirements:

(i) The completely buried storage capacity of the facility is 42,000 gallons or less of oil. For purposes of this exemption, the completely buried storage capacity of a facility excludes the capacity of a completely buried tank, as defined in §112.2, and connected underground piping, underground ancillary equipment, and containment systems, that is currently subject to all of the technical requirements of part 280 of this chapter or all of the technical requirements of a State program approved under part 281 of this chapter. The completely buried storage capacity of a facility also excludes the capacity of a container that is ''permanently closed,'' as defined in §112.2.

(ii) The aggregate aboveground storage capacity of the facility is 1,320 gallons or less of oil. For purposes of this exemption, only containers of oil with a capacity of 55 gallons or greater are counted. The aggregate aboveground storage capacity of a facility excludes the capacity of a container that is ''permanently closed,'' as defined in §112.2.

(3) Any offshore oil drilling, production, or workover facility that is subject to the notices and regulations of the Minerals Management Service, as specified in the Memorandum of Understanding between the Secretary of Transportation, the Secretary of the Interior, and the Administrator of EPA, dated November 8, 1993 (Appendix B of this part).

(4) Any completely buried storage tank, as defined in §112.2, and connected underground piping, underground ancillary equipment, and containment systems, at any facility, that is subject to all of the technical requirements of part 280 of this chapter or a State program approved under part 281 of this chapter, except that such a tank must be marked on the facility diagram as provided in §112.7(a)(3), if the facility is otherwise subject to this part.

(5) Any container with a storage capacity of less than 55 gallons of oil.

(6) Any facility or part thereof used exclusively for wastewater treatment and not used to satisfy any requirement of this part. The production, recovery, or recycling of oil is not wastewater treatment for purposes of this paragraph.

(e) This part establishes requirements for the preparation and implementation of Spill Prevention, Control, and Countermeasure (SPCC) Plans. SPCC Plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules. The purpose of an SPCC Plan is to form a comprehensive Federal/State spill prevention program

that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State, or local laws.

(f) Notwithstanding paragraph (d) of this section, the Regional Administrator may require that the owner or operator of any facility subject to the jurisdiction of EPA under section 311(j) of the CWA prepare and implement an SPCC Plan, or any applicable part, to carry out the purposes of the CWA.

(1) Following a preliminary determination, the Regional Administrator must provide a written notice to the owner or operator stating the reasons why he must prepare an SPCC Plan, or applicable part. The Regional Administrator must send such notice to the owner or operator by certified mail or by personal delivery. If the owner or operator is a corporation, the Regional Administrator must also mail a copy of such notice to the registered agent, if any and if known, of the corporation in the State where the facility is located.

(2) Within 30 days of receipt of such written notice, the owner or operator may provide information and data and may consult with the Agency about the need to prepare an SPCC Plan, or applicable part.

(3) Within 30 days following the time under paragraph (b)(2) of this section within which the owner or operator may provide information and data and consult with the Agency about the need to prepare an SPCC Plan, or applicable part, the Regional Administrator must make a final determination regarding whether the owner or operator is required to prepare and implement an SPCC Plan, or applicable part. The Regional Administrator must send the final determination to the owner or operator by certified mail or by personal delivery. If the owner or operator is a corporation, the Regional Administrator must also mail a copy of the final determination to the registered agent, if any and if known, of the corporation in the State where the facility is located.

(4) If the Regional Administrator makes a final determination that an SPCC Plan, or applicable part, is necessary, the owner or operator must prepare the Plan, or applicable part, within six months of that final determination and implement the Plan, or applicable part, as soon as possible, but not later than one year after the Regional Administrator has made a final determination.

(5) The owner or operator may appeal a final determination made by the Regional Administrator requiring preparation and implementation of an SPCC Plan, or applicable part, under this paragraph. The owner or operator must make the appeal to the Administrator of EPA within 30 days of receipt of the final determination under paragraph (b)(3) of this section from the Regional Administrator requiring preparation and/or implementation of an SPCC Plan, or applicable part. The owner or operator must send a complete copy of the appeal to the Regional Administrator at the time he makes the appeal to the Administrator. The appeal must contain a clear and concise statement of the issues and points of fact in the case. In the appeal, the owner or operator may also provide additional information. The additional information may be from any person. The Administrator may request additional information from the owner or operator. The Administrator must render a decision within 60 days of receiving the appeal or additional information submitted by the owner or operator and must serve the owner or operator with the decision made in the appeal in the manner described in paragraph (f)(1) of this section.

§ 112.2 Definitions.

For the purposes of this part:

Adverse weather means weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil, and that must be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part (as appropriate), ice conditions, temperatures, weather-related visibility, and

currents within the area in which the systems or equipment is intended to function.

Alteration means any work on a container involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of the container.

Animal fat means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin.

Breakout tank means a container used to relieve surges in an oil pipeline system or to receive and store oil transported by a pipeline for reinjection and continued transportation by pipeline.

Bulk storage container means any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.

Bunkered tank means a container constructed or placed in the ground by cutting the earth and re-covering the container in a manner that breaks the surrounding natural grade, or that lies above grade, and is covered with earth, sand, gravel, asphalt, or other material. A bunkered tank is considered an aboveground storage container for purposes of this part.

Completely buried tank means any container completely below grade and covered with earth, sand, gravel, asphalt, or other material. Containers in vaults, bunkered tanks, or partially buried tanks are considered aboveground storage containers for purposes of this part.

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the CWA.

Contiguous zone means the zone established by the United States under Article 24 of the Convention of the Territorial Sea and Contiguous Zone, that is contiguous to the territorial sea and that extends nine miles seaward from the outer limit of the territorial area.

Contract or other approved means means:

(1) A written contractual agreement with an oil spill removal organization that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

(3) Active membership in a local or regional oil spill removal organization that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic area; and/or

(4) Any other specific arrangement approved by the Regional Administrator upon request of the owner or operator.

Discharge includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under section 402 of the CWA; discharges resulting from circumstances identified, reviewed, and made a part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a condition in such permit; or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of this part, the term discharge shall not include any discharge of oil that is authorized by a permit issued under section 13 of the River and Harbor Act of 1899 (33 U.S.C. 407).

Facility means any mobile or fixed, onshore or offshore building, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and waste treatment, or in which oil is used, as described in Appendix A to this part. The boundaries of a facility depend on

several site-specific factors, including, but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and the types of activity at the site.

Fish and wildlife and sensitive environments means areas that may be identified by their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered or threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archaeological sites and parks. These areas may also include unique habitats such as aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge, or exposure to a product of reactions resulting from a discharge.

Maximum extent practicable means within the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It includes the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in §112.20 or in a specific plan approved by the Regional Administrator.

Navigable waters means the waters of the United States, including the territorial seas.

(1) The term includes:

(i) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;

(ii) All interstate waters, including interstate wetlands;

(iii) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

(A) That are or could be used by interstate or foreign travelers for recreational or other purposes; or

(B) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or,

(C) That are or could be used for industrial purposes by industries in interstate commerce;

(iv) All impoundments of waters otherwise defined as waters of the United States under this section;

(v) Tributaries of waters identified in paragraphs (1)(i) through (iv) of this definition;

(vi) The territorial sea; and

(vii) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraph (1) of this definition.

(2) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds which also meet the criteria of this definition) are not waters of the United States. Navigable waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.

Non-petroleum oil means oil of any kind that is not petroleum-based, including but not limited to: Fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

Offshore facility means any facility of any kind (other than a vessel or public vessel) located in, on, or under any of the navigable waters of the United

States, and any facility of any kind that is subject to the jurisdiction of the United States and is located in, on, or under any other waters.

Oil means oil of any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.

Oil Spill Removal Organization means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Onshore facility means any facility of any kind located in, on, or under any land within the United States, other than submerged lands.

Owner or operator means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated or maintained the facility immediately prior to such abandonment.

Partially buried tank means a storage container that is partially inserted or constructed in the ground, but not entirely below grade, and not completely covered with earth, sand, gravel, asphalt, or other material. A partially buried tank is considered an aboveground storage container for purposes of this part.

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.

Person includes an individual, firm, corporation, association, or partnership.

Petroleum oil means petroleum in any form, including but not limited to crude oil, fuel oil, mineral oil, sludge, oil refuse, and refined products.

Production facility means all structures (including but not limited to wells, platforms, or storage facilities), piping (including but not limited to flowlines or gathering lines), or equipment (including but not limited to workover equipment, separation equipment, or auxiliary non-transportation-related equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of oil, or associated storage or measurement, and located in a single geographical oil or gas field operated by a single operator.

Regional Administrator means the Regional Administrator of the Environmental Protection Agency, in and for the Region in which the facility is located.

Repair means any work necessary to maintain or restore a container to a condition suitable for safe operation, other than that necessary for ordinary, day-to-day maintenance to maintain the functional integrity of the container and that does not weaken the container.

Spill Prevention, Control, and Countermeasure Plan; SPCC Plan, or Plan means the document required by §112.3 that details the equipment, workforce, procedures, and steps to prevent, control, and provide adequate countermeasures to a discharge.

Storage capacity of a container means the shell capacity of the container.

Transportation-related and non-transportation-related, as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, (Appendix A of this part).

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, the U.S. Virgin Islands, and the Pacific Island Governments.

Vegetable oil means a non-petroleum oil or fat of vegetable origin, including

but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels.

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, other than a public vessel.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.

§ 112.3 Requirement to prepare and implement a Spill Prevention, Control, and Countermeasure Plan.

The owner or operator of an onshore or offshore facility subject to this section must prepare a Spill Prevention, Control, and Countermeasure Plan (hereafter ''SPCC Plan'' or ''Plan),'' in writing, and in accordance with §112.7, and any other applicable section of this part.

(a) If your onshore or offshore facility was in operation on or before August 16, 2002, you must maintain your Plan, but must amend it, if necessary to ensure compliance with this part, on or before February 17, 2006, and must implement the amended Plan as soon as possible, but not later than August 18, 2006. If your onshore or offshore facility becomes operational after August 16, 2002, through August 18, 2006, and could reasonably be expected to have a discharge as described in §112.1(b), you must prepare a Plan on or before August 18, 2006, and fully implement it as soon as possible, but not later than August 18, 2006.

(b) If you are the owner or operator of an onshore or offshore facility that becomes operational after August 18, 2006, 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.

(c) If you are the owner or operator of an onshore or offshore mobile facility, such as an onshore drilling or workover rig, barge mounted offshore drilling or workover rig, or portable fueling facility, you must prepare, implement, and maintain a facility Plan as required by this section. You must maintain your Plan, but must amend and implement it, if necessary to ensure compliance with this part, on or before August 18, 2006. If your onshore or offshore mobile facility becomes operational after August 18, 2006, 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. This provision does not require that you prepare a new Plan each time you move the facility to a new site. The Plan may be a general Plan. When you move the mobile or portable facility, you must locate and install it using the discharge prevention practices outlined in the Plan for the facility. The Plan is applicable only while the facility is in a fixed (non-transportation) operating mode.

(d) A licensed Professional Engineer must review and certify a Plan for it to be effective to satisfy the requirements of this part.

(1) By means of this certification the Professional Engineer attests:

(i) That he is familiar with the requirements of this part ;

(ii) That he or his agent has visited and examined the facility;

(iii) That the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part;

(iv) That procedures for required inspections and testing have been established; and

(v) That the Plan is adequate for the facility.

(2) Such certification shall in no way relieve the owner or operator of a facility of his duty to prepare and fully implement such Plan in accordance with the requirements of this part.

(e) If you are the owner or operator of a facility for which a Plan is required under this section, you must:

(1) Maintain a complete copy of the Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended, and

(2) Have the Plan available to the Regional Administrator for on-site review during normal working hours.

(f) *Extension of time.* (1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of a Plan, or any amendment thereto, beyond the time permitted for the preparation, implementation, or amendment of a Plan under this part, when he finds that the owner or operator of a facility subject to this section, cannot fully comply with the requirements as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or his agents or employees.

(2) If you are an owner or operator seeking an extension of time under paragraph (f)(1) of this section, you may submit a written extension request to the Regional Administrator. Your request must include:

(i) A full explanation of the cause for any such delay and the specific aspects of the Plan affected by the delay;

(ii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay; and

(iii) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment, or other preventive measures. In addition you may present additional oral or written statements in support of your extension request.

(3) The submission of a written extension request under paragraph (f)(2) of this section does not relieve you of your obligation to comply with the requirements of this part. The Regional Administrator may request a copy of your Plan to evaluate the extension request. When the Regional Administrator authorizes an extension of time for particular equipment or other specific aspects of the Plan, such extension does not affect your obligation to comply with the requirements related to other equipment or other specific aspects of the Plan for which the Regional Administrator has not expressly authorized an extension.

[67 FR 47140, July 17, 2002, as amended at 68 FR 1351, Jan. 9, 2003; 68 FR 18894, Apr. 17, 2003; 69 FR 48798, Aug. 11, 2004]

§ 112.4 Amendment of Spill Prevention, Control, and Countermeasure Plan by Regional Administrator.

If you are the owner or operator of a facility subject to this part, you must:

(a) Notwithstanding compliance with § 112.3, whenever your facility has discharged more than 1,000 U.S. gallons of oil in a single discharge as described in § 112.1(b), or discharged more than 42 U.S. gallons of oil in each of two discharges as described in § 112.1(b), occurring within any twelve month period, submit the following information to the Regional Administrator within 60 days from the time the facility becomes subject to this section:

(1) Name of the facility;

(2) Your name;

(3) Location of the facility;

(4) Maximum storage or handling capacity of the facility and normal daily throughput;

(5) Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;

(6) An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;

(7) The cause of such discharge as described in § 112.1(b), including a failure analysis of the system or subsystem in which the failure occurred;

(8) Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence; and

(9) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or discharge.

(b) Take no action under this section until it applies to your facility. This section does not apply until the expiration of the time permitted for the initial preparation and implementation of

the Plan under §112.3, but not including any amendments to the Plan.

(c) Send to the appropriate agency or agencies in charge of oil pollution control activities in the State in which the facility is located a complete copy of all information you provided to the Regional Administrator under paragraph (a) of this section. Upon receipt of the information such State agency or agencies may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment, and other requirements necessary to prevent and to contain discharges from your facility.

(d) Amend your Plan, if after review by the Regional Administrator of the information you submit under paragraph (a) of this section, or submission of information to EPA by the State agency under paragraph (c) of this section, or after on-site review of your Plan, the Regional Administrator requires that you do so. The Regional Administrator may require you to amend your Plan if he finds that it does not meet the requirements of this part or that amendment is necessary to prevent and contain discharges from your facility.

(e) Act in accordance with this paragraph when the Regional Administrator proposes by certified mail or by personal delivery that you amend your SPCC Plan. If the owner or operator is a corporation, he must also notify by mail the registered agent of such corporation, if any and if known, in the State in which the facility is located. The Regional Administrator must specify the terms of such proposed amendment. Within 30 days from receipt of such notice, you may submit written information, views, and arguments on the proposed amendment. After considering all relevant material presented, the Regional Administrator must either notify you of any amendment required or rescind the notice. You must amend your Plan as required within 30 days after such notice, unless the Regional Administrator, for good cause, specifies another effective date. You must implement the amended Plan as soon as possible, but not later than six months after you amend your Plan, unless the Regional Administrator specifies another date.

(f) If you appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan, send the appeal to the EPA Administrator in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment under paragraph (e) of this section. You must send a complete copy of the appeal to the Regional Administrator at the time you make the appeal. The appeal must contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from you, or from any other person. The EPA Administrator may request additional information from you, or from any other person. The EPA Administrator must render a decision within 60 days of receiving the appeal and must notify you of his decision.

§112.5 Amendment of Spill Prevention, Control, and Countermeasure Plan by owners or operators.

If you are the owner or operator of a facility subject to this part, you must:

(a) Amend the SPCC Plan for your facility in accordance with the general requirements in §112.7, and with any specific section of this part applicable to your facility, when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge as described in §112.1(b). Examples of changes that may require amendment of the Plan include, but are not limited to: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures at a facility. An amendment made under this section must be prepared within six months, and implemented as soon as possible, but not later than six months following preparation of the amendment.

(b) Notwithstanding compliance with paragraph (a) of this section, complete a review and evaluation of the SPCC Plan at least once every five years from the date your facility becomes

subject to this part; or, if your facility was in operation on or before August 16, 2002, five years from the date your last review was required under this part. As a result of this review and evaluation, you must amend your SPCC Plan within six months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in §112.1(b) from the facility. You must implement any amendment as soon as possible, but not later than six months following preparation of any amendment. You must document your completion of the review and evaluation, and must sign a statement as to whether you will amend the Plan, either at the beginning or end of the Plan or in a log or an appendix to the Plan. The following words will suffice, ''I have completed review and evaluation of the SPCC Plan for (name of facility) on (date), and will (will not) amend the Plan as a result.''

(c) Have a Professional Engineer certify any technical amendment to your Plan in accordance with §112.3(d).

§112.6 [Reserved]

§112.7 General requirements for Spill Prevention, Control, and Countermeasure Plans.

If you are the owner or operator of a facility subject to this part you must prepare a Plan in accordance with good engineering practices. The Plan must have the full approval of management at a level of authority to commit the necessary resources to fully implement the Plan. You must prepare the Plan in writing. If you do not follow the sequence specified in this section for the Plan, you must prepare an equivalent Plan acceptable to the Regional Administrator that meets all of the applicable requirements listed in this part, and you must supplement it with a section cross-referencing the location of requirements listed in this part and the equivalent requirements in the other prevention plan. If the Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, you must discuss these items in separate paragraphs, and must explain separately the details of installation and operational start-up. As detailed elsewhere in this section, you must also:

(a)(1) Include a discussion of your facility's conformance with the requirements listed in this part.

(2) Comply with all applicable requirements listed in this part. Your Plan may deviate from the requirements in paragraphs (g), (h)(2) and (3), and (i) of this section and the requirements in subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2),112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11),112.13(c)(2), and 112.14(c), where applicable to a specific facility, if you provide equivalent environmental protection by some other means of spill prevention, control, or countermeasure. Where your Plan does not conform to the applicable requirements in paragraphs (g), (h)(2) and (3), and (i) of this section, or the requirements of subparts B and C of this part, except the secondary containment requirements in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c), you must state the reasons for nonconformance in your Plan and describe in detail alternate methods and how you will achieve equivalent environmental protection. If the Regional Administrator determines that the measures described in your Plan do not provide equivalent environmental protection, he may require that you amend your Plan, following the procedures in §112.4(d) and (e).

(3) Describe in your Plan the physical layout of the facility and include a facility diagram, which must mark the location and contents of each container. The facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under §112.1(d)(4). The facility diagram must also include all transfer stations and connecting pipes. You must also address in your Plan:

(i) The type of oil in each container and its storage capacity;

(ii) Discharge prevention measures including procedures for routine handling of products (loading, unloading, and facility transfers, *etc.*);

(iii) Discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of a discharge;

(iv) Countermeasures for discharge discovery, response, and cleanup (both the facility's capability and those that might be required of a contractor);

(v) Methods of disposal of recovered materials in accordance with applicable legal requirements; and

(vi) Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge as described in §112.1(b).

(4) Unless you have submitted a response plan under §112.20, provide information and procedures in your Plan to enable a person reporting a discharge as described in §112.1(b) to relate information on the exact address or location and phone number of the facility; the date and time of the discharge, the type of material discharged; estimates of the total quantity discharged; estimates of the quantity discharged as described in §112.1(b); the source of the discharge; a description of all affected media; the cause of the discharge; any damages or injuries caused by the discharge; actions being used to stop, remove, and mitigate the effects of the discharge; whether an evacuation may be needed; and, the names of individuals and/or organizations who have also been contacted.

(5) Unless you have submitted a response plan under §112.20, organize portions of the Plan describing procedures you will use when a discharge occurs in a way that will make them readily usable in an emergency, and include appropriate supporting material as appendices.

(b) Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your 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.

(c) Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, you must use one of the following prevention systems or its equivalent:

(1) For onshore facilities:

(i) Dikes, berms, or retaining walls sufficiently impervious to contain oil;

(ii) Curbing;

(iii) Culverting, gutters, or other drainage systems;

(iv) Weirs, booms, or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds; or

(vii) Sorbent materials.

(2) For offshore facilities:

(i) Curbing or drip pans; or

(ii) Sumps and collection systems.

(d) If you determine that the installation of any of the structures or pieces of equipment listed in paragraphs (c) and (h)(1) of this section, and §§112.8(c)(2), 112.8(c)(11), 112.9(c)(2), 112.10(c), 112.12(c)(2), 112.12(c)(11), 112.13(c)(2), and 112.14(c) to prevent a discharge as described in §112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under §112.20, provide in your Plan the following:

(1) An oil spill contingency plan following the provisions of part 109 of this chapter.

(2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.

(e) *Inspections, tests, and records.* Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

(f) *Personnel, training, and discharge prevention procedures.* (1) At a minimum, train your oil-handling personnel 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 facility SPCC Plan.

(2) Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management.

(3) Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in §112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures.

(g) *Security (excluding oil production facilities).* (1) Fully fence each facility handling, processing, or storing oil, and lock and/or guard entrance gates when the facility is not in production or is unattended.

(2) Ensure that the master flow and drain valves and any other valves permitting direct outward flow of the container's contents to the surface have adequate security measures so that they remain in the closed position when in non-operating or non-standby status.

(3) Lock the starter control on each oil pump in the ''off'' position and locate it at a site accessible only to authorized personnel when the pump is in a non-operating or non-standby status.

(4) Securely cap or blank-flange the loading/unloading connections of oil pipelines or facility piping when not in service or when in standby service for an extended time. This security practice also applies to piping that is emptied of liquid content either by draining or by inert gas pressure.

(5) Provide facility lighting commensurate with the type and location of the facility that will assist in the:

(i) Discovery of discharges occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.); and

(ii) Prevention of discharges occurring through acts of vandalism.

(h) *Facility tank car and tank truck loading/unloading rack (excluding offshore facilities).* (1) Where loading/unloading area drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading and unloading areas. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

(2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system in loading/unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.

(3) Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

(i) If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action.

(j) In addition to the minimal prevention standards listed under this section, include in your Plan a complete

discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines.

Subpart B—Requirements for Petroleum Oils and Non-Petroleum Oils, Except Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and Vegetable Oils (Including Oils from Seeds, Nuts, Fruits, and Kernels)

SOURCE: 67 FR 47146, July 17, 2002, unless otherwise noted.

§ 112.8 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities).

If you are the owner or operator of an onshore facility (excluding a production facility), you must:

(a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed in this section.

(b) *Facility drainage.* (1) Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

(2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, as provided in paragraphs (c)(3)(ii), (iii), and (iv) of this section.

(3) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

(4) If facility drainage is not engineered as in paragraph (b)(3) of this section, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

(5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two ''lift'' pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility.

(c) *Bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.

(2) Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

(3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

(i) Normally keep the bypass valve sealed closed.

(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in §112.1(b).

(iii) Open the bypass valve and reseal it following drainage under responsible supervision; and

(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with §§ 122.41(j)(2) and 122.41(m)(3) of this chapter.

(4) Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

(5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

(6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

(7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

(8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.

(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

(iii) Direct audible or code signal communication between the container gauger and the pumping station.

(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.

(v) You must regularly test liquid level sensing devices to ensure proper operation.

(9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in § 112.1(b).

(10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in § 112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

(d) *Facility transfer operations, pumping, and facility process.* (1) Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage,

you must undertake additional examination and corrective action as indicated by the magnitude of the damage.

(2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.

(3) Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

(4) Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.

(5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

§ 112.9 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities.

If you are the owner or operator of an onshore production facility, you must:

(a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed under this section.

(b) *Oil production facility drainage.* (1) At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in §112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under §112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in §112.8(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.

(2) Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil.

(c) *Oil production facility bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(2) Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.

(3) Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

(4) Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:

(i) Container capacity adequate to assure that a container will not overfill if a pumper/gauger is delayed in making regularly scheduled rounds.

(ii) Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.

(iii) Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.

(iv) High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.

(d) *Facility transfer operations, oil production facility.* (1) Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.

(2) Inspect saltwater (oil field brine) disposal facilities often, particularly

following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge.

(3) Have a program of flowline maintenance to prevent discharges from each flowline.

§ 112.10 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.

If you are the owner or operator of an onshore oil drilling and workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in § 112.1(b).

(c) Provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids.

(d) Install a blowout prevention (BOP) assembly and well control system before drilling below any casing string or during workover operations. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

§ 112.11 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities.

If you are the owner or operator of an offshore oil drilling, production, or workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Use oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. You must control and direct facility drains toward a central collection sump to prevent the facility from having a discharge as described in § 112.1(b). Where drains and sumps are not practicable, you must remove oil contained in collection equipment as often as necessary to prevent overflow.

(c) For facilities employing a sump system, provide adequately sized sump and drains and make available a spare pump to remove liquid from the sump and assure that oil does not escape. You must employ a regularly scheduled preventive maintenance inspection and testing program to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(d) At facilities with areas where separators and treaters are equipped with dump valves which predominantly fail in the closed position and where pollution risk is high, specially equip the facility to prevent the discharge of oil. You must prevent the discharge of oil by:

(1) Extending the flare line to a diked area if the separator is near shore;

(2) Equipping the separator with a high liquid level sensor that will automatically shut in wells producing to the separator; or

(3) Installing parallel redundant dump valves.

(e) Equip atmospheric storage or surge containers with high liquid level sensing devices that activate an alarm or control the flow, or otherwise prevent discharges.

(f) Equip pressure containers with high and low pressure sensing devices that activate an alarm or control the flow.

(g) Equip containers with suitable corrosion protection.

(h) Prepare and maintain at the facility a written procedure within the Plan for inspecting and testing pollution prevention equipment and systems.

(i) Conduct testing and inspection of the pollution prevention equipment and systems at the facility on a scheduled periodic basis, commensurate with the complexity, conditions, and circumstances of the facility and any other appropriate regulations. You

must use simulated discharges for testing and inspecting human and equipment pollution control and countermeasure systems.

(j) Describe in detailed records surface and subsurface well shut-in valves and devices in use at the facility for each well sufficiently to determine their method of activation or control, such as pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms.

(k) Install a BOP assembly and well control system during workover operations and before drilling below any casing string. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while the BOP assembly and well control system are on the well.

(l) Equip all manifolds (headers) with check valves on individual flowlines.

(m) Equip the flowline with a high pressure sensing device and shut-in valve at the wellhead if the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves. Alternatively you may provide a pressure relief system for flowlines.

(n) Protect all piping appurtenant to the facility from corrosion, such as with protective coatings or cathodic protection.

(o) Adequately protect sub-marine piping appurtenant to the facility against environmental stresses and other activities such as fishing operations.

(p) Maintain sub-marine piping appurtenant to the facility in good operating condition at all times. You must periodically and according to a schedule inspect or test such piping for failures. You must document and keep a record of such inspections or tests at the facility.

Subpart C—Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and for Vegetable Oils, including Oils from Seeds, Nuts, Fruits, and Kernels.

SOURCE: 67 FR 57149, July 17, 2002, unless otherwise noted.

§ 112.12 Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)

If you are the owner or operator of an onshore facility (excluding a production facility), you must:

(a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed in this section.

(b) *Facility drainage.* (1) Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

(2) Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, subject to the requirements of paragraphs (c)(3)(ii), (iii), and (iv) of this section.

(3) Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate

catchment basins in areas subject to periodic flooding.

(4) If facility drainage is not engineered as in paragraph (b)(3) of this section, equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

(5) Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two ''lift'' pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility.

(c) *Bulk storage containers.* (1) Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.

(2) Construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

(3) Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

(i) Normally keep the bypass valve sealed closed.

(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in §112.1(b).

(iii) Open the bypass valve and reseal it following drainage under responsible supervision; and

(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with §§122.41(j)(2) and 122.41(m)(3) of this chapter.

(4) Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection compatible with local soil conditions. You must regularly leak test such completely buried metallic storage tanks.

(5) Not use partially buried or bunkered metallic tanks for the storage of oil, unless you protect the buried section of the tank from corrosion. You must protect partially buried and bunkered tanks from corrosion by coatings or cathodic protection compatible with local soil conditions.

(6) Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

(7) Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the steam return or exhaust lines through a settling tank, skimmer, or other separation or retention system.

(8) Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid level alarms with an audible or visual signal at a constantly

attended operation or surveillance station. In smaller facilities an audible air vent may suffice.

(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

(iii) Direct audible or code signal communication between the container gauger and the pumping station.

(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.

(v) You must regularly test liquid level sensing devices to ensure proper operation.

(9) Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge as described in §112.1(b).

(10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

(11) Position or locate mobile or portable oil storage containers to prevent a discharge as described in §112.1(b). You must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.

(d) *Facility transfer operations, pumping, and facility process.* (1) Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in part 280 of this chapter or a State program approved under part 281 of this chapter. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage.

(2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.

(3) Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

(4) Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.

(5) Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

§112.13 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil production facilities.

If you are the owner or operator of an onshore production facility, you must:

(a) Meet the general requirements for the Plan listed under §112.7, and the specific discharge prevention and containment procedures listed under this section.

(b) *Oil production facility drainage.* (1) At tank batteries and separation and treating areas where there is a reasonable possibility of a discharge as described in §112.1(b), close and seal at all times drains of dikes or drains of equivalent measures required under §112.7(c)(1), except when draining uncontaminated rainwater. Prior to drainage, you must inspect the diked area and take action as provided in §112.12(c)(3)(ii), (iii), and (iv). You must remove accumulated oil on the rainwater and return it to storage or dispose of it in accordance with legally approved methods.

(2) Inspect at regularly scheduled intervals field drainage systems (such as drainage ditches or road ditches), and oil traps, sumps, or skimmers, for an accumulation of oil that may have resulted from any small discharge. You must promptly remove any accumulations of oil.

(c) *Oil production facility bulk storage containers.* (1) Not use a container for

the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(2) Provide all tank battery, separation, and treating facility installations with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must safely confine drainage from undiked areas in a catchment basin or holding pond.

(3) Periodically and upon a regular schedule visually inspect each container of oil for deterioration and maintenance needs, including the foundation and support of each container that is on or above the surface of the ground.

(4) Engineer or update new and old tank battery installations in accordance with good engineering practice to prevent discharges. You must provide at least one of the following:

(i) Container capacity adequate to assure that a container will not overfill if a pumper/gauger is delayed in making regularly scheduled rounds.

(ii) Overflow equalizing lines between containers so that a full container can overflow to an adjacent container.

(iii) Vacuum protection adequate to prevent container collapse during a pipeline run or other transfer of oil from the container.

(iv) High level sensors to generate and transmit an alarm signal to the computer where the facility is subject to a computer production control system.

(d) *Facility transfer operations, oil production facility.* (1) Periodically and upon a regular schedule inspect all aboveground valves and piping associated with transfer operations for the general condition of flange joints, valve glands and bodies, drip pans, pipe supports, pumping well polish rod stuffing boxes, bleeder and gauge valves, and other such items.

(2) Inspect saltwater (oil field brine) disposal facilities often, particularly following a sudden change in atmospheric temperature, to detect possible system upsets capable of causing a discharge.

(3) Have a program of flowline maintenance to prevent discharges from each flowline.

§ 112.14 Spill Prevention, Control, and Countermeasure Plan requirements for onshore oil drilling and workover facilities.

If you are the owner or operator of an onshore oil drilling and workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Position or locate mobile drilling or workover equipment so as to prevent a discharge as described in § 112.1(b).

(c) Provide catchment basins or diversion structures to intercept and contain discharges of fuel, crude oil, or oily drilling fluids.

(d) Install a blowout prevention (BOP) assembly and well control system before drilling below any casing string or during workover operations. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

§ 112.15 Spill Prevention, Control, and Countermeasure Plan requirements for offshore oil drilling, production, or workover facilities.

If you are the owner or operator of an offshore oil drilling, production, or workover facility, you must:

(a) Meet the general requirements listed under § 112.7, and also meet the specific discharge prevention and containment procedures listed under this section.

(b) Use oil drainage collection equipment to prevent and control small oil discharges around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and associated equipment. You must control and direct facility drains toward a central collection sump to prevent the facility from having a discharge as described in § 112.1(b). Where drains and sumps are not practicable,

you must remove oil contained in collection equipment as often as necessary to prevent overflow.

(c) For facilities employing a sump system, provide adequately sized sump and drains and make available a spare pump to remove liquid from the sump and assure that oil does not escape. You must employ a regularly scheduled preventive maintenance inspection and testing program to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(d) At facilities with areas where separators and treaters are equipped with dump valves which predominantly fail in the closed position and where pollution risk is high, specially equip the facility to prevent the discharge of oil. You must prevent the discharge of oil by:

(1) Extending the flare line to a diked area if the separator is near shore;

(2) Equipping the separator with a high liquid level sensor that will automatically shut in wells producing to the separator; or

(3) Installing parallel redundant dump valves.

(e) Equip atmospheric storage or surge containers with high liquid level sensing devices that activate an alarm or control the flow, or otherwise prevent discharges.

(f) Equip pressure containers with high and low pressure sensing devices that activate an alarm or control the flow.

(g) Equip containers with suitable corrosion protection.

(h) Prepare and maintain at the facility a written procedure within the Plan for inspecting and testing pollution prevention equipment and systems.

(i) Conduct testing and inspection of the pollution prevention equipment and systems at the facility on a scheduled periodic basis, commensurate with the complexity, conditions, and circumstances of the facility and any other appropriate regulations. You must use simulated discharges for testing and inspecting human and equipment pollution control and countermeasure systems.

(j) Describe in detailed records surface and subsurface well shut-in valves and devices in use at the facility for each well sufficiently to determine their method of activation or control, such as pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms.

(k) Install a BOP assembly and well control system during workover operations and before drilling below any casing string. The BOP assembly and well control system must be capable of controlling any well-head pressure that may be encountered while that BOP assembly and well control system are on the well.

(l) Equip all manifolds (headers) with check valves on individual flowlines.

(m) Equip the flowline with a high pressure sensing device and shut-in valve at the wellhead if the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves. Alternatively you may provide a pressure relief system for flowlines.

(n) Protect all piping appurtenant to the facility from corrosion, such as with protective coatings or cathodic protection.

(o) Adequately protect sub-marine piping appurtenant to the facility against environmental stresses and other activities such as fishing operations.

(p) Maintain sub-marine piping appurtenant to the facility in good operating condition at all times. You must periodically and according to a schedule inspect or test such piping for failures. You must document and keep a record of such inspections or tests at the facility.

Subpart D—Response Requirements

§ 112.20 Facility response plans.

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response

plan to the Regional Administrator, according to the following provisions:

(1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101–380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

(ii) For a newly constructed facility that commences operation after August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(4) *Preparation and submission of response plans—Animal fat and vegetable oil facilities.* The owner or operator of any non-transportation-related facility that handles, stores, or transports animal fats and vegetable oils must prepare and submit a facility response plan as follows:

(i) *Facilities with approved plans.* The owner or operator of a facility with a facility response plan that has been approved under paragraph (c) of this section by July 31, 2000 need not prepare or submit a revised plan except as otherwise required by paragraphs (b), (c), or (d) of this section.

(ii) *Facilities with plans that have been submitted to the Regional Administrator.* Except for facilities with approved plans as provided in paragraph (a)(4)(i) of this section, the owner or operator of a facility that has submitted a response plan to the Regional Administrator prior to July 31, 2000 must review the plan to determine if it meets or exceeds the applicable provisions of this part. An owner or operator need not prepare or submit a new plan if the existing plan meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must prepare and submit a new plan by September 28, 2000.

(iii) *Newly regulated facilities.* The owner or operator of a newly constructed facility that commences operation after July 31, 2000 must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(ii) of this section. The plan must meet or exceed the applicable provisions of this part. The owner or operator of an existing facility that must prepare and submit a plan after July 31, 2000 as a result of a planned or unplanned change in facility characteristics that causes the facility to become regulated under paragraph (f)(1) of this section, must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(iii) or (iv) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.

(iv) *Facilities amending existing plans.* The owner or operator of a facility submitting an amended plan in accordance with paragraph (d) of this section after July 31, 2000, including plans that had been previously approved, must also review the plan to determine if it meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must revise and resubmit revised portions of an amended plan to the Regional Administrator in accordance with paragraph (d) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.

(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:

(1) Promptly review the facility response plan;

(2) Require amendments to any response plan that does not meet the requirements of this section;

(3) Approve any response plan that meets the requirements of this section; and

(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

(d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;

(iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

(f)(1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-I to Appendix C to this part:

(i) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or

(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;

(B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III of the ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;

(C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or

(D) The facility has had a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2)(i) To determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

(ii) Any person, including a member of the public or any representative from a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

(3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

(i) Frequency of past discharges;

(ii) Proximity to navigable waters;

(iii) Age of oil storage tanks; and

(iv) Other facility-specific and Region-specific information, including local impacts on public health.

(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

(3) The owner or operator shall review and update the facility response

plan periodically to reflect changes at the facility.

(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless you have prepared an equivalent response plan acceptable to the Regional Administrator to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:

(1) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;

(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;

(iii) A description of information to pass to response personnel in the event of a reportable discharge;

(iv) A description of the facility's response equipment and its location;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of discharged oil; and

(viii) A diagram of the facility.

(2) *Facility information.* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.

(3) *Information about emergency response.* The response plan shall include:

(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);

(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;

(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iv) A description of information to pass to response personnel in the event of a reportable discharge;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;

(vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(viii) A diagram of evacuation routes; and

(ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:

(A) Activate internal alarms and hazard communication systems to notify all facility personnel;

(B) Notify all response personnel, as needed;

(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;

(E) Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;

(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

(G) Assess and implement prompt removal actions to contain and remove the substance released;

(H) Coordinate rescue and response actions as previously arranged with all response personnel;

(I) Use authority to immediately access company funding to initiate cleanup activities; and

(J) Direct cleanup activities until properly relieved of this responsibility.

(4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(5) *Response planning levels.* The response plan shall include discussion of specific planning scenarios for:

(i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;

(ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and

(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.

(6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.

(7) *Plan implementation.* The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of discharged oil.

(8) *Self-inspection, drills/exercises, and response training.* The response plan shall include:

(i) A checklist and record of inspections for tanks, secondary containment, and response equipment;

(ii) A description of the drill/exercise program to be carried out under the response plan as described in § 112.21;

(iii) A description of the training program to be carried out under the response plan as described in § 112.21; and

(iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.

(9) *Diagrams.* The response plan shall include site plan and drainage plan diagrams.

(10) *Security systems.* The response plan shall include a description of facility security systems.

(11) *Response plan cover sheet.* The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.

(i)(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(3) After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

[59 FR 34098, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 66 FR 34560, June 29, 2001; 67 FR 47151, July 17, 2002]

§ 112.21 Facility response training and drills/exercises.

(a) The owner or operator of any facility required to prepare a facility response plan under § 112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in § 112.20(h)(8).

(b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

(1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.

(2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.

(3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.

(c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 13, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

[59 FR 34101, July 1, 1994, as amended at 65 FR 40798, June 30, 2000]

APPENDIX A TO PART 112—MEMORANDUM OF UNDERSTANDING BETWEEN THE SECRETARY OF TRANSPORTATION AND THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) *Non-transportation-related onshore and offshore facilities* means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) *Transportation-related onshore and offshore facilities* means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a non-transportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

APPENDIX B TO PART 112—MEMORANDUM OF UNDERSTANDING AMONG THE SECRETARY OF THE INTERIOR, SECRETARY OF TRANSPORTATION, AND ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

PURPOSE

This Memorandum of Understanding (MOU) establishes the jurisdictional responsibilities for offshore facilities, including pipelines, pursuant to section 311 (j)(1)(c), (j)(5), and (j)(6)(A) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (Public Law 101–380). The Secretary of the Department of the Interior (DOI), Secretary of the Department of Transportation (DOT), and Administrator of the Environmental Protection Agency (EPA) agree to the division of responsibilities set forth below for spill prevention and control, response planning, and equipment inspection activities pursuant to those provisions.

BACKGROUND

Executive Order (E.O.) 12777 (56 FR 54757) delegates to DOI, DOT, and EPA various responsibilities identified in section 311(j) of the CWA. Sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 assigned to DOI spill prevention and control, contingency planning, and equipment inspection activities associated with offshore facilities. Section 311(a)(11) defines the term ''offshore facility'' to include facilities of any kind located in, on, or under navigable waters of the United States. By using this definition, the traditional DOI role of regulating facilities on the Outer Continental Shelf is expanded by E.O. 12777 to include inland lakes, rivers, streams, and any other inland waters.

RESPONSIBILITIES

Pursuant to section 2(i) of E.O. 12777, DOI redelegates, and EPA and DOT agree to assume, the functions vested in DOI by sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 as set forth below. For purposes of this MOU, the term ''coast line'' shall be defined as in the Submerged Lands Act (43 U.S.C. 1301(c)) to mean ''the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters.''

1. To EPA, DOI redelegates responsibility for non-transportation-related offshore facilities located landward of the coast line.

2. To DOT, DOI redelegates responsibility for transportation-related facilities, including pipelines, located landward of the coast line. The DOT retains jurisdiction for deepwater ports and their associated seaward pipelines, as delegated by E.O. 12777.

3. The DOI retains jurisdiction over facilities, including pipelines, located seaward of the coast line, except for deepwater ports and associated seaward pipelines delegated by E.O. 12777 to DOT.

EFFECTIVE DATE

This MOU is effective on the date of the final execution by the indicated signatories.

LIMITATIONS

1. The DOI, DOT, and EPA may agree in writing to exceptions to this MOU on a facility-specific basis. Affected parties will receive notification of the exceptions.

2. Nothing in this MOU is intended to replace, supersede, or modify any existing agreements between or among DOI, DOT, or EPA.

MODIFICATION AND TERMINATION

Any party to this agreement may propose modifications by submitting them in writing to the heads of the other agency/department. No modification may be adopted except with the consent of all parties. All parties shall indicate their consent to or disagreement with any proposed modification within 60 days of receipt. Upon the request of any party, representatives of all parties shall meet for the purpose of considering exceptions or modifications to this agreement. This MOU may be terminated only with the mutual consent of all parties.

Dated: November 8, 1993.
Bruce Babbitt,
Secretary of the Interior.
Dated: December 14, 1993.
Federico Peña,
Secretary of Transportation.
Dated: February 3, 1994.
Carol M. Browner,
Administrator, Environmental Protection Agency.

[59 FR 34102, July 1, 1994]

APPENDIX C TO PART 112—SUBSTANTIAL HARM CRITERIA

1.0 INTRODUCTION

The flowchart provided in Attachment C–I to this appendix shows the decision tree with the criteria to identify whether a facility ''could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines.'' In addition, the Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

1.1 Definitions

1.1.1 *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

1.1.2 Higher Volume Port Areas include

(1) Boston, MA;

(2) New York, NY;

(3) Delaware Bay and River to Philadelphia, PA;

(4) St. Croix, VI;

(5) Pascagoula, MS;

(6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA;

(7) Louisiana Offshore Oil Port (LOOP), LA;

(8) Lake Charles, LA;

(9) Sabine-Neches River, TX;

(10) Galveston Bay and Houston Ship Channel, TX;

(11) Corpus Christi, TX;

(12) Los Angeles/Long Beach Harbor, CA;

(13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA;

(14) Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound, WA;

(15) Prince William Sound, AK; and

(16) Others as specified by the Regional Administrator for any EPA Region.

1.1.3 *Inland Area* means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR 80.740—80.850). The inland area does not include the Great Lakes.

1.1.4 *Rivers and Canals* means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigating that have project depths of 12 feet or less.

2.0 DESCRIPTION OF SCREENING CRITERIA FOR THE SUBSTANTIAL HARM FLOWCHART

A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA in accordance with Appendix F to this part. A description of the screening criteria for the substantial harm flowchart is provided below:

2.1 *Non-Transportation-Related Facilities With a Total Oil Storage Capacity Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil.* A non-transportation-related facility with a total oil storage capacity greater than or equal to 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water. These facilities are located adjacent to navigable water.

2.2 *Lack of Adequate Secondary Containment at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* Any facility with a total oil storage capacity greater than or equal to 1 million gallons without secondary containment sufficiently large to contain the capacity of the largest aboveground oil storage tank within each area plus sufficient freeboard to allow for precipitation must submit a response plan to EPA. Secondary containment structures that meet the standard of good engineering practice for the purposes of this part include berms, dikes, retaining walls, curbing, culverts, gutters, or other drainage systems.

2.3 *Proximity to Fish and Wildlife and Sensitive Environments at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury (as defined at 40 CFR 112.2) to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan. Facility owners or operators must determine the distance at which an oil discharge could cause injury to fish and wildlife and sensitive environments using the appropriate formula presented in Attachment C–III to this appendix or a comparable formula.

2.4 *Proximity to Public Drinking Water Intakes at Facilities with a Total Oil Storage Capacity Greater than or Equal to 1 Million Gallons* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a public drinking water intake, which is analogous to a public water system as described at 40 CFR 143.2(c). The distance at which an oil discharge from an SPCC-regulated facility would shut down a public drinking water intake shall be calculated using the appropriate formula presented in Attachment C–III to this appendix or a comparable formula.

2.5 *Facilities That Have Experienced Reportable Oil Discharges in an Amount Greater Than or Equal to 10,000 Gallons Within the Past 5 Years and That Have a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility's oil spill history within the past 5 years shall be considered in the evaluation for substantial harm. Any facility with a total oil storage capacity greater than or equal to 1 million gallons that has experienced a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the past 5 years must submit a response plan to EPA.

3.0 Certification for Facilities That Do Not Pose Substantial Harm

If the facility does not meet the substantial harm criteria listed in Attachment C–I to this appendix, the owner or operator shall complete and maintain at the facility the certification form contained in Attachment C–II to this appendix. In the event an alternative formula that is comparable to the one in this appendix is used to evaluate the substantial harm criteria, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

4.0 References

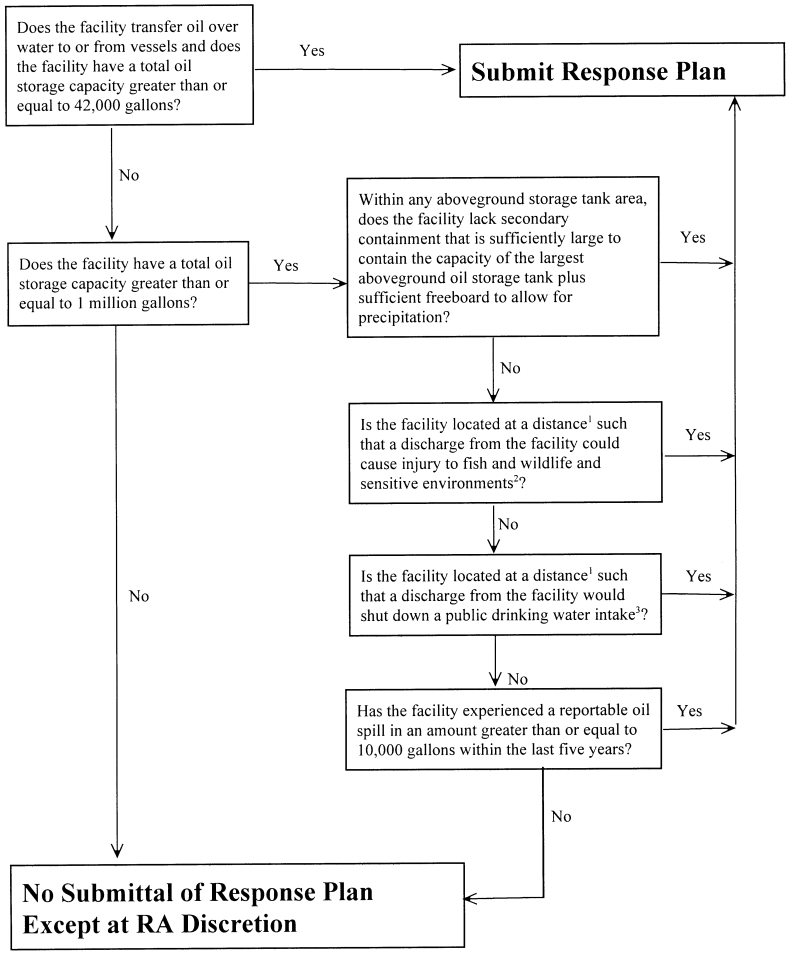
Chow, V.T. 1959. Open Channel Hydraulics. McGraw Hill.

USCG IFR (58 FR 7353, February 5, 1993). This document is available through EPA's rulemaking docket as noted in Appendix E to this part, section 13.

ATTACHMENTS TO APPENDIX C

Attachment C-I

Flowchart of Criteria for Substantial Harm



[1] Calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula.

[2] For further description of fish and wildlife and sensitive environments, see Appendices I,II, and III to DOC/NOAA's "Guidance for Facility and vessel response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

[3] Public drinking water intakes are analogous to public water systems as described at CFR 143.2(c).

ATTACHMENT C-II—CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: _____
Facility Address: _____

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 _____

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 aboveground oil storage tank area?

Yes _____ No _____

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 (as calculated using the appropriate formula in Attachment C–III to this appendix or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan.

Yes _____ No _____

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 (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula[1]) such that a discharge from the facility would shut down a public drinking water intake[2]?

Yes _____ No _____

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 discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____ No _____

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.

_____
Signature

_____
Name (please type or print)

_____
Title

_____
Date

ATTACHMENT C-III—CALCULATION OF THE PLANNING DISTANCE

1.0 Introduction

1.1 The facility owner or operator must evaluate whether the facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments or disrupt operations at a public drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still, tidal influence, and moving navigable waters. EPA has determined that the primary concern for calculation of a planning distance is the transport of oil in navigable waters during adverse weather conditions. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water. The method to determine oil transport on tidal influence areas is based on the type of oil discharged and the distance down current during ebb tide and up current during flood tide to the point of maximum tidal influence.

1.2 EPA's formulas were designed to be simple to use. However, facility owners or operators may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such comparable formulas may result in different planning distances than EPA's formulas. In the event that an alternative formula that is comparable to one contained in this appendix is used to evaluate the criterion in 40 CFR 112.20(f)(1)(ii)(B) or (f)(1)(ii)(C), the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula and shall notify the Regional Administrator in

[1] If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2] For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

writing that an alternative formula was used.[1]

1.3 A regulated facility may meet the criteria for the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the substantial harm criteria because of inadequate secondary containment or oil spill history, as listed in the flowchart in Attachment C–I to this appendix, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment or oil spill history as listed in the flowchart, calculation of a planning distance for proximity to fish and wildlife and sensitive environments and public drinking water intakes is required, unless it is clear without performing the calculation (e.g., the facility is located in a wetland) that these areas would be impacted.

1.4 A facility owner or operator who must perform a planning distance calculation on navigable water is only required to do so for the type of navigable water conditions (i.e., moving water, still water, or tidal- influenced water) applicable to the facility. If a facility owner or operator determines that more than one type of navigable water condition applies, then the facility owner or operator is required to perform a planning distance calculation for each navigable water type to determine the greatest single distance that oil may be transported. As a result, the final planning distance for oil transport on water shall be the greatest individual distance rather than a summation of each calculated planning distance.

1.5 The planning distance formula for transport on moving waterways contains three variables: the velocity of the navigable water (v), the response time interval (t), and a conversion factor (c). The velocity, v, is determined by using the Chezy-Manning equation, which, in this case, models the flood flow rate of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners or operators. Manning's Roughness Coefficient (for flood flow rates), n, can be determined from Table 1 of this attachment. The hydraulic radius, r, can be estimated using the average mid-channel depth from charts provided by the sources listed in Table 2 of this attachment. The average slope of the river, s, can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2 of this attachment.

1.6 Table 3 of this attachment contains specified time intervals for estimating the arrival of response resources at the scene of a discharge. Assuming no prior planning, response resources should be able to arrive at the discharge site within 12 hours of the discovery of any oil discharge in Higher Volume Port Areas and within 24 hours in Great Lakes and all other river, canal, inland, and nearshore areas. The specified time intervals in Table 3 of Appendix C are to be used only to aid in the identification of whether a facility could cause substantial harm to the environment. Once it is determined that a plan must be developed for the facility, the owner or operator shall reference Appendix E to this part to determine appropriate resource levels and response times. The specified time intervals of this appendix include a 3-hour time period for deployment of boom and other response equipment. The Regional Administrator may identify additional areas as appropriate.

2.0 Oil Transport on Moving Navigable Waters

2.1 The facility owner or operator must use the following formula or a comparable formula as described in §112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

$d = v \times t \times c$; where

d: the distance downstream from a facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);

v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2 of this attachment);

t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c: constant conversion factor 0.68 sec/mile/hr/ft (3600 sec/hr ÷ 5280 ft/mile).

2.2 Chezy-Manning's equation is used to determine velocity:

$v = 1.5/n \times r^{2/3} \times s^{1/2}$; where

v=the velocity of the river of concern (in ft/sec);

n=Manning's Roughness Coefficient from Table 1 of this attachment;

r=the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by 0.667

[1] For persistent oils or non-persistent oils, a worst case trajectory model (i.e., an alternative formula) may be substituted for the distance formulas described in still, moving, and tidal waters, subject to Regional Administrator's review of the model. An example of an alternative formula that is comparable to the one contained in this appendix would be a worst case trajectory calculation based on credible adverse winds, currents, and/or river stages, over a range of seasons, weather conditions, and river stages. Based on historical information or a spill trajectory model, the Agency may require that additional fish and wildlife and sensitive environments or public drinking water intakes also be protected.

(sources for obtaining the mid-channel depth are listed in Table 2 of this attachment); and

s=the average slope of the river (unitless) obtained from U.S. Geological Survey topographic maps at the address listed in Table 2 of this attachment.

TABLE 1—MANNING'S ROUGHNESS COEFFICIENT FOR NATURAL STREAMS

[NOTE: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)
Minor Streams (Top Width <100 ft.)	
Clean:	
Straight	0.03
Winding	0.04
Sluggish (Weedy, deep pools):	
No trees or brush	0.06
Trees and/or brush	0.10
Major Streams (Top Width >100 ft.)	
Regular section:	
(No boulders/brush)	0.035
Irregular section:	
(Brush)	0.05

TABLE 2—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION

All of the charts and related publications for navigational waters may be ordered from:
Distribution Branch
(N/CG33)
National Ocean Service
Riverdale, Maryland 20737–1199
Phone: (301) 436–6990
There will be a charge for materials ordered and a VISA or Mastercard will be accepted.
The mid-channel depth to be used in the calculation of the hydraulic radius (r) can be obtained directly from the following sources:
Charts of Canadian Coastal and Great Lakes Waters:
Canadian Hydrographic Service
Department of Fisheries and Oceans Institute
P.O. Box 8080
1675 Russell Road
Ottawa, Ontario KIG 3H6
Canada
Phone: (613) 998–4931
Charts and Maps of Lower Mississippi River (Gulf of Mexico to Ohio River and St. Francis, White, Big Sunflower, Atchafalaya, and other rivers):
U.S. Army Corps of Engineers
Vicksburg District
P.O. Box 60
Vicksburg, Mississippi 39180
Phone: (601) 634–5000
Charts of Upper Mississippi River and Illinois Waterway to Lake Michigan:
U.S. Army Corps of Engineers
Rock Island District
P.O. Box 2004
Rock Island, Illinois 61204
Phone: (309) 794–5552
Charts of Missouri River:
U.S. Army Corps of Engineers
Omaha District
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102
Phone: (402) 221–3900
Charts of Ohio River:
U.S. Army Corps of Engineers
Ohio River Division
P.O. Box 1159
Cincinnati, Ohio 45201
Phone: (513) 684–3002
Charts of Tennessee Valley Authority Reservoirs, Tennessee River and Tributaries:
Tennessee Valley Authority
Maps and Engineering Section
416 Union Avenue
Knoxville, Tennessee 37902
Phone: (615) 632–2921
Charts of Black Warrior River, Alabama River, Tombigbee River, Apalachicola River and Pearl River:
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628–0001
Phone: (205) 690–2511
The average slope of the river (s) may be obtained from topographic maps:
U.S. Geological Survey
Map Distribution
Federal Center
Bldg. 41
Box 25286
Denver, Colorado 80225
Additional information can be obtained from the following sources:

1. The State's Department of Natural Resources (DNR) or the State's Aids to Navigation office;
2. A knowledgeable local marina operator; or
3. A knowledgeable local water authority (e.g., State water commission)

2.3 The average slope of the river (s) can be determined from the topographic maps using the following steps:

(1) Locate the facility on the map.

(2) Find the Normal Pool Elevation at the point of discharge from the facility into the water (A).

(3) Find the Normal Pool Elevation of the public drinking water intake or fish and wildlife and sensitive environment located downstream (B) (Note: The owner or operator should use a minimum of 20 miles downstream as a cutoff to obtain the average slope if the location of a specific public drinking water intake or fish and wildlife and sensitive environment is unknown).

(4) If the Normal Pool Elevation is not available, the elevation contours can be used to find the slope. Determine elevation of the water at the point of discharge from the facility (A). Determine the elevation of the

water at the appropriate distance downstream (B). The formula presented below can be used to calculate the slope.

(5) Determine the distance (in miles) between the facility and the public drinking water intake or fish and wildlife and sensitive environments (C).

(6) Use the following formula to find the slope, which will be a unitless value: Average Slope=[(A−B) (ft)/C (miles)] × [1 mile/5280 feet]

2.4 If it is not feasible to determine the slope and mid-channel depth by the Chezy-Manning equation, then the river velocity can be approximated on- site. A specific length, such as 100 feet, can be marked off along the shoreline. A float can be dropped into the stream above the mark, and the time required for the float to travel the distance can be used to determine the velocity in feet per second. However, this method will not yield an average velocity for the length of the stream, but a velocity only for the specific location of measurement. In addition, the flow rate will vary depending on weather conditions such as wind and rainfall. It is recommended that facility owners or operators repeat the measurement under a variety of conditions to obtain the most accurate estimate of the surface water velocity under adverse weather conditions.

2.5 The planning distance calculations for moving and still navigable waters are based on worst case discharges of persistent oils. Persistent oils are of concern because they can remain in the water for significant periods of time and can potentially exist in large quantities downstream. Owners or operators of facilities that store persistent as well as non-persistent oils may use a comparable formula. The volume of oil discharged is not included as part of the planning distance calculation for moving navigable waters. Facilities that will meet this substantial harm criterion are those with facility capacities greater than or equal to 1 million gallons. It is assumed that these facilities are capable of having an oil discharge of sufficient quantity to cause injury to fish and wildlife and sensitive environments or shut down a public drinking water intake. While owners or operators of transfer facilities that store greater than or equal to 42,000 gallons are not required to use a planning distance formula for purposes of the substantial harm criteria, they should use a planning distance calculation in the development of facility-specific response plans.

TABLE 3—SPECIFIED TIME INTERVALS

Operating areas	Substantial harm planning time (hrs)
Higher volume port area.	12 hour arrival+3 hour deployment=15 hours.
Great Lakes ...	24 hour arrival+3 hour deployment=27 hours.
All other rivers and canals, inland, and nearshore areas.	24 hour arrival+3 hour deployment=27 hours.

2.6 *Example of the Planning Distance Calculation for Oil Transport on Moving Navigable Waters.* The following example provides a sample calculation using the planning distance formula for a facility discharging oil into the Monongahela River:

(1) Solve for v by evaluating n, r, and s for the Chezy-Manning equation:

Find the roughness coefficient, n, on Table 1 of this attachment for a regular section of a major stream with a top width greater than 100 feet. The top width of the river can be found from the topographic map.

n=0.035.

Find slope, s, where A=727 feet, B=710 feet, and C=25 miles.

Solving:

$s=[(727\ ft-1710\ ft)/25\ miles]\times[1\ mile/5280\ feet]=1.3\times10^{-4}$

The average mid-channel depth is found by averaging the mid-channel depth for each mile along the length of the river between the facility and the public drinking water intake or the fish or wildlife or sensitive environment (or 20 miles downstream if applicable). This value is multiplied by 0.667 to obtain the hydraulic radius. The mid-channel depth is found by obtaining values for r and s from the sources shown in Table 2 for the Monongahela River.

Solving:

r=0.667×20 feet=13.33 feet

Solve for v using:

$v=1.5/n\times r^{2/3}\times s^{1/2}$:

$v=[1.5/0.035]\times(13.33)^{2/3}\times(1.3\times10^{-4})^{1/2}$

v=2.73 feet/second

(2) Find t from Table 3 of this attachment. The Monongahela River's resource response time is 27 hours.

(3) Solve for planning distance, d:

d=v×t×c

d=(2.73 ft/sec)×(27 hours)×(0.68 secω mile/hrω ft)

d=50 miles

Therefore, 50 miles downstream is the appropriate planning distance for this facility.

3.0 Oil Transport on Still Water

3.1 For bodies of water including lakes or ponds that do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners or operators of facilities located next to still water bodies may use a comparable means of calculating

the planning distance. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable calculation must be attached to the response plan cover sheet.

3.2 *Example of the Planning Distance Calculation for Oil Transport on Still Water.* To assist those facilities which could potentially discharge into a still body of water, the following analysis was performed to provide an example of the type of formula that may be used to calculate the planning distance. For this example, a worst case discharge of 2,000,000 gallons is used.

(1) The surface area in square feet covered by an oil discharge on still water, A1, can be determined by the following formula,[2] where V is the volume of the discharge in gallons and C is a constant conversion factor:

$A_1=10^5\times V^{3/4}\times C$

$C=0.1643$

$A_1=10^5\times(2{,}000{,}000 \text{ gallons})^{3/4}\times(0.1643)$

$A_1=8.74\times10^8 \text{ ft}^2$

(2) The spreading formula is based on the theoretical condition that the oil will spread uniformly in all directions forming a circle. In reality, the outfall of the discharge will direct the oil to the surface of the water where it intersects the shoreline. Although the oil will not spread uniformly in all directions, it is assumed that the discharge will spread from the shoreline into a semi-circle (this assumption does not account for winds or wave action).

(3) The area of a circle=† r^2

(4) To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided by 2 and is designated as A_2.

$A_2=(\dagger r^2)/2$

Solving for the radius, r, using the relationship $A_1=A_2$: $8.74\times10^8 \text{ ft}^2=(\dagger^2)/2$

Therefore, r=23,586 ft

r=23,586 ft÷5,280 ft/mile=4.5 miles

Assuming a 20 knot wind under storm conditions:

1 knot=1.15 miles/hour

20 knots×1.15 miles/hour/knot=23 miles/hr

Assuming that the oil slick moves at 3 percent of the wind's speed:[3]

23 miles/hour×0.03=0.69 miles/hour

(5) To estimate the distance that the oil will travel, use the times required for response resources to arrive at different geographic locations as shown in Table 3 of this attachment.

For example:

For Higher Volume Port Areas: 15 hrs×0.69 miles/hr=10.4 miles

For Great Lakes and all other areas: 27 hrs×0.69 miles/hr=18.6 miles

(6) The total distance that the oil will travel from the point of discharge, including the distance due to spreading, is calculated as follows:

Higher Volume Port Areas: d=10.4+4.5 miles or approximately 15 miles

Great Lakes and all other areas: d=18.6+4.5 miles or approximately 23 miles

4.0 Oil Transport on Tidal-Influence Areas

4.1 The planning distance method for tidal influence navigable water is based on worst case discharges of persistent and non-persistent oils. Persistent oils are of primary concern because they can potentially cause harm over a greater distance. For persistent oils discharged into tidal waters, the planning distance is 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide.

4.2 For non-persistent oils discharged into tidal waters, the planning distance is 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.

4.3 *Example of Determining the Planning Distance for Two Types of Navigable Water Conditions.* Below is an example of how to determine the proper planning distance when a facility could impact two types of navigable water conditions: moving water and tidal water.

(1) Facility X stores persistent oil and is located downstream from locks along a slow moving river which is affected by tides. The river velocity, v, is determined to be 0.5 feet/second from the Chezy-Manning equation used to calculate oil transport on moving navigable waters. The specified time interval, t, obtained from Table 3 of this attachment for river areas is 27 hours. Therefore, solving for the planning distance, d:

$d=v\times t\times c$

$d=(0.5 \text{ ft/sec})\times(27 \text{ hours})\times(0.68 \text{ secmile/hrft})$

$d=9.18$ miles.

(2) However, the planning distance for maximum tidal influence down current during ebb tide is 15 miles, which is greater than the calculated 9.18 miles. Therefore, 15 miles downstream is the appropriate planning distance for this facility.

5.0 Oil Transport Over Land

5.1 Facility owners or operators must evaluate the potential for oil to be transported over land to navigable waters of the United States. The owner or operator must evaluate the likelihood that portions of a worst case discharge would reach navigable

[2] Huang, J.C. and Monastero, F.C., 1982. *Review of the State-of-the-Art of Oil Pollution Models.* Final report submitted to the American Petroleum Institute by Raytheon Ocean Systems, Co., East Providence, Rhode Island.

[3] *Oil Spill Prevention & Control.* National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions excluding secondary containment structures.

5.2 As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. It is assumed that once oil reaches such an inlet, it will flow into the receiving navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open concrete channel and pipe flow. The ranges listed below reflect minimum and maximum velocities used as design criteria.[4] The calculation below demonstrates that the time required for oil to travel through a storm drain or open concrete channel to navigable water is negligible and can be considered instantaneous. The velocities are:

For open concrete channels:
maximum velocity=25 feet per second
minimum velocity=3 feet per second
For storm drains:
maximum velocity=25 feet per second
minimum velocity=2 feet per second

5.3 Assuming a length of 0.5 mile from the point of discharge through an open concrete channel or concrete storm drain to a navigable water, the travel times (distance/velocity) are:

1.8 minutes at a velocity of 25 feet per second
14.7 minutes at a velocity of 3 feet per second
22.0 minutes for at a velocity of 2 feet per second

5.4 The distances that shall be considered to determine the planning distance are illustrated in Figure C-I of this attachment. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for discharge, X_1, to a storm drain or an open concrete channel leading to navigable water.
D2=Distance through the storm drain or open concrete channel to navigable water.
D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.
D4=Distance from the nearest opportunity for discharge, X_2, to fish and wildlife and sensitive environments not bordering navigable water.

5.5 A facility owner or operator whose nearest opportunity for discharge is located within 0.5 mile of a navigable water must complete the planning distance calculation (D3) for the type of navigable water near the facility or use a comparable formula.

5.6 A facility that is located at a distance greater than 0.5 mile from a navigable water must also calculate a planning distance (D3) if it is in close proximity (i.e., D1 is less than 0.5 mile and other factors are conducive to oil travel over land) to storm drains that flow to navigable waters. Factors to be considered in assessing oil transport over land to storm drains shall include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity. Storm drains or concrete drainage channels that are located in close proximity to the facility can provide a direct pathway to navigable waters, regardless of the length of the drainage pipe. If D1 is less than or equal to 0.5 mile, a discharge from the facility could pose substantial harm because the time to travel the distance from the storm drain to the navigable water (D2) is virtually instantaneous.

5.7 A facility's proximity to fish and wildlife and sensitive environments not bordering a navigable water, as depicted as D4 in Figure C–I of this attachment, must also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to fish and wildlife and sensitive environments should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

5.8 If a facility is not found to pose substantial harm to fish and wildlife and sensitive environments not bordering navigable waters via oil transport on land, then supporting documentation should be maintained at the facility. However, such documentation should be submitted with the response plan if a facility is found to pose substantial harm.

[4] The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.

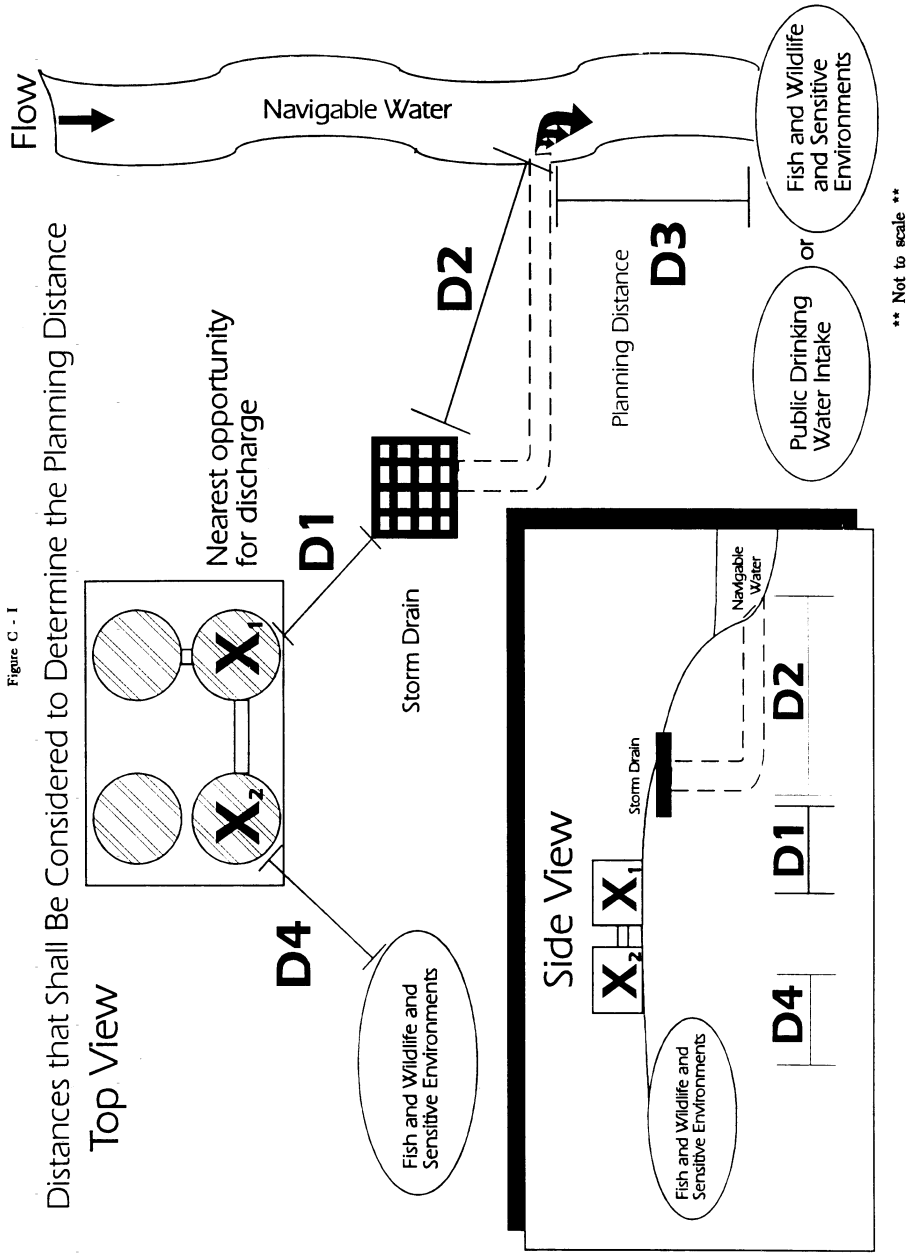


Figure C - 1

[59 FR 34102, July 1, 1994, as amended at 65 FR 40798, June 30, 2000; 67 FR 47152, July 17, 2002]

APPENDIX D TO PART 112—DETERMINATION OF A WORST CASE DISCHARGE PLANNING VOLUME

1.0 Instructions

1.1 An owner or operator is required to complete this worksheet if the facility meets the criteria, as presented in Appendix C to this part, or it is determined by the RA that the facility could cause substantial harm to the environment. The calculation of a worst case discharge planning volume is used for emergency planning purposes, and is required in 40 CFR 112.20 for facility owners or operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather conditions must be taken into consideration. An owner or operator is required to determine the facility's worst case discharge planning volume from either part A of this appendix for an onshore storage facility, or part B of this appendix for an onshore production facility. The worksheet considers the provision of adequate secondary containment at a facility.

1.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In a worst case discharge scenario, a single failure could cause the discharge of the contents of more than one tank. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge planning volume would be based on the capacity of the largest oil storage tank within a common secondary containment area or the largest oil storage tank within a single secondary containment area, whichever is greater. For permanently manifolded tanks that function as one oil storage unit, the worst case discharge planning volume would be based on the combined oil storage capacity of all manifolded tanks or the capacity of the largest single oil storage tank within a secondary containment area, whichever is greater. For purposes of this rule, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.3 For production facilities, the presence of exploratory wells, production wells, and oil storage tanks must be considered in the calculation. Part B of this appendix takes these additional factors into consideration and provides steps for their inclusion in the total worst case discharge planning volume. Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator. Although a potential worst case discharge planning volume is calculated within each section of the worksheet, the final worst case amount depends on the risk parameter that results in the greatest volume.

1.4 Marine transportation-related transfer facilities that contain fixed aboveground onshore structures used for bulk oil storage are jointly regulated by EPA and the U.S. Coast Guard (USCG), and are termed ''complexes.'' Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil, a separate calculation for the worst case discharge planning volume for USCG-related facilities is included in the USCG IFR (see Appendix E to this part, section 13, for availability). All complexes that are jointly regulated by EPA and the USCG must compare both calculations for worst case discharge planning volume derived by using the EPA and USCG methodologies and plan for whichever volume is greater.

PART A: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE STORAGE FACILITIES[1]

Part A of this worksheet is to be completed by the owner or operator of an SPCC-regulated facility (excluding oil production facilities) if the facility meets the criteria as presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm to the environment. If you are the owner or operator of a production facility, please proceed to part B of this worksheet.

A.1 SINGLE-TANK FACILITIES

For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the oil storage tank. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the oil storage tank, multiply the capacity of the tank by 0.8.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

[1] ''Storage facilities'' represent all facilities subject to this part, excluding oil production facilities.

A.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?[2]

_____ (Y/N)

A.2.1 If the answer is yes, the final worst case discharge planning volume equals the *total aboveground oil storage capacity at the facility*.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

A.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER ''0'' (zero).

_____ GAL

A.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A.2.2.

FINAL WORST CASE VOLUME:[3] _____ GAL

PART B: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE PRODUCTION FACILITIES

Part B of this worksheet is to be completed by the owner or operator of an SPCC-regulated oil production facility if the facility meets the criteria presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm. A production facility consists of all wells (producing and exploratory) and related equipment in a single geographical oil or gas field operated by a single operator.

B.1 SINGLE-TANK FACILITIES

B.1.1 For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the aboveground oil storage tank plus the production volume of the well with the highest output at the facility. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the storage tank, multiply the capacity of the tank by 0.8.

B.1.2 For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

B.1.3 If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

B.1.4 Attachment D–1 to this appendix provides methods for calculating the production volume for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

B.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?

_____ (Y/N)

B.2.1 If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity without adequate secondary containment plus the production volume of the well with the highest output at the facility.

(1) For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

(2) If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

(3) Attachment D–1 to this appendix provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(A) FINAL WORST CASE VOLUME: _____ GAL

(B) Do not proceed further.

[2] Secondary containment is described in 40 CFR part 112, subparts A through C. Acceptable methods and structures for containment are also given in 40 CFR 112.7(c)(1).

[3] All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

B.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER ''0'' (zero).

_____ GAL

B.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, plus the production volume of the well with the highest output, PLUS THE VOLUME FROM QUESTION B.2.2. Attachment D–1 provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME:[4]

_____ GAL

(2) Do not proceed further.

ATTACHMENTS TO APPENDIX D

ATTACHMENT D–I—METHODS TO CALCULATE PRODUCTION VOLUMES FOR PRODUCTION FACILITIES WITH EXPLORATORY WELLS OR PRODUCTION WELLS PRODUCING UNDER PRESSURE

1.0 Introduction

The owner or operator of a production facility with exploratory wells or production wells producing under pressure shall compare the well rate of the highest output well (rate of well), in barrels per day, to the ability of response equipment and personnel to recover the volume of oil that could be discharged (rate of recovery), in barrels per day. The result of this comparison will determine the method used to calculate the production volume for the production facility. This production volume is to be used to calculate the worst case discharge planning volume in part B of this appendix.

2.0 Description of Methods

2.1 Method A

If the well rate would overwhelm the response efforts (i.e., rate of well/rate of recovery ≥1), then the production volume would be the 30-day forecasted well rate for a well 10,000 feet deep or less, or the 45-day forecasted well rate for a well deeper than 10,000 feet.

(1) For wells 10,000 feet deep or less:

Production volume=30 days × rate of well.

(2) For wells deeper than 10,000 feet:

Production volume=45 days × rate of well.

2.2 Method B

2.2.1 If the rate of recovery would be greater than the well rate (i.e., rate of well/rate of recovery <1), then the production volume would equal the sum of two terms:

Production volume=discharge volume$_1$ + discharge volume$_2$

2.2.2 The first term represents the volume of the oil discharged from the well between the time of the blowout and the time the response resources are on scene and recovering oil (discharge volume$_1$).

Discharge volume$_1$=(days unattended+days to respond) × (rate of well)

2.2.3 The second term represents the volume of oil discharged from the well after the response resources begin operating until the discharge is stopped, adjusted for the recovery rate of the response resources (discharge volume $_2$).

(1) For wells 10,000 feet deep or less:

Discharge volume$_2$=[30 days−(days unattended + days to respond)] × (rate of well) × (rate of well/rate of recovery)

(2) For wells deeper than 10,000 feet:

Discharge volume$_2$=[45 days−(days unattended + days to respond)] × (rate of well) × (rate of well/rate of recovery)

3.0 Example

3.1 A facility consists of two production wells producing under pressure, which are both less than 10,000 feet deep. The well rate of well A is 5 barrels per day, and the well rate of well B is 10 barrels per day. The facility is unattended for a maximum of 7 days. The facility operator estimates that it will take 2 days to have response equipment and personnel on scene and responding to a blowout, and that the projected rate of recovery will be 20 barrels per day.

(1) First, the facility operator determines that the highest output well is well B. The facility operator calculates the ratio of the rate of well to the rate of recovery:

10 barrels per day/20 barrels per day=0.5 Because the ratio is less than one, the facility operator will use Method B to calculate the production volume.

(2) The first term of the equation is:

Discharge volume$_1$=(7 days + 2 days) × (10 barrels per day)=90 barrels

(3) The second term of the equation is:

Discharge volume $_2$=[30 days—(7 days + 2 days)] × (10 barrels per day) × (0.5)=105 barrels

(4) Therefore, the production volume is:

Production volume=90 barrels + 105 barrels=195 barrels

[4] All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

3.2 If the recovery rate was 5 barrels per day, the ratio of rate of well to rate of recovery would be 2, so the facility operator would use Method A. The production volume would have been:

30 days × 10 barrels per day=300 barrels

[59 FR 34110, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40800, June 30, 2000; 67 FR 47152, July 17, 2002]

APPENDIX E TO PART 112—DETERMINATION AND EVALUATION OF REQUIRED RESPONSE RESOURCES FOR FACILITY RESPONSE PLANS

1.0 Purpose and Definitions

1.1 The purpose of this appendix is to describe the procedures to identify response resources to meet the requirements of §112.20. To identify response resources to meet the facility response plan requirements of 40 CFR 112.20(h), owners or operators shall follow this appendix or, where not appropriate, shall clearly demonstrate in the response plan why use of this appendix is not appropriate at the facility and make comparable arrangements for response resources.

1.2 Definitions.

1.2.1 *Animal fat* means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin. Animal fats are further classified based on specific gravity as follows:

(1) Group A—specific gravity less than 0.8.

(2) Group B—specific gravity equal to or greater than 0.8 and less than 1.0.

(3) Group C—specific gravity equal to or greater than 1.0.

1.2.2 *Nearshore* is an operating area defined as extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending 12 miles from the line of demarcation (COLREG lines) defined in 49 CFR 80.740 and 80.850.

1.2.3 *Non-persistent oils* or *Group 1 oils* include:

(1) A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

(A) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F); and

(B) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F); and

(2) A non-petroleum oil, other than an animal fat or vegetable oil, with a specific gravity less than 0.8.

1.2.4 *Non-petroleum oil* means oil of any kind that is not petroleum-based, including but not limited to: fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

1.2.5 *Ocean* means the nearshore area.

1.2.6 *Operating area* means Rivers and Canals, Inland, Nearshore, and Great Lakes geographic location(s) in which a facility is handling, storing, or transporting oil.

1.2.7 *Operating environment* means Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.

1.2.8 *Persistent oils* include:

(1) A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

(2) A non-petroleum oil, other than an animal fat or vegetable oil, with a specific gravity of 0.8 or greater. These oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity equal to or greater than 0.8 and less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

1.2.9 *Vegetable oil* means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels. Vegetable oils are further classified based on specific gravity as follows:

(1) Group A—specific gravity less than 0.8.

(2) Group B—specific gravity equal to or greater than 0.8 and less than 1.0.

(3) Group C—specific gravity equal to or greater than 1.0.

1.2.10 Other definitions are included in §112.2, section 1.1 of Appendix C, and section 3.0 of Appendix F.

2.0 Equipment Operability and Readiness

2.1 All equipment identified in a response plan must be designed to operate in the conditions expected in the facility's geographic area (i.e., operating environment). These conditions vary widely based on location and season. Therefore, it is difficult to identify a single stockpile of response equipment that will function effectively in each geographic location (i.e., operating area).

2.2 Facilities handling, storing, or transporting oil in more than one operating environment as indicated in Table 1 of this appendix must identify equipment capable of successfully functioning in each operating environment.

2.3 When identifying equipment for the response plan (based on the use of this appendix), a facility owner or operator must consider the inherent limitations of the operability of equipment components and response systems. The criteria in Table 1 of this appendix shall be used to evaluate the operability in a given environment. These criteria reflect the general conditions in certain operating environments.

2.3.1 The Regional Administrator may require documentation that the boom identified in a facility response plan meets the criteria in Table 1 of this appendix. Absent acceptable documentation, the Regional Administrator may require that the boom be tested to demonstrate that it meets the criteria in Table 1 of this appendix. Testing must be in accordance with ASTM F 715, ASTM F 989, or other tests approved by EPA as deemed appropriate (see Appendix E to this part, section 13, for general availability of documents).

2.4 Table 1 of this appendix lists criteria for oil recovery devices and boom. All other equipment necessary to sustain or support response operations in an operating environment must be designed to function in the same conditions. For example, boats that deploy or support skimmers or boom must be capable of being safely operated in the significant wave heights listed for the applicable operating environment.

2.5 A facility owner or operator shall refer to the applicable Area Contingency Plan (ACP), where available, to determine if ice, debris, and weather-related visibility are significant factors to evaluate the operability of equipment. The ACP may also identify the average temperature ranges expected in the facility's operating area. All equipment identified in a response plan must be designed to operate within those conditions or ranges.

2.6 This appendix provides information on response resource mobilization and response times. The distance of the facility from the storage location of the response resources must be used to determine whether the resources can arrive on-scene within the stated time. A facility owner or operator shall include the time for notification, mobilization, and travel of resources identified to meet the medium and Tier 1 worst case discharge requirements identified in sections 4.3 and 9.3 of this appendix (for medium discharges) and section 5.3 of this appendix (for worst case discharges). The facility owner or operator must plan for notification and mobilization of Tier 2 and 3 response resources as necessary to meet the requirements for arrival on-scene in accordance with section 5.3 of this appendix. An on-water speed of 5 knots and a land speed of 35 miles per hour is assumed, unless the facility owner or operator can demonstrate otherwise.

2.7 In identifying equipment, the facility owner or operator shall list the storage location, quantity, and manufacturer's make and model. For oil recovery devices, the effective daily recovery capacity, as determined using section 6 of this appendix, must be included. For boom, the overall boom height (draft and freeboard) shall be included. A facility owner or operator is responsible for ensuring that the identified boom has compatible connectors.

3.0 Determining Response Resources Required for Small Discharges—Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

3.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a small discharge. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

3.2 Complexes that are regulated by EPA and the United States Coast Guard (USCG) must also consider planning quantities for the transportation-related transfer portion of the facility.

3.2.1 *Petroleum oils.* The USCG planning level that corresponds to EPA's ''small discharge'' is termed ''the average most probable discharge.'' A USCG rule found at 33 CFR 154.1020 defines ''the average most probable discharge'' as the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge. Owners or operators of complexes that handle, store, or transport petroleum oils must compare oil discharge volumes for a small discharge and an average most probable discharge, and plan for whichever quantity is greater.

3.2.2 *Non-petroleum oils other than animal fats and vegetable oils.* Owners or operators of complexes that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils must plan for oil discharge volumes for a small discharge. There is no USCG planning level that directly corresponds to EPA's ''small discharge.'' However, the USCG (at 33 CFR 154.545) has requirements to identify equipment to contain oil resulting from an operational discharge.

3.3 The response resources shall, as appropriate, include:

3.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a discharge;

3.3.2 Oil recovery devices with an effective daily recovery capacityequal to the amount of oil discharged in a small discharge or greater which is available at the

facility within 2 hours of the detection of an oil discharge; and

3.3.3 Oil storage capacity for recovered oily material indicated in section 12.2 of this appendix.

4.0 Determining Response Resources Required for Medium Discharges—Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

4.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of oil for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

4.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility.

4.2.1 *Petroleum oils.* The USCG planning level that corresponds to EPA's ''medium discharge'' is termed ''the maximum most probable discharge.'' The USCG rule found at 33 CFR part 154 defines ''the maximum most probable discharge'' as a discharge of 1,200 barrels (50,400 gallons) or 10 percent of the worst case discharge, whichever is less. Owners or operators of complexes that handle, store, or transport petroleum oils must compare calculated discharge volumes for a medium discharge and a maximum most probable discharge, and plan for whichever quantity is greater.

4.2.2 *Non-petroleum oils other than animal fats and vegetable oils.* Owners or operators of complexes that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils must plan for oil discharge volumes for a medium discharge. For non-petroleum oils, there is no USCG planning level that directly corresponds to EPA's ''medium discharge.''

4.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

4.4 Because rapid control, containment, and removal of oil are critical to reduce discharge impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 4.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

4.5 In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable ACP. Although 40 CFR part 112 does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

4.6 The plan must indicate the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

4.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area: The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the daily recovery capacity as indicated in section 12.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

5.0 Determining Response Resources Required for the Worst Case Discharge to the Maximum Extent Practicable

5.1 A facility owner or operator shall identify and ensure the availability of, by

contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Sections 7 and 10 of this appendix describe the method to determine the necessary response resources. Worksheets are provided as Attachments E–1 and E–2 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.1 A facility owner or operator shall identify and ensure the availability of, by contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Sections 7 and 10 of this appendix describe the method to determine the necessary response resources. Worksheets are provided as Attachments E–1 and E–2 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.2 Complexes that are regulated by EPA and the USCG must also consider planning for the worst case discharge at the transportation-related portion of the facility. The USCG requires that transportation-related facility owners or operators use a different calculation for the worst case discharge in the revisions to 33 CFR part 154. Owners or operators of complex facilities that are regulated by EPA and the USCG must compare both calculations of worst case discharge derived by EPA and the USCG and plan for whichever volume is greater.

5.3 Oil discharge response resources identified in the response plan and available, by contract or other approved means as described in §112.2, to meet the applicable worst case discharge planning volume must be located such that they are capable of arriving at the scene of a discharge within the times specified for the applicable response tier listed as follows

	Tier 1 (in hours)	Tier 2 (in hours)	Tier 3 (in hours)
Higher volume port areas	6	30	54
Great Lakes	12	36	60
All other river and canal, inland, and nearshore areas	12	36	60

The three levels of response tiers apply to the amount of time in which facility owners or operators must plan for response resources to arrive at the scene of a discharge to respond to the worst case discharge planning volume. For example, at a worst case discharge in an inland area, the first tier of response resources (*i.e.,* that amount of on-water and shoreline cleanup capacity necessary to respond to the fraction of the worst case discharge as indicated through the series of steps described in sections 7.2 and 7.3 or sections 10.2 and 10.3 of this appendix) would arrive at the scene of the discharge within 12 hours; the second tier of response resources would arrive within 36 hours; and the third tier of response resources would arrive within 60 hours.

5.4 The effective daily recovery capacity for oil recovery devices identified in the response plan must be determined using the criteria in section 6 of this appendix. A facility owner or operator shall identify the storage locations of all response resources used for each tier. The owner or operator of a facility whose required daily recovery capacity exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment, their location, and the arrangements made to obtain this equipment during a response. The owner or operator of a facility whose calculated planning volume exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment equal to twice the cap listed in Tier 3 or the amount necessary to reach the calculated planning volume, whichever is lower. The resources identified above the cap shall be capable of arriving on-scene not later than the Tier 3 response times in section 5.3 of this appendix. No contract is required. While general listings of available response equipment may be used to identify additional sources (i.e., ''public'' resources vs. ''private'' resources), the response plan shall identify the specific sources, locations, and quantities of equipment that a facility owner or operator has considered in his or her planning. When listing USCG-classified oil spill removal organization(s) that have sufficient removal capacity to recover the volume above the response capacity cap for the specific facility, as specified in Table 5 of this appendix, it is not necessary to list specific quantities of equipment.

5.5 A facility owner or operator shall identify the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

5.6 When selecting response resources necessary to meet the response plan requirements, the facility owner or operator shall, as appropriate, ensure that a portion of

those resources is capable of being used in close-to-shore response activities in shallow water. For any EPA-regulated facility that is required to plan for response in shallow water, at least 20 percent of the on-water response equipment identified for the applicable operating area shall, as appropriate, be capable of operating in water of 6 feet or less depth.

5.7 In addition to oil spill recovery devices, a facility owner or operator shall identify sufficient quantities of boom that are available, by contract or other approved means as described in §112.2, to arrive on-scene within the specified response times for oil containment and collection. The specific quantity of boom required for collection and containment will depend on the facility-specific information and response strategies employed. A facility owner or operator shall, as appropriate, also identify sufficient quantities of oil containment boom to protect fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability), and the applicable ACP. Refer to this guidance document for the number of days and geographic areas (*i.e.*, operating environments) specified in Table 2 and Table 6 of this appendix.

5.8 A facility owner or operator shall also identify, by contract or other approved means as described in §112.2, the availability of an oil spill removal organization(s) (as described in §112.2) capable of responding to a shoreline cleanup operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline. The volume of oil that shall, as appropriate, be planned for is calculated through the application of factors contained in Tables 2, 3, 6, and 7 of this appendix. The volume calculated from these tables is intended to assist the facility owner or operator to identify an oil spill removal organization with sufficient resources and expertise.

6.0 Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 Oil recovery devices identified by a facility owner or operator must be identified by the manufacturer, model, and effective daily recovery capacity. These capacities must be used to determine whether there is sufficient capacity to meet the applicable planning criteria for a small discharge, a medium discharge, and a worst case discharge to the maximum extent practicable.

6.2 To determine the effective daily recovery capacity of oil recovery devices, the formula listed in section 6.2.1 of this appendix shall be used. This formula considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The RA may assign a lower efficiency factor to equipment listed in a response plan if it is determined that such a reduction is warranted.

6.2.1 The following formula shall be used to calculate the effective daily recovery capacity:

$R = T \times 24 \text{ hours} \times E$

where:

R—Effective daily recovery capacity;
T—Throughput rate in barrels per hour (nameplate capacity); and
E—20 percent efficiency factor (or lower factor as determined by the Regional Administrator).

6.2.2 For those devices in which the pump limits the throughput of liquid, throughput rate shall be calculated using the pump capacity.

6.2.3 For belt or moptype devices, the throughput rate shall be calculated using the speed of the belt or mop through the device, assumed thickness of oil adhering to or collected by the device, and surface area of the belt or mop. For purposes of this calculation, the assumed thickness of oil will be ¼ inch.

6.2.4 Facility owners or operators that include oil recovery devices whose throughput is not measurable using a pump capacity or belt/mop speed may provide information to support an alternative method of calculation. This information must be submitted following the procedures in section 6.3.2 of this appendix.

6.3 As an alternative to section 6.2 of this appendix, a facility owner or operator may submit adequate evidence that a different effective daily recovery capacity should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in discharge conditions or tests using American Society of Testing and Materials (ASTM) Standard F 631–99, F 808–83 (1999), or an equivalent test approved by EPA as deemed appropriate (see Appendix E to this part, section 13, for general availability of documents).

6.3.1 The following formula must be used to calculate the effective daily recovery capacity under this alternative:

$R = D \times U$

where:

R—Effective daily recovery capacity;
D—Average Oil Recovery Rate in barrels per hour (Item 26 in F 808–83; Item 13.2.16 in F 631–99; or actual performance data); and
U—Hours per day that equipment can operate under discharge conditions. Ten hours per day must be used unless a facility owner or operator can demonstrate that the recovery operation can be sustained for longer periods.

6.3.2 A facility owner or operator submitting a response plan shall provide data that supports the effective daily recovery capacities for the oil recovery devices listed. The following is an example of these calculations:

(1) A weir skimmer identified in a response plan has a manufacturer's rated throughput at the pump of 267 gallons per minute (gpm).

267 gpm=381 barrels per hour (bph)
R=381 bph×24 hr/day×0.2=1,829 barrels per day

(2) After testing using ASTM procedures, the skimmer's oil recovery rate is determined to be 220 gpm. The facility owner or operator identifies sufficient resources available to support operations for 12 hours per day.

220 gpm=314 bph
R=314 bph×12 hr/day=3,768 barrels per day

(3) The facility owner or operator will be able to use the higher capacity if sufficient temporary oil storage capacity is available. Determination of alternative efficiency factors under section 6.2 of this appendix or the acceptability of an alternative effective daily recovery capacity under section 6.3 of this appendix will be made by the Regional Administrator as deemed appropriate.

7.0 Calculating Planning Volumes for a Worst Case Discharge—Petroleum Oils and Non-Petroleum Oils Other Than Animal Fats and Vegetable Oils

7.1 A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to evaporative and natural dissipation, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline. The procedures for non-petroleum oils other than animal fats and vegetable oils are discussed in section 7.7 of this appendix.

7.2 The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

7.2.1 The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, 4, 5) or non-persistent (Group 1)]; and the facility's specific operating area. See sections 1.2.3 and 1.2.8 of this appendix for the definitions of non-persistent and persistent oils, respectively. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 2 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 2 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

7.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 3 of this appendix. Facilities that handle, store, or transport oil from different petroleum groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of an oil discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

7.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 2 of this appendix. The facility owner or operator shall identify and ensure the availability, by contract or other approved means as described in §112.2, of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1993 must make arrangements to identify and ensure the availability, by contract or other approved means as described in §112.2, for additional capacity to be under contract by 1998 or 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume

must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's total oil storage capacity.

7.3 The procedures discussed in sections 7.3.1–7.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Group 1 through Group 4 oils).

7.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, or 4) or non-persistent (Group 1)]; and the geographic area(s) in which the facility operates (*i.e.*, operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 2 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

7.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

7.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 1 through Group 4 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.5 The following is an example of the procedure described above in sections 7.2 and 7.3 of this appendix: A facility with a 270,000 barrel (11.3 million gallons) capacity for #6 oil (specific gravity 0.96) is located in a higher volume port area. The facility is on a peninsula and has docks on both the ocean and bay sides. The facility has four aboveground oil storage tanks with a combined total capacity of 80,000 barrels (3.36 million gallons) and no secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (90,000 barrels or 3.78 million gallons) has its own secondary containment. Two 50,000 barrel (2.1 million gallon) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 100,000 barrels (4.2 million gallons) plus sufficient freeboard.

7.5.1 The worst case discharge for the facility is calculated by adding the capacity of all aboveground oil storage tanks without secondary containment (80,000 barrels) plus the capacity of the largest aboveground oil storage tank inside secondary containment. The resulting worst case discharge volume is 170,000 barrels or 7.14 million gallons.

7.5.2 Because the requirements for Tiers 1, 2, and 3 for inland and nearshore exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response to 10,000 barrels per day (bpd) for Tier 1, 20,000 bpd for Tier 2, and 40,000 bpd for Tier 3. Resources for the remaining 7,850 bpd for Tier 1, 9,750 bpd for Tier 2, and 7,600 bpd for Tier 3 shall be identified but need not be contracted for in advance. The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in their response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments,'' (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C–III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be impacted in the event of a worst case discharge.

7.6 The procedures discussed in sections 7.6.1–7.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group 5 oils.

7.6.1 The owner or operator of a facility that handles, stores, or transports Group 5 oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

(1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;

(2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;

(3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;

(4) Equipment necessary to assess the impact of such discharges; and

(5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored,, or transported.

7.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group 5 oils under section 7.6.1 of this appendix shall be capable of being deployed (on site) within 24 hours of discovery of a discharge to the area where the facility is operating.

7.6.3 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 5 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group 5 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.7 *Non-petroleum oils other than animal fats and vegetable oils.* The procedures described in sections 7.7.1 through 7.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport non-petroleum oils other than animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

7.7.1 An owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must provide information in his or her plan that identifies:

(1) Procedures and strategies for responding to a worst case discharge to the maximum extent practicable; and

(2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

7.7.2 An owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the conditions expected in the geographic area(s) (*i.e.,* operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

(1) Ice conditions;

(2) Debris;

(3) Temperature ranges; and

(4) Weather-related visibility.

7.7.3 The owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

(1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;

(2) Oil recovery devices appropriate for the type of non-petroleum oil carried; and

(3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

7.7.4 Response resources identified in a response plan according to section 7.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

7.7.5 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports non-petroleum oils other than animal fats and vegetable oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for fires of these oils. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

8.0 Determining Response Resources Required for Small Discharges—Animal Fats and Vegetable Oils

8.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a small discharge of animal fats or vegetable oils. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

8.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the marine transportation-related portion of the facility.

8.2.1 The USCG planning level that corresponds to EPA's ''small discharge'' is termed ''the average most probable discharge.'' A USCG rule found at 33 CFR 154.1020 defines ''the average most probable discharge'' as the lesser of 50 barrels (2,100 gallons) or 1 percent of the volume of the worst case discharge. Owners or operators of complexes that handle, store, or transport animal fats and vegetable oils must compare oil discharge volumes for a small discharge and an average most probable discharge, and plan for whichever quantity is greater.

8.3 The response resources shall, as appropriate, include:

8.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a discharge;

8.3.2 Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within 2 hours of the detection of a discharge; and

8.3.3 Oil storage capacity for recovered oily material indicated in section 12.2 of this appendix.

9.0 Determining Response Resources Required for Medium Discharges—Animal Fats and Vegetable Oils

9.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of animal fats or vegetable oils for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

9.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. Owners or operators of complexes that handle, store, or transport animal fats or vegetable oils must plan for oil discharge volumes for a medium discharge. For non-petroleum oils, there is no USCG planning level that directly corresponds to EPA's ''medium discharge.'' Although the USCG does not have planning requirements for medium discharges, they do have requirements (at 33 CFR 154.545) to identify equipment to contain oil resulting from an operational discharge.

9.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

9.4 Because rapid control, containment, and removal of oil are critical to reduce discharge impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 9.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

9.5 In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (59 FR 14713–22, March 29, 1994) and the applicable ACP. Although 40 CFR part 112 does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

9.6 The plan must indicate the availability of temporary storage capacity to meet section 12.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

9.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area:

The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the

daily recovery capacity as indicated in section 12.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

10.0 Calculating Planning Volumes for a Worst Case Discharge—Animal Fats and Vegetable Oils.

10.1 A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to physical, chemical, and biological processes, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline or on sediments. The response planning procedures for animal fats and vegetable oils are discussed in section 10.7 of this appendix. You may use alternate response planning procedures for animal fats and vegetable oils if those procedures result in environmental protection equivalent to that provided by the procedures in section 10.7 of this appendix.

10.2 The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

10.2.1 The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (Groups A, B, C); and the facility's specific operating area. See sections 1.2.1 and 1.2.9 of this appendix for the definitions of animal fats and vegetable oils and groups thereof. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 6 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 6 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

10.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 7 of this appendix. Facilities that handle, store, or transport oil from different groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

10.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of a discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

10.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 6 of this appendix. The facility owner or operator shall identify and ensure, by contract or other approved means as described in §112.2, the availability of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1998 must make arrangements to identify and ensure, by contract or other approved means as described in §112.2, the availability of additional capacity to be under contract by 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's oil storage capacity.

10.3 The procedures discussed in sections 10.3.1 through 10.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Groups A and B oils).

10.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (Groups A or B); and the geographic area(s) in which the facility operates

(i.e., operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 6 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

10.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 10.2.2 of this appendix.

10.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

10.4 A response plan must identify response resources with fire fighting capability appropriate for the risk of fire and explosion at the facility from the discharge or threat of discharge of oil. The owner or operator of a facility that handles, stores, or transports Group A or B oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The facility owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual to work with the fire department for Group A or B oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

10.5 The following is an example of the procedure described in sections 10.2 and 10.3 of this appendix. A facility with a 37.04 million gallon (881,904 barrel) capacity of several types of vegetable oils is located in the Inland Operating Area. The vegetable oil with the highest specific gravity stored at the facility is soybean oil (specific gravity 0.922, Group B vegetable oil). The facility has ten aboveground oil storage tanks with a combined total capacity of 18 million gallons (428,571 barrels) and without secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (3 million gallons or 71,428 barrels) has its own secondary containment. Two 2.1 million gallon (50,000 barrel) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 4.2 million gallons (100,000 barrels) plus sufficient freeboard.

10.5.1 The worst case discharge for the facility is calculated by adding the capacity of all aboveground vegetable oil storage tanks without secondary containment (18.0 million gallons) plus the capacity of the largest aboveground storage tank inside secondary containment (3.0 million gallons). The resulting worst case discharge is 21 million gallons or 500,000 barrels.

10.5.2 With a specific worst case discharge identified, the planning volume for on-water recovery can be identified as follows:

Worst case discharge: 21 million gallons (500,000 barrels) of Group B vegetable oil

Operating Area: Inland

Planned percent recovered floating vegetable oil (from Table 6, column Nearshore/Inland/Great Lakes): Inland, Group B is 20%

Emulsion factor (from Table 7): 2.0

Planning volumes for on-water recovery: 21,000,000 gallons × 0.2 × 2.0 = 8,400,000 gallons or 200,000 barrels.

Determine required resources for on-water recovery for each of the three tiers using mobilization factors (from Table 4, column Inland/Nearshore/Great Lakes)

Inland Operating Area	Tier 1	Tier 2	Tier 3
Mobilization factor by which you multiply planning volume	.15	.25	.40
Estimated Daily Recovery Capacity (bbls)	30,000	50,000	80,000

10.5.3 Because the requirements for On-Water Recovery Resources for Tiers 1, 2, and 3 for Inland Operating Area exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response of 12,500 barrels per day (bpd) for Tier 1, 25,000 bpd for Tier 2, and 50,000 bpd for Tier 3. Resources for the remaining 17,500 bpd for Tier 1, 25,000 bpd for Tier 2, and 30,000 bpd for Tier 3 shall be identified but need not be contracted for in advance.

10.5.4 With the specific worst case discharge identified, the planning volume of onshore recovery can be identified as follows:

Worst case discharge: 21 million gallons (500,000 barrels) of Group B vegetable oil

Operating Area: Inland

Planned percent recovered floating vegetable oil from onshore (from Table 6, column Nearshore/Inland/Great Lakes): Inland, Group B is 65%

Emulsion factor (from Table 7): 2.0

Planning volumes for shoreline recovery:

21,000,000 gallons × 0.65 × 2.0 = 27,300,000 gallons or 650,000 barrels

10.5.5 The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in the response plan for the protection of fish and wildlife

and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments,'' (see Appendix E to this part, section 13, for availability) and the applicable ACP. Attachment C–III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be adversely affected in the event of a worst case discharge.

10.6 The procedures discussed in sections 10.6.1 through 10.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group C oils.

10.6.1 The owner or operator of a facility that handles, stores, or transports Group C oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

(1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;

(2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;

(3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;

(4) Equipment necessary to assess the impact of such discharges; and

(5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.

10.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group C oils under section 10.6.1 of this appendix shall be capable of being deployed on scene within 24 hours of discovery of a discharge.

10.6.3 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group C oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group C oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

10.7 The procedures described in sections 10.7.1 through 10.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport animal fats and vegetable oils. Refer to section 11 of this appendix for information on the limitations on the use of chemical agents for inland and nearshore areas.

10.7.1 An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must provide information in the response plan that identifies:

(1) Procedures and strategies for responding to a worst case discharge of animal fats and vegetable oils to the maximum extent practicable; and

(2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

10.7.2 An owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must ensure that any equipment identified in a response plan is capable of operating in the geographic area(s) (*i.e.,* operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

(1) Ice conditions;

(2) Debris;

(3) Temperature ranges; and

(4) Weather-related visibility.

10.7.3. The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

(1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;

(2) Oil recovery devices appropriate for the type of animal fat or vegetable oil carried; and

(3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

10.7.4 Response resources identified in a response plan according to section 10.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

10.7.5 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports animal fats and vegetable oils that does not have adequate fire fighting resources located at

the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. The owner or operator shall ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for animal fat and vegetable oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

11.0 Determining the Availability of Alternative Response Methods

11.1 For chemical agents to be identified in a response plan, they must be on the NCP Product Schedule that is maintained by EPA. (Some States have a list of approved dispersants for use within State waters. Not all of these State-approved dispersants are listed on the NCP Product Schedule.)

11.2 Identification of chemical agents in the plan does not imply that their use will be authorized. Actual authorization will be governed by the provisions of the NCP and the applicable ACP.

12.0 Additional Equipment Necessary to Sustain Response Operations

12.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of animal fats or vegetables oils for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

12.2 A facility owner or operator shall evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans must identify daily storage capacity equivalent to twice the effective daily recovery capacity required on-scene. This temporary storage capacity may be reduced if a facility owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant waste, or the availability of alternative temporary storage or disposal locations will reduce the overall volume of oily material storage.

12.3 A facility owner or operator shall ensure that response planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

13.0 References and Availability

13.1 All materials listed in this section are part of EPA's rulemaking docket and are located in the Superfund Docket, 1235 Jefferson Davis Highway, Crystal Gateway 1, Arlington, Virginia 22202, Suite 105 (Docket Numbers SPCC–2P, SPCC–3P, and SPCC–9P). The docket is available for inspection between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays.

Appointments to review the docket can be made by calling 703–603–9232. Docket hours are subject to change. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services.

13.2 The docket will mail copies of materials to requestors who are outside the Washington, DC metropolitan area. Materials may be available from other sources, as noted in this section. As provided in 40 CFR part 2, a reasonable fee may be charged for copying services. The RCRA/Superfund Hotline at 800–424–9346 may also provide additional information on where to obtain documents. To contact the RCRA/Superfund Hotline in the Washington, DC metropolitan area, dial 703–412–9810. The Telecommunications Device for the Deaf (TDD) Hotline number is 800–553–7672, or, in the Washington, DC metropolitan area, 703–412–3323.

13.3 Documents

(1) National Preparedness for Response Exercise Program (PREP). The PREP draft guidelines are available from United States Coast Guard Headquarters (G-MEP-4), 2100 Second Street, SW., Washington, DC 20593. (See 58 FR 53990–91, October 19, 1993, Notice of Availability of PREP Guidelines).

(2) ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments (published in the Federal Register by DOC/NOAA at 59 FR 14713–22, March 29, 1994.). The guidance is available in the Superfund Docket (see sections 13.1 and 13.2 of this appendix).

(3) ASTM Standards. ASTM F 715, ASTM F 989, ASTM F 631–99, ASTM F 808–83 (1999). The ASTM standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.

(4) Response Plans for Marine Transportation-Related Facilities, Interim Final Rule. Published by USCG, DOT at 58 FR 7330–76, February 5, 1993.

TABLE 1 TO APPENDIX E—RESPONSE RESOURCE OPERATING CRITERIA

Oil Recovery Devices		
Operating environment	Significant wave height [1]	Sea state
Rivers and Canals	≤ 1 foot	1
Inland	≤ 3 feet	2
Great Lakes	≤ 4 feet	2–3
Ocean	≤ 6 feet	3–4

Boom				
Boom property	Use			
	Rivers and canals	Inland	Great Lakes	Ocean
Significant Wave Height [1]	≤ 1	≤ 3	≤ 4	≤ 6
Sea State	1	2	2–3	3–4
Boom height—inches (draft plus freeboard)	6–18	18–42	18–42	≥42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—pounds	4,500	15,000–20,000.	15,000–20,000.	≥20,000
Skirt Fabric Tensile Strength—pounds	200	300	300	500
Skirt Fabric Tear Strength—pounds	100	100	100	125

[1] Oil recovery devices and boom *shall* be at least capable of operating in wave heights up to and including the values listed in Table 1 for each operating environment.

TABLE 2 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE FOR PETROLEUM OILS

Spill location	Rivers and canals			Nearshore/Inland/Great Lakes		
Sustainability of on-water oil recovery	3 days			4 days		
Oil group [1]	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore
1—Non-persistent oils	80	10	10	80	20	10
2—Light crudes	40	15	45	50	50	30
3—Medium crudes and fuels	20	15	65	30	50	50
4—Heavy crudes and fuels	5	20	75	10	50	70

[1] The response resource considerations for non-petroleum oils other than animal fats and vegetable oils are outlined in section 7.7 of this appendix.

NOTE: Group 5 oils are defined in section 1.2.8 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS [1]

Non-Persistent Oil:	
Group 1	1.0
Persistent Oil:	
Group 2	1.8
Group 3	2.0
Group 4	1.4
Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.	

[1] See sections 1.2.2 and 1.2.7 of this appendix for group designations for non-persistent and persistent oils, respectively.

TABLE 4 TO APPENDIX E—ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

Operating area	Tier 1	Tier 2	Tier 3
Rivers and Canals	0.30	0.40	0.60
Inland/Nearshore Great Lakes	0.15	0.25	0.40

Note: These mobilization factors are for total resources mobilized, not incremental response resources.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except Rivers & Canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA—Continued

	Tier 1	Tier 2	Tier 3
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers & Canals	1.5K bbls/day	3.0K bbls/day	6.0K bbls/day.
February 18, 1998:			
All except Rivers & Canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & Canals	1.875K bbls/day	3.75K bbls/day	7.5K bbls/day.
February 18, 2003:			
All except Rivers & Canals, Great Lakes	TBD	TBD	TBD.
Great Lakes	TBD	TBD	TBD.
Rivers & Canals	TBD	TBD	TBD.

Note: The caps show cumulative overall effective daily recovery capacity, not incremental increases.
TBD=To Be Determined.

TABLE 6 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE FOR ANIMAL FATS AND VEGETABLE OILS

Spill location	Rivers and canals			Nearshore/Inland/Great Lakes		
Sustainability of on-water oil recovery	3 days			4 days		
Oil group [1]	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore	Percent natural loss	Percent recovered floating oil	Percent recovered oil from onshore
Group A	40	15	45	50	20	30
Group B	20	15	65	30	20	50

[1] Substances with a specific gravity greater than 1.0 generally sink below the surface of the water. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.

NOTE: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

TABLE 7 TO APPENDIX E—EMULSIFICATION FACTORS FOR ANIMAL FATS AND VEGETABLE OILS

Oil Group [1]:	
Group A	1.0
Group B	2.0

[1] Substances with a specific gravity greater than 1.0 generally sink below the surface of the water. Response resource considerations are outlined in section 10.6 of this appendix. The owner or operator of the facility is responsible for determining appropriate response resources for Group C oils including locating oil on the bottom or suspended in the water column; containment boom or other appropriate methods for containing oil that may remain floating on the surface; and dredges, pumps, or other equipment to recover animal fats or vegetable oils from the bottom and shoreline.

NOTE: Group C oils are defined in sections 1.2.1 and 1.2.9 of this appendix; the response resource procedures are discussed in section 10.6 of this appendix.

ATTACHMENTS TO APPENDIX E

Attachment E-1 --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) _____ (A)

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) . _____

Step (C) Operating Area (choose one) . . . . ☐ Near shore/Inland Great Lakes ☐ or Rivers and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step(A)}}{100}$ _____ (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ . . . . _____ (E2)

Step (F) Emulsification Factor
(Table 3 of this appendix) . . . . . _____ (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-1 (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) . . . . . [ ]

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-1 Example --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) 170,000 (A)

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) . 4

Step (C) Operating Area (choose one) . . [X] Near shore/Inland Great Lakes [ ] or Rivers and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
10	50	70
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ 85,000 (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ 119,000 (E2)

Step (F) Emulsification Factor (Table 3 of this appendix) . . . . . 1.4 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-1 Example (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Petroleum Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
17,850	29,750	47,600
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 166,600

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000	20,000	40,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
7,850	9,750	7,600
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-2 --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) ____ (A)

Step (B) Oil Group[1] (Table 7 and section 1.2 of this appendix) . ____

Step (C) Operating Area (choose one) . . . . ☐ Near shore/Inland Great Lakes ☐ or Rivers and Canals

Step (D) Percentages of Oil (Table 6 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ ____ (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ . . . ____ (E2)

Step (F) Emulsification Factor
(Table 7 of this appendix) . . . . . ____ (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-2 (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) . . . . [ ]

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Attachment E-2 Example --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) . . . . . 500,000 (A)

Step (B) Oil Group[1] (Table 7 and section 1.2 of this appendix) . . . . . B

Step (C) Operating Area (choose one) [X] Near shore/Inl and Great Lakes [ ] or Rivers and Canals

Step (D) Percentages of Oil (Table 6 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
30 (D1)	20 (D2)	50 (D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ 100,000 (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ 250,000 (E2)

Step (F) Emulsification Factor (Table 7 of this appendix) . . . . . 2.0 (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
0.15 (G1)	0.25 (G2)	0.40 (G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

Attachment E-2 Example (continued) --
Worksheet to Plan Volume of Response Resources
for Worst Case Discharge - Animal Fats and Vegetable Oils (continued)

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
30,000	50,000	80,000
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 500,000

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
12,500	25,000	50,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
17,500	25,000	30,000
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

[59 FR 34111, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40806, 40807, June 30, 2000; 65 FR 47325, Aug. 2, 2000; 66 FR 47325, Aug. 2, 2000; 66 FR 35460, 35461, June 29, 2001]

APPENDIX F TO PART 112—FACILITY-SPECIFIC RESPONSE PLAN

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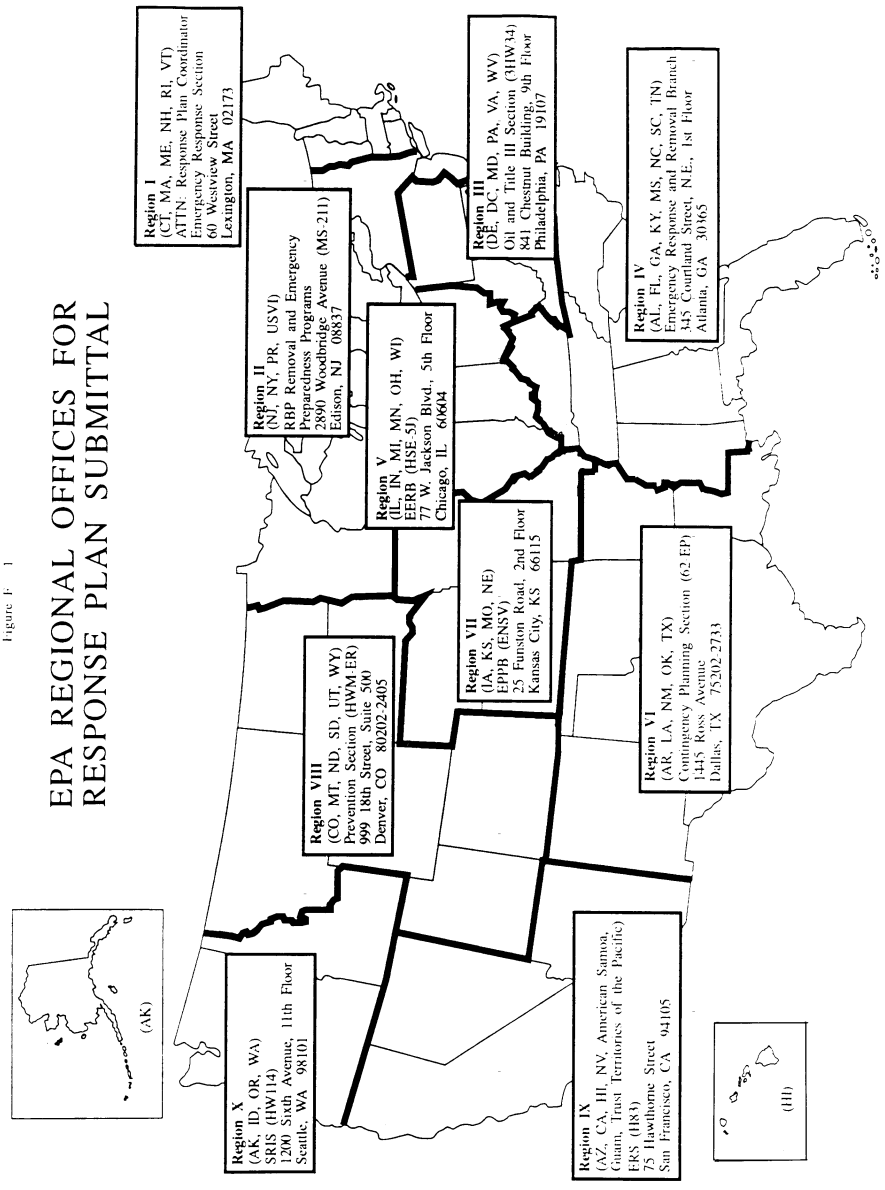
1.0 Model Facility-Specific Response Plan

(A) Owners or operators of facilities regulated under this part which pose a threat of substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines are required to prepare and submit facility-specific response plans to EPA in accordance with the provisions in this appendix. This appendix further describes the required elements in §112.20(h).

(B) Response plans must be sent to the appropriate EPA Regional office. Figure F–1 of this Appendix lists each EPA Regional office and the address where owners or operators must submit their response plans. Those facilities deemed by the Regional Administrator (RA) to pose a threat of significant and substantial harm to the environment will have their plans reviewed and approved by EPA. In certain cases, information required in the model response plan is similar to information currently maintained in the facility's Spill Prevention, Control, and Countermeasures (SPCC) Plan as required by 40 CFR 112.3. In these cases, owners or operators may reproduce the information and include a photocopy in the response plan.

(C) A complex may develop a single response plan with a set of core elements for all regulating agencies and separate sections for the non-transportation-related and transportation-related components, as described in §112.20(h). Owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location (e.g., oil storage areas at opposite ends of a single, continuous parcel of property) shall, as appropriate, develop separate sections of the response plan for each storage area.



1.1 Emergency Response Action Plan

Several sections of the response plan shall be co-located for easy access by response personnel during an actual emergency or oil discharge. This collection of sections shall be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the discharge and be arranged so response actions are not delayed. The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the

forms included in the associated sections of the response plan. Each Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. In the latter case, both binders shall be kept together so that the entire plan can be accessed by the qualified individual and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Qualified Individual Information (Section 1.2) partial
2. Emergency Notification Phone List (Section 1.3.1) partial
3. Spill Response Notification Form (Section 1.3.1) partial
4. Response Equipment List and Location (Section 1.3.2) complete
5. Response Equipment Testing and Deployment (Section 1.3.3) complete
6. Facility Response Team (Section 1.3.4) partial
7. Evacuation Plan (Section 1.3.5) condensed
8. Immediate Actions (Section 1.7.1) complete
9. Facility Diagram (Section 1.9) complete

1.2 Facility Information

The facility information form is designed to provide an overview of the site and a description of past activities at the facility. Much of the information required by this section may be obtained from the facility's existing SPCC Plan.

1.2.1 *Facility name and location:* Enter facility name and street address. Enter the address of corporate headquarters only if corporate headquarters are physically located at the facility. Include city, county, state, zip code, and phone number.

1.2.2 *Latitude and Longitude:* Enter the latitude and longitude of the facility. Include degrees, minutes, and seconds of the main entrance of the facility.

1.2.3 *Wellhead Protection Area:* Indicate if the facility is located in or drains into a wellhead protection area as defined by the Safe Drinking Water Act of 1986 (SDWA).[1] The response plan requirements in the Wellhead Protection Program are outlined by the State or Territory in which the facility resides.

1.2.4 *Owner/operator:* Write the name of the company or person operating the facility and the name of the person or company that owns the facility, if the two are different. List the address of the owner, if the two are different.

1.2.5 *Qualified Individual:* Write the name of the qualified individual for the entire facility. If more than one person is listed, each individual indicated in this section shall have full authority to implement the facility response plan. For each individual, list: name, position, home and work addresses (street addresses, not P.O. boxes), emergency phone number, and specific response training experience.

1.2.6 *Date of Oil Storage Start-up:* Enter the year which the present facility first started storing oil.

1.2.7 *Current Operation:* Briefly describe the facility's operations and include the North American Industrial Classification System (NAICS) code.

1.2.8 *Dates and Type of Substantial Expansion:* Include information on expansions that have occurred at the facility. Examples of such expansions include, but are not limited to: Throughput expansion, addition of a product line, change of a product line, and installation of additional oil storage capacity. The data provided shall include all facility historical information and detail the expansion of the facility. An example of substantial expansion is any material alteration of the facility which causes the owner or operator of the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility.

Date of Last Update: _____

FACILITY INFORMATION FORM

Facility Name: _____
Location (Street Address): _____
City: _____ State: _____ Zip: _____
County: _____ Phone Number: ( ) _____
Latitude: _____ Degrees _____ Minutes _____ Seconds
Longitude: _____ Degrees _____ Minutes _____ Seconds
Wellhead Protection Area: _____
Owner: _____
Owner Location (Street Address): _____
(if different from Facility Address)
City: _____ State: _____ Zip: _____
County: _____ Phone Number: ( ) _____
Operator (if not Owner): _____
Qualified Individual(s): (attach additional sheets if more than one)
Name: _____
Position: _____
Work Address: _____
Home Address: _____
Emergency Phone Number: ( ) _____

[1] A wellhead protection area is defined as the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. For further information regarding State and territory protection programs, facility owners or operators may contact the SDWA Hotline at 1–800–426–4791.

Date of Oil Storage Start-up: _____
Current Operations: _____

_____

_____

Date(s) and Type(s) of Substantial Expansion(s): _____

_____

(Attach additional sheets if necessary)

1.3 Emergency Response Information

(A) The information provided in this section shall describe what will be needed in an actual emergency involving the discharge of oil or a combination of hazardous substances and oil discharge. The Emergency Response Information section of the plan must include the following components:

(1) The information provided in the Emergency Notification Phone List in section 1.3.1 identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified immediately in the event of an emergency. This section shall include all the appropriate phone numbers for the facility. These numbers must be verified each time the plan is updated. The contact list must be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties.

(2) The Spill Response Notification Form in section 1.3.1 creates a checklist of information that shall be provided to the National Response Center (NRC) and other response personnel. All information on this checklist must be known at the time of notification, or be in the process of being collected. This notification form is based on a similar form used by the NRC. Note: Do not delay spill notification to collect the information on the list.

(3) Section 1.3.2 provides a description of the facility's list of emergency response equipment and location of the response equipment. When appropriate, the amount of oil that emergency response equipment can handle and any limitations (e.g., launching sites) must be described.

(4) Section 1.3.3 provides information regarding response equipment tests and deployment drills. Response equipment deployment exercises shall be conducted to ensure that response equipment is operational and the personnel who would operate the equipment in a spill response are capable of deploying and operating it. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the remainder is properly maintained. If appropriate, testing of response equipment may be conducted while it is being deployed. Facilities without facility-owned response equipment must ensure that the oil spill removal organization that is identified in the response plan to provide this response equipment certifies that the deployment exercises have been met. Refer to the National Preparedness for Response Exercise Program (PREP) Guidelines (see Appendix E to this part, section 13, for availability), which satisfy Oil Pollution Act (OPA) response exercise requirements.

(5) Section 1.3.4 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed for personnel to respond, their responsibility in the case of an emergency, and their level of response training. Three different forms are included in this section. The Emergency Response Personnel List shall be composed of all personnel employed by the facility whose duties involve responding to emergencies, including oil discharges, even when they are not physically present at the site. An example of this type of person would be the Building Engineer-in-Charge or Plant Fire Chief. The second form is a list of the Emergency Response Contractors (both primary and secondary) retained by the facility. Any changes in contractor status must be reflected in updates to the response plan. Evidence of contracts with response contractors shall be included in this section so that the availability of resources can be verified. The last form is the Facility Response Team List, which shall be composed of both emergency response personnel (referenced by job title/position) and emergency response contractors, included in one of the two lists described above, that will respond immediately upon discovery of an oil discharge or other emergency (i.e., the first people to respond). These are to be persons normally on the facility premises or primary response contractors. Examples of these personnel would be the Facility Hazardous Materials (HAZMAT) Spill Team 1, Facility Fire Engine Company 1, Production Supervisor, or Transfer Supervisor. Company personnel must be able to respond immediately and adequately if contractor support is not available.

(6) Section 1.3.5 lists factors that must, as appropriate, be considered when preparing an evacuation plan.

(7) Section 1.3.6 references the responsibilities of the qualified individual for the facility in the event of an emergency.

(B) The information provided in the emergency response section will aid in the assessment of the facility's ability to respond to a worst case discharge and will identify additional assistance that may be needed. In addition, the facility owner or operator may want to produce a wallet-size card containing a checklist of the immediate response and notification steps to be taken in the event of an oil discharge.

1.3.1 Notification

Date of Last Update: _____

EMERGENCY NOTIFICATION PHONE LIST WHOM TO NOTIFY

Reporter's Name: _____
Date: _____
Facility Name: _____
Owner Name: _____
Facility Identification Number: _____
Date and Time of Each NRC Notification: _____

Organization	Phone No.
1. National Response Center (NRC):	1–800–424–8802
2. Qualified Individual:	
Evening Phone:	
3. Company Response Team:	
Evening Phone:	
4. Federal On-Scene Coordinator (OSC) and/or Regional Response Center (RRC):	
Evening Phone(s):	
Pager Number(s):	
5. Local Response Team (Fire Dept./Co-operatives):	
6. Fire Marshall:	
Evening Phone:	
7. State Emergency Response Commission (SERC):	
Evening Phone:	
8. State Police:	
9. Local Emergency Planning Committee (LEPC):	
10. Local Water Supply System:	
Evening Phone:	
11. Weather Report:	
12. Local Television/Radio Station for Evacuation Notification:	
13. Hospitals:	

SPILL RESPONSE NOTIFICATION FORM

Reporter's Last Name: _____
First: _____
M.I.: _____
Position: _____
Phone Numbers:
Day ( ) –
Evening ( ) –
Company: _____
Organization Type: _____
Address: _____
_____
City: _____
State: _____
Zip: _____
Were Materials Discharged? _____ (Y/N) Confidential? _____ (Y/N)
Meeting Federal Obligations to Report? _____ (Y/N) Date Called: _____
Calling for Responsible Party? _____ (Y/N) Time Called: _____

Incident Description

Source and/or Cause of Incident: _____
_____
_____
_____
_____
Date of Incident: _____
Time of Incident: _____ AM/PM
Incident Address/Location: _____
_____
Nearest City: _____ State: _____
County: _____ Zip: _____
Distance from City: _____ Units of Measure: _____ Direction from City: _____
Section: _____ Township: _____ Range: _____ Borough: _____
Container Type: _____ Tank Oil Storage Capacity: _____ Units of Measure: _____
Facility Oil Storage Capacity: _____ Units of Measure: _____
Facility Latitude: _____ Degrees _____ Minutes _____ Seconds
Facility Longitude: _____ Degrees _____ Minutes _____ Seconds

Material

CHRIS Code	Discharged quantity	Unit of measure	Material Discharged in water	Quantity	Unit of measure

CHRIS Code	Discharged quantity	Unit of measure	Material Discharged in water	Quantity	Unit of measure

Response Action

Actions Taken to Correct, Control or Mitigate Incident:

_____

_____

_____

_____

Impact

Number of Injuries: _____ Number of Deaths: _____

Were there Evacuations? _____ (Y/N) Number Evacuated: _____

Was there any Damage? _____ (Y/N)

Damage in Dollars (approximate): _____

Medium Affected: _____

Description: _____

More Information about Medium: _____

_____

_____

Additional Information

Any information about the incident not recorded elsewhere in the report:

_____

_____

_____

Caller Notifications

EPA? _____ (Y/N) USCG? _____ (Y/N) State? _____ (Y/N)

Other? _____ (Y/N) Describe: _____

1.3.2 Response Equipment List

Date of Last Update:_____

FACILITY RESPONSE EQUIPMENT LIST

1. Skimmers/Pumps—Operational Status: _____

Type, Model, and Year: _____

_____

Type Model Year

Number: _____

Capacity: _____ gal./min.

Daily Effective Recovery Rate: _____

Storage Location(s): _____

Date Fuel Last Changed: _____

2. Boom—Operational Status: _____

Type, Model, and Year: _____

Type Model Year

Number: _____

Size (length): _____ ft.

Containment Area: _____ sq. ft.

Storage Location: _____

3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date purchased	Treatment capacity	Storage location

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910) and the Area Contingency Plan (ACP), where applicable?_____ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: _____ .

Date Authorized: _____ .

4. Dispersant Dispensing Equipment—Operational Status: _____ .

Type and year	Capacity	Storage location	Response time (minutes)

5. Sorbents—Operational Status: _____
Type and Year Purchased: _____
Amount: _____
Absorption Capacity (gal.): _____
Storage Location(s): _____
6. Hand Tools—Operational Status: _____

Type and year	Quantity	Storage location

7. Communication Equipment (include operating frequency and channel and/or cellular phone numbers)—Operational Status: _____

Type and year	Quantity	Storage location/ number

8. Fire Fighting and Personnel Protective Equipment—Operational Status: _____

Type and year	Quantity	Storage location

Type and year	Quantity	Storage location

9. Other (e.g., Heavy Equipment, Boats and Motors)—Operational Status: _____

Type and year	Quantity	Storage location

1.3.3 Response Equipment Testing/Deployment

Date of Last Update:_____

Response Equipment Testing and Deployment Drill Log

Last Inspection or Response Equipment Test Date: _____
Inspection Frequency: _____
Last Deployment Drill Date: _____
Deployment Frequency: _____
Oil Spill Removal Organization Certification (if applicable): _____

1.3.4 Personnel

Date of Last Update:_____

EMERGENCY RESPONSE PERSONNEL

Company Personnel

Name	Phone [1]	Response time	Responsibility during response action	Response training type/date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

[1] Phone number to be used when person is not on-site.

EMERGENCY RESPONSE CONTRACTORS

Date of Last Update: _____

Contractor	Phone	Response time	Contract responsibility [1]
1.			
2.			
3.			
4.			

[1] Include evidence of contracts/agreements with response contractors to ensure the availability of personnel and response equipment.

FACILITY RESPONSE TEAM

Date of Last Update:_____

Team member	Response time (minutes)	Phone or pager number (day/evening)
Qualified Individual:		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/

NOTE: If the facility uses contracted help in an emergency response situation, the owner or operator must provide the contractors' names and review the contractors' capacities to provide adequate personnel and response equipment.

1.3.5 Evacuation Plans

1.3.5.1 Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan shall be developed. In addition, plans to evacuate parts of the facility that are at a high risk of exposure in the event of a discharge or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9 of this appendix). When developing evacuation plans, consideration must be given to the following factors, as appropriate:

(1) Location of stored materials;
(2) Hazard imposed by discharged material;
(3) Discharge flow direction;
(4) Prevailing wind direction and speed;
(5) Water currents, tides, or wave conditions (if applicable);
(6) Arrival route of emergency response personnel and response equipment;
(7) Evacuation routes;
(8) Alternative routes of evacuation;
(9) Transportation of injured personnel to nearest emergency medical facility;
(10) Location of alarm/notification systems;
(11) The need for a centralized check-in area for evacuation validation (roll call);
(12) Selection of a mitigation command center; and
(13) Location of shelter at the facility as an alternative to evacuation.

1.3.5.2 One resource that may be helpful to owners or operators in preparing this section of the response plan is The *Handbook of Chemical Hazard Analysis Procedures* by the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), and EPA. *The Handbook of Chemical Hazard Analysis Procedures* is available from: FEMA , Publication Office, 500 C. Street, S.W., Washington, DC 20472, (202) 646–3484.

1.3.5.3 As specified in §112.20(h)(1)(vi), the facility owner or operator must reference existing community evacuation plans, as appropriate.

1.3.6 Qualified Individual's Duties

The duties of the designated qualified individual are specified in §112.20(h)(3)(ix). The qualified individual's duties must be described and be consistent with the minimum requirements in §112.20(h)(3)(ix). In addition, the qualified individual must be identified with the Facility Information in section 1.2 of the response plan.

1.4 Hazard Evaluation

This section requires the facility owner or operator to examine the facility's operations closely and to predict where discharges could occur. Hazard evaluation is a widely used industry practice that allows facility owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. *The Handbook of Chemical Hazard Analysis Procedures,* prepared by the EPA, DOT, and the FEMA and the *Hazardous Materials Emergency Planning Guide* (NRT–1), prepared by the National Response Team are good references for conducting a hazard analysis. Hazard identification and evaluation will assist facility owners or operators in planning for potential discharges, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of discharges. In addition, special hazards to workers and emergency response personnel's health and safety shall be evaluated, as well as the facility's oil spill history.

1.4.1 Hazard Identification

The Tank and Surface Impoundment (SI) forms, or their equivalent, that are part of this section must be completed according to the directions below. (''Surface Impoundment'' means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well or a seepage facility.) Similar worksheets, or their equivalent, must be developed for any other type of storage containers.

(1) List each tank at the facility with a separate and distinct identifier. Begin aboveground tank identifiers with an ''A'' and belowground tank identifiers with a ''B'', or submit multiple sheets with the aboveground tanks and belowground tanks on separate sheets.

(2) Use gallons for the maximum capacity of a tank; and use square feet for the area.

(3) Using the appropriate identifiers and the following instructions, fill in the appropriate forms:

(a) Tank or SI number—Using the aforementioned identifiers (A or B) or multiple reporting sheets, identify each tank or SI at the facility that stores oil or hazardous materials.

(b) Substance Stored—For each tank or SI identified, record the material that is stored therein. If the tank or SI is used to store more than one material, list all of the stored materials.

(c) Quantity Stored—For each material stored in each tank or SI, report the average volume of material stored on any given day.

(d) Tank Type or Surface Area/Year—For each tank, report the type of tank (e.g., floating top), and the year the tank was originally installed. If the tank has been refabricated, the year that the latest refabrication was completed must be recorded in parentheses next to the year installed. For

each SI, record the surface area of the impoundment and the year it went into service.

(e) Maximum Capacity—Record the operational maximum capacity for each tank and SI. If the maximum capacity varies with the season, record the upper and lower limits.

(f) Failure/Cause—Record the cause and date of any tank or SI failure which has resulted in a loss of tank or SI contents.

(4) Using the numbers from the tank and SI forms, label a schematic drawing of the facility. This drawing shall be identical to any schematic drawings included in the SPCC Plan.

(5) Using knowledge of the facility and its operations, describe the following in writing:

(a) The loading and unloading of transportation vehicles that risk the discharge of oil or release of hazardous substances during transport processes. These operations may include loading and unloading of trucks, railroad cars, or vessels. Estimate the volume of material involved in transfer operations, if the exact volume cannot be determined.

(b) Day-to-day operations that may present a risk of discharging oil or releasing a hazardous substance. These activities include scheduled venting, piping repair or replacement, valve maintenance, transfer of tank contents from one tank to another, etc. (not including transportation-related activities). Estimate the volume of material involved in these operations, if the exact volume cannot be determined.

(c) The secondary containment volume associated with each tank and/or transfer point at the facility. The numbering scheme developed on the tables, or an equivalent system, must be used to identify each containment area. Capacities must be listed for each individual unit (tanks, slumps, drainage traps, and ponds), as well as the facility total.

(d) Normal daily throughput for the facility and any effect on potential discharge volumes that a negative or positive change in that throughput may cause.

HAZARD IDENTIFICATION TANKS [1]

Date of Last Update: _____

Tank No.	Substance Stored (Oil and Hazardous Substance)	Quantity Stored (gallons)	Tank Type/Year	Maximum Capacity (gallons)	Failure/Cause

[1] Tank = any container that stores oil.
Attach as many sheets as necessary.

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SIS)

Date of Last Update: _____

SI No.	Substance Stored	Quantity Stored (gallons)	Surface Area/Year	Maximum Capacity (gallons)	Failure/Cause

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SIS)—Continued

Date of Last Update: _____

SI No.	Substance Stored	Quantity Stored (gallons)	Surface Area/Year	Maximum Capacity (gallons)	Failure/Cause

Attach as many sheets as necessary.

1.4.2 Vulnerability Analysis

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil discharge. Attachment C–III to Appendix C to this part provides a method that owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Owners or operators can use a comparable formula that is considered acceptable by the RA. If a comparable formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis must be prepared for each facility and, as appropriate, must discuss the vulnerability of:

(1) Water intakes (drinking, cooling, or other);
(2) Schools;
(3) Medical facilities;
(4) Residential areas;
(5) Businesses;
(6) Wetlands or other sensitive environments;[2]
(7) Fish and wildlife;
(8) Lakes and streams;
(9) Endangered flora and fauna;
(10) Recreational areas;
(11) Transportation routes (air, land, and water);
(12) Utilities; and
(13) Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats.

1.4.3 Analysis of the Potential for an Oil Discharge

Each owner or operator shall analyze the probability of a discharge occurring at the facility. This analysis shall incorporate factors such as oil discharge history, horizontal range of a potential discharge, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age. This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of discharges. The owner or operator may need to research the age of the tanks the oil discharge history at the facility.

1.4.4 Facility Reportable Oil Spill History

Briefly describe the facility's reportable oil spill[3] history for the entire life of the facility to the extent that such information is reasonably identifiable, including:

(1) Date of discharge(s);
(2) List of discharge causes;
(3) Material(s) discharged;
(4) Amount discharged in gallons;
(5) Amount of discharge that reached navigable waters, if applicable;
(6) Effectiveness and capacity of secondary containment;
(7) Clean-up actions taken;
(8) Steps taken to reduce possibility of recurrence;
(9) Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged;
(10) Enforcement actions;
(11) Effectiveness of monitoring equipment; and
(12) Description(s) of how each oil discharge was detected.

[2] Refer to the DOC/NOAA ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (See appendix E to this part, section 13, for availability).

[3] As described in 40 CFR part 110, reportable oil spills are those that: (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

The information solicited in this section may be similar to requirements in 40 CFR 112.4(a). Any duplicate information required by §112.4(a) may be photocopied and inserted.

1.5 Discharge Scenarios

In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium discharge, as appropriate. A multi-level planning approach has been chosen because the response actions to a discharge (*i.e.*, necessary response equipment, products, and personnel) are dependent on the magnitude of the discharge. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. The facility owner or operator shall discuss the potential direction of the discharge pathway.

1.5.1 Small and Medium Discharges

1.5.1.1 To address multi-level planning requirements, the owner or operator must consider types of facility-specific discharge scenarios that may contribute to a small or medium discharge. The scenarios shall account for all the operations that take place at the facility, including but not limited to:

(1) Loading and unloading of surface transportation;
(2) Facility maintenance;
(3) Facility piping;
(4) Pumping stations and sumps;
(5) Oil storage tanks;
(6) Vehicle refueling; and
(7) Age and condition of facility and components.

1.5.1.2 The scenarios shall also consider factors that affect the response efforts required by the facility. These include but are not limited to:

(1) Size of the discharge;
(2) Proximity to downgradient wells, waterways, and drinking water intakes;
(3) Proximity to fish and wildlife and sensitive environments;
(4) Likelihood that the discharge will travel offsite (*i.e.*, topography, drainage);
(5) Location of the material discharged (*i.e.*, on a concrete pad or directly on the soil);
(6) Material discharged;
(7) Weather or aquatic conditions (*i.e.*, river flow);
(8) Available remediation equipment;
(9) Probability of a chain reaction of failures; and
(10) Direction of discharge pathway.

1.5.2 Worst Case Discharge

1.5.2.1 In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners or operators to use when calculating worst case discharge are presented in Appendix D to this part. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan shall be addressed.

1.5.2.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In this section of the response plan, owners or operators must provide evidence that oil storage tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume shall be based on the combined oil storage capacity of all manifold tanks or the oil storage capacity of the largest single oil storage tank within the secondary containment area, whichever is greater. For permanently manifolded oil storage tanks that function as one storage unit, the worst case discharge shall be based on the combined oil storage capacity of all manifolded tanks or the oil storage capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded oil storage tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.6 Discharge Detection Systems

In this section, the facility owner or operator shall provide a detailed description of the procedures and equipment used to detect discharges. A section on discharge detection by personnel and a discussion of automated discharge detection, if applicable, shall be included for both regular operations and after hours operations. In addition, the facility owner or operator shall discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.

1.6.1 Discharge Detection by Personnel

In this section, facility owners or operators shall describe the procedures and personnel that will detect any discharge of oil or release of a hazardous substance. A thorough discussion of facility inspections must be included. In addition, a description of initial response actions shall be addressed. This section shall reference section 1.3.1 of the response plan for emergency response information.

1.6.2 Automated Discharge Detection

In this section, facility owners or operators must describe any automated discharge detection equipment that the facility has in place. This section shall include a discussion of overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 Plan Implementation

In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan. This section shall include the identification of response resources for small, medium, and worst case discharges; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil discharge event and the time frame to update the plan must be described.

1.7.1 Response Resources for Small, Medium, and Worst Case Discharges

1.7.1.1 Once the discharge scenarios have been identified in section 1.5 of the response plan, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified discharge scenarios. The determination and demonstration of adequate response capability are presented in Appendix E to this part. In addition, steps to expedite the cleanup of oil discharges must be discussed. At a minimum, the following items must be addressed:

(1) Emergency plans for spill response;

(2) Additional response training;

(3) Additional contracted help;

(4) Access to additional response equipment/experts; and

(5) Ability to implement the plan including response training and practice drills.

1.7.1.2A recommended form detailing immediate actions follows.

OIL SPILL RESPONSE—IMMEDIATE ACTIONS

1. Stop the product flow	Act quickly to secure pumps, close valves, etc.
2. Warn personnel	Enforce safety and security measures.
3. Shut off ignition sources.	Motors, electrical circuits, open flames, etc.
4. Initiate containment	Around the tank and/or in the water with oil boom.
5. Notify NRC	1–800–424–8802
6. Notify OSC	
7. Notify, as appropriate	

Source: FOSS, Oil Spill Response—Emergency Procedures, Revised December 3, 1992.

1.7.2 Disposal Plans

1.7.2.1 Facility owners or operators must describe how and where the facility intends to recover, reuse, decontaminate, or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State, and Federal requirements must be addressed. Materials that must be accounted for in the disposal plan, as appropriate, include:

(1) Recovered product;

(2) Contaminated soil;

(3) Contaminated equipment and materials, including drums, tank parts, valves, and shovels;

(4) Personnel protective equipment;

(5) Decontamination solutions;

(6) Adsorbents; and

(7) Spent chemicals.

1.7.2.2 These plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA]), State, and local regulations, where applicable. A copy of the disposal plans from the facility's SPCC Plan may be inserted with this section, including any diagrams in those plans.

Material	Disposal facility	Location	RCRA permit/manifest
1.			
2.			
3.			
4.			

1.7.3 Containment and Drainage Planning

A proper plan to contain and control a discharge through drainage may limit the threat of harm to human health and the environment. This section shall describe how to contain and control a discharge through drainage, including:

(1) The available volume of containment (use the information presented in section 1.4.1 of the response plan);
(2) The route of drainage from oil storage and transfer areas;
(3) The construction materials used in drainage troughs;
(4) The type and number of valves and separators used in the drainage system;
(5) Sump pump capacities;
(6) The containment capacity of weirs and booms that might be used and their location (see section 1.3.2 of this appendix); and
(7) Other cleanup materials.

In addition, a facility owner or operator must meet the inspection and monitoring requirements for drainage contained in 40 CFR part 112, subparts A through C. A copy of the containment and drainage plans that are required in 40 CFR part 112, subparts A through C may be inserted in this section, including any diagrams in those plans.

NOTE: The general permit for stormwater drainage may contain additional requirements.

1.8 Self-Inspection, Drills/Exercises, and Response Training

The owner or operator must develop programs for facility response training and for drills/exercises according to the requirements of 40 CFR 112.21. Logs must be kept for facility drills/exercises, personnel response training, and spill prevention meetings. Much of the recordkeeping information required by this section is also contained in the SPCC Plan required by 40 CFR 112.3. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.1 Facility Self-Inspection

Under 40 CFR 112.7(e), you must include the written procedures and records of inspections for each facility in the SPCC Plan. You must include the inspection records for each container, secondary containment, and item of response equipment at the facility. You must cross-reference the records of inspections of each container and secondary containment required by 40 CFR 112.7(e) in the facility response plan. The inspection record of response equipment is a new requirement in this plan. Facility self-inspection requires two-steps: (1) a checklist of things to inspect; and (2) a method of recording the actual inspection and its findings. You must note the date of each inspection. You must keep facility response plan records for five years. You must keep SPCC records for three years.

1.8.1.1. Tank Inspection

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Duplicate information from the SPCC Plan may be photocopied and inserted in this section. The inspection checklist consists of the following items:

TANK INSPECTION CHECKLIST

1. Check tanks for leaks, specifically looking for:
   A. drip marks;
   B. discoloration of tanks;
   C. puddles containing spilled or leaked material;
   D. corrosion;
   E. cracks; and
   F. localized dead vegetation.
2. Check foundation for:
   A. cracks;
   B. discoloration;
   C. puddles containing spilled or leaked material;
   D. settling;
   E. gaps between tank and foundation; and
   F. damage caused by vegetation roots.
3. Check piping for:
   A. droplets of stored material;
   B. discoloration;
   C. corrosion;
   D. bowing of pipe between supports;
   E. evidence of stored material seepage from valves or seals; and
   F. localized dead vegetation.

TANK/SURFACE IMPOUNDMENT INSPECTION LOG

Inspector	Tank or SI#	Date	Comments

TANK/SURFACE IMPOUNDMENT INSPECTION LOG—Continued

Inspector	Tank or SI#	Date	Comments

1.8.1.2 Response Equipment Inspection

Using the Emergency Response Equipment List provided in section 1.3.2 of the response plan, describe each type of response equipment, checking for the following:

Response Equipment Checklist

1. Inventory (item and quantity);
2. Storage location;
3. Accessibility (time to access and respond);
4. Operational status/condition;
5. Actual use/testing (last test date and frequency of testing); and
6. Shelf life (present age, expected replacement date).

Please note any discrepancies between this list and the available response equipment.

RESPONSE EQUIPMENT INSPECTION LOG

[Use section 1.3.2 of the response plan as a checklist]

Inspector	Date	Comments

RESPONSE EQUIPMENT INSPECTION LOG—Continued

[Use section 1.3.2 of the response plan as a checklist]

Inspector	Date	Comments

1.8.1.3 Secondary Containment Inspection

Inspect the secondary containment (as described in sections 1.4.1 and 1.7.2 of the response plan), checking the following:

Secondary Containment Checklist

1. Dike or berm system.
   A. Level of precipitation in dike/available capacity;
   B. Operational status of drainage valves;
   C. Dike or berm permeability;
   D. Debris;
   E. Erosion;
   F. Permeability of the earthen floor of diked area; and
   G. Location/status of pipes, inlets, drainage beneath tanks, etc.
2. Secondary containment
   A. Cracks;
   B. Discoloration;
   C. Presence of spilled or leaked material (standing liquid);
   D. Corrosion; and
   E. Valve conditions.
3. Retention and drainage ponds
   A. Erosion;
   B. Available capacity;
   C. Presence of spilled or leaked material;
   D. Debris; and
   E. Stressed vegetation.

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR part 112, subparts A through C. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section.

1.8.2 Facility Drills/Exercises

(A) CWA section 311(j)(5), as amended by OPA, requires the response plan to contain a description of facility drills/exercises. According to 40 CFR 112.21(c), the facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. Following the PREP guidelines (see Appendix E to this part, section 13, for availability) would satisfy a facility's requirements for drills/exercises under this part. Alternately, under §112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the Regional Administrator based on the description of the program provided in the response plan.

(B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a discharge in the area if the plan was utilized for response to the discharge and the objectives of the Exercise were met and were properly evaluated, documented, and self-certified.

(C) Section 112.20(h)(8)(ii) requires the facility owner or operator to provide a description of the drill/exercise program to be carried out under the response plan. Qualified Individual Notification Drill and Spill Management Team Tabletop Drill logs shall be provided in sections 1.8.2.1 and 1.8.2.2, respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan. See section 1.3.3 of this appendix for Equipment Deployment Drill Logs.

1.8.2.1 Qualified Individual Notification Drill Logs

Qualified Individual Notification Drill Log

Date: _____
Company: _____
Qualified Individual(s): _____
Emergency Scenario: _____

_____

_____

Evaluation: _____

_____

_____

_____

Changes to be Implemented: _____

_____

_____

Time Table for Implementation: _____

_____

1.8.2.2 Spill Management Team Tabletop Exercise Logs

Spill Management Team Tabletop Exercise Log

Date: _____
Company: _____
Qualified Individual(s): _____
Emergency Scenario: _____

_____

_____

Evaluation: _____

_____

_____

_____

Changes to be Implemented: _____

_____

_____

Time Table for Implementation: _____

1.8.3 Response Training

Section 112.21(a) requires facility owners or operators to develop programs for facility response training. Facility owners or operators are required by §112.20(h)(8)(iii) to provide a description of the response training program to be carried out under the response plan. A facility's training program can be based on the USCG's Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the RA. The training elements are available from the USCG Office of Response (G-MOR) at (202) 267–0518 or fax (202) 267–4085. Personnel response training logs and discharge prevention meeting logs shall be included in sections 1.8.3.1 and 1.8.3.2 of the response plan respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.3.1 Personnel Response Training Logs

PERSONNEL RESPONSE TRAINING LOG

Name	Response training/date and number of hours	Prevention training/date and number of hours

1.8.3.2 Discharge Prevention Meetings Logs

DISCHARGE PREVENTION MEETING LOG

Date: _____
Attendees: _____

_____

_____

_____

_____

_____

_____

Subject/issue identified	Required action	Implementation date

1.9 Diagrams

The facility-specific response plan shall include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

(1) The Site Plan Diagram shall, as appropriate, include and identify:
(A) the entire facility to scale;
(B) above and below ground bulk oil storage tanks;
(C) the contents and capacities of bulk oil storage tanks;
(D) the contents and capacity of drum oil storage areas;
(E) the contents and capacities of surface impoundments;
(F) process buildings;
(G) transfer areas;
(H) secondary containment systems (location and capacity);
(I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
(J) location of communication and emergency response equipment;
(K) location of electrical equipment which contains oil; and
(L) for complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.

(2) The Site Drainage Plan Diagram shall, as appropriate, include:
(A) major sanitary and storm sewers, manholes, and drains;
(B) weirs and shut-off valves;
(C) surface water receiving streams;
(D) fire fighting water sources;
(E) other utilities;
(F) response personnel ingress and egress;
(G) response equipment transportation routes; and
(H) direction of discharge flow from discharge points.

(3) The Site Evacuation Plan Diagram shall, as appropriate, include:
(A) site plan diagram with evacuation route(s); and
(B) location of evacuation regrouping areas.

1.10 Security

According to 40 CFR 112.7(g) facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:

(1) emergency cut-off locations (automatic or manual valves);
(2) enclosures (e.g., fencing, etc.);
(3) guards and their duties, day and night;
(4) lighting;
(5) valve and pump locks; and
(6) pipeline connection caps.

The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

2.0 Response Plan Cover Sheet

A three-page form has been developed to be completed and submitted to the RA by owners or operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment F–1) must accompany the response plan to provide the Agency with basic information concerning the facility. This section will describe the Response Plan Cover Sheet and provide instructions for its completion.

2.1 General Information

Owner/Operator of Facility: Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of

the facility is a corporation, enter the name of the facility's principal corporate executive. Enter as much of the name as will fit in each section.

(1) *Facility Name:* Enter the proper name of the facility.

(2) *Facility Address:* Enter the street address, city, State, and zip code.

(3) *Facility Phone Number:* Enter the phone number of the facility.

(4) *Latitude and Longitude:* Enter the facility latitude and longitude in degrees, minutes, and seconds.

(5) *Dun and Bradstreet Number:* Enter the facility's Dun and Bradstreet number if available (this information may be obtained from public library resources).

(6) North American Industrial Classification System (NAICS) Code: Enter the facility's NAICS code as determined by the Office of Management and Budget (this information may be obtained from public library resources.)

(7) *Largest Oil Storage Tank Capacity:* Enter the capacity in GALLONS of the largest aboveground oil storage tank at the facility.

(8) *Maximum Oil Storage Capacity:* Enter the total maximum capacity in GALLONS of all aboveground oil storage tanks at the facility.

(9) *Number of Oil Storage Tanks:* Enter the number of all aboveground oil storage tanks at the facility.

(10) *Worst Case Discharge Amount:* Using information from the worksheets in Appendix D, enter the amount of the worst case discharge in GALLONS.

(11) *Facility Distance to Navigable Waters:* Mark the appropriate line for the nearest distance between an opportunity for discharge (i.e., oil storage tank, piping, or flowline) and a navigable water.

2.2 Applicability of Substantial Harm Criteria

Using the flowchart provided in Attachment C–I to Appendix C to this part, mark the appropriate answer to each question. Explanations of referenced terms can be found in Appendix C to this part. If a comparable formula to the ones described in Attachment C–III to Appendix C to this part is used to calculate the planning distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

2.3 Certification

Complete this block after all other questions have been answered.

3.0 Acronyms

ACP: Area Contingency Plan
ASTM: American Society of Testing Materials
bbls: Barrels
bpd: Barrels per Day
bph: Barrels per Hour
CHRIS: Chemical Hazards Response Information System
CWA: Clean Water Act
DOI: Department of Interior
DOC: Department of Commerce
DOT: Department of Transportation
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
FR: Federal Register
gal: Gallons
gpm: Gallons per Minute
HAZMAT: Hazardous Materials
LEPC: Local Emergency Planning Committee
MMS: Minerals Management Service (part of DOI)
NAICS: North American Industrial Classification System
NCP: National Oil and Hazardous Substances Pollution Contingency Plan
NOAA: National Oceanic and Atmospheric Administration (part of DOC)
NRC: National Response Center
NRT: National Response Team
OPA: Oil Pollution Act of 1990
OSC: On-Scene Coordinator
PREP: National Preparedness for Response Exercise Program
RA: Regional Administrator
RCRA: Resource Conservation and Recovery Act
RRC: Regional Response Centers
RRT: Regional Response Team
RSPA: Research and Special Programs Administration
SARA: Superfund Amendments and Reauthorization Act
SERC: State Emergency Response Commission
SDWA: Safe Drinking Water Act of 1986
SI: Surface Impoundment
SPCC: Spill Prevention, Control, and Countermeasures
USCG: United States Coast Guard

4.0 References

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group.

U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency

Planning for Extremely Hazardous Substances.

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC.

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List. Reston, VA.

ATTACHMENTS TO APPENDIX F

Attachment F–1—Response Plan Cover Sheet

This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in Appendix F. Please type or write legibly in blue or black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to: Chief, Information Policy Branch, Mail Code: PM–2822, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

GENERAL INFORMATION

Owner/Operator of Facility:

_____

Facility Name: _____

Facility Address (street address or route):

_____

_____

City, State, and U.S. Zip Code:

_____

Facility Phone No.: _____

Latitude (Degrees: North):

_____

degrees, minutes, seconds

Dun & Bradstreet Number: [1]

_____

Largest Aboveground Oil Storage Tank Capacity (Gallons):

_____

Number of Aboveground Oil Storage Tanks:

_____

Longitude (Degrees: West):

_____

degrees, minutes, seconds _____

North American Industrial Classification System (NAICS) Code: [1] _____

_____

Maximum Oil Storage Capacity (Gallons): __

Worst Case Oil Discharge Amount (Gallons):

Facility Distance to Navigable Water. Mark the appropriate line. _____

0– ¼ mile ____ ¼–½ mile ____ ½–1 mile ____ >1 mile ____

APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

Does the facility transfer oil over-water [2] to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____

No _____

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

Yes _____

No _____

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 [2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? [3]

Yes _____

No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million

[1] These numbers may be obtained from public library resources.

[2] Explanations of the above-referenced terms can be found in Appendix C to this part. If a comparable formula to the ones contained in Attachment C–III is used to establish the appropriate distance to fish and wildlife and sensitive environments or public drinking water intakes, documentation of the reliability and analytical soundness of the formula must be attached to this form.

[3] For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's ''Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments'' (see Appendix E to this part, section 13, for availability) and the applicable ACP.

gallons and is the facility located at a distance[2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?[2]

Yes _____

No _____

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 [2] in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____

No _____

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 information, I believe that the submitted information is true, accurate, and complete.

Signature: _____

Name (Please type or print): _____

_____

Title: _____

Date: _____

[59 FR 34122, July 1, 1994; 59 FR 49006, Sept. 26, 1994, as amended at 65 FR 40816, June 30, 2000; 65 FR 43840, July 14, 2000; 66 FR 34561, June 29, 2001; 67 FR 47152, July 17, 2002]

PART 113—LIABILITY LIMITS FOR SMALL ONSHORE STORAGE FACILITIES

Subpart A—Oil Storage Facilities

Sec.

AUTHORITY: Sec. 311(f)(2), 86 Stat. 867 (33 U.S.C. 1251 (1972)).

SOURCE: 38 FR 25440, Sept. 13, 1973, unless otherwise noted.

Subpart A—Oil Storage Facilities

§ 113.1 Purpose.

This subpart establishes size classifications and associated liability limits for small onshore oil storage facilities with fixed capacity of 1,000 barrels or less.

§ 113.2 Applicability.

This subpart applies to all onshore oil storage facilities with fixed capacity of 1,000 barrels or less. When a discharge to the waters of the United States occurs from such facilities and when removal of said discharge is performed by the United States Government pursuant to the provisions of subsection 311(c)(1) of the Act, the liability of the owner or operator and the facility will be limited to the amounts specified in § 113.4.

§ 113.3 Definitions.

As used in this subpart, the following terms shall have the meanings indicated below:

(a) *Aboveground* storage facility means a tank or other container, the bottom of which is on a plane not more than 6 inches below the surrounding surface.

(b) *Act* means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1151, *et seq.*

(c) *Barrel* means 42 United States gallons at 60 degrees Fahrenheit.

(d) *Belowground* storage facility means a tank or other container located other than as defined as ''Aboveground''.

(e) *Discharge* includes, but is not limited to any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

(f) *Onshore Oil Storage Facility* means any facility (excluding motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States, other than submerged land.

(g) *On-Scene Coordinator* is the single Federal representative designated pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan and identified in approved Regional Oil and Hazardous Substances Pollution Contingency Plans.

(h) *Oil* means oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

APPENDIX B

SPILL SPREAD AND FLOW CALCULATIONS

SPILL SPREAD AND FLOW CALCULATIONS

A. Spill Spread

The following assumptions were used in the calculation of the spill flow rate and spill radius:

- a release of oil consists of the maximum total volume of the unit;
- the oil migrates in a 180-degree radius from the unit (if unconstrained by permanent site features);
- the slope in the vicinity of each oil-filled unit is topographically flat;
- on gravel and landscaped surfaces, oil saturates the gravel or the surficial soils and does not infiltrate the subsurface soils. Migrating oil reaches equilibrium at an average depth of 1 inch (zero flow rate);
- on impervious surfaces, the oil spread reaches equilibrium at 0.25-inch thickness (zero flow rate); and
- a porosity of 30 percent was assumed when estimating the potential infiltration of the release to the subsurface (gravel and landscaped areas).

Given these assumptions, the following formulae were used to calculate oil migration distances:

<u>Gravel/Landscaped Surfaces</u>

Where: V = volume of oil (gallons)
0.3 = 30 percent void space
1/12 = 1-inch zero flow rate converted to feet (feet)
7.48 = conversion constant (gallons to cubic feet)
$\pi = 3.14$

Impervious Surfaces

$$Spill\ radius\ (feet) = \sqrt{\frac{2V}{(\frac{0.25}{12})(7.48)\pi}}$$

Where: 0.25/12 = 0.25-inch zero flow rate converted to feet (feet)

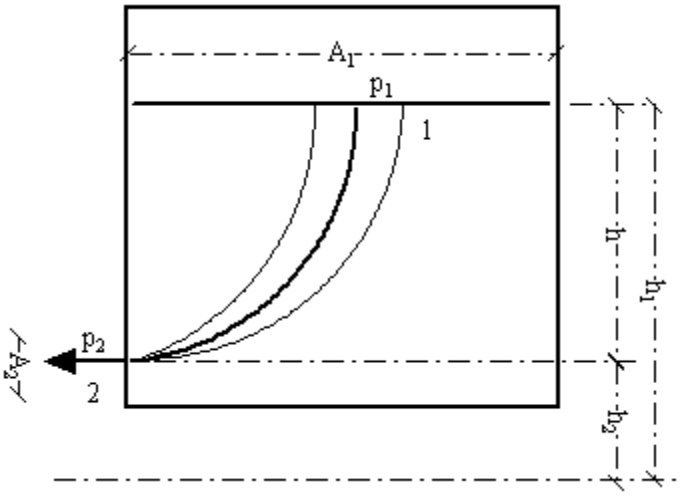
Once the oil is spilled, the horizontal migration rate is slow where the ground surface is flat or is gravel-covered. The migration rate depends on the quantity and flow rate of the spill, variations in the surrounding slope of the ground surface, and obstacles that may modify the migration pattern. The migration rate will also decrease as the oil spreads and the pressure and temperature gradients decrease.

B. Flow Rate Calculation

Flow rate of liquids from an AST through an orifice are calculated using the Bernoulli equation as streamline from the surface (1) to the orifice (2) as depicted in the figure below. First the velocity of the liquid is calculated, and then it is multiplied by the area of the orifice:

Where:

A = area
p = pressure
h = height



Conservative velocity is calculated for tanks that are vented or are open to the atmosphere (i.e., the pressure inside and outside the tank are approximately equal). The following formula is used to calculate conservative velocity:

$$V2 = \sqrt{2 \cdot g \cdot h}$$

Where: V2 = velocity (meters/second) (m/s)
g = gravity (9.81 meters/second^2) (m/s^2)
h = height (meters) (m)

For example, the conservative velocity for the 1,000-gallon AST located at Generator Plant 2, which is approximately 4 feet (1.22 meters) tall, is calculated as follows:

$$V2 = \sqrt{2*9.81*1.22} = 4.89 \text{ m/s}$$

Because of friction, the velocity will be lower than the theoretical example presented above. Therefore, friction coefficient of discharge "c" is used to calculate the effect of friction on the flow rate from the AST. To account for the friction, the velocity formula presented above is modified as follows:

$$V2 = c\sqrt{2 \cdot g \cdot h}$$

A friction coefficient of discharge for a sharp-edged opening is typically 0.6. For a smooth opening, the friction coefficient typically ranges from 0.95 to 1. A value of 0.6 was selected because it was assumed that the opening would have a sharp edge that is common for punctures.

For example, the velocity from the 1,000-gallon AST with friction is calculated as follows:

$$V2 = 0.6\sqrt{2*9.81*1.22} = 2.93 \text{ m/s}$$

Once the velocity is obtained, the flow rate can be calculated by multiplying the velocity by the area of the most likely puncture hole. For these calculations, a hole with an area of 0.05 square feet was used.

Flow Rate (gallons/minute) = V2 * A * 7.48 * 60 * 3.28

Where: V2 = velocity assuming friction (m/s)
A = Area of the hole (square feet) (ft^2)
7.48 = conversion constant (gallons to cubic feet)
60 = conversion constant (seconds to minutes)
3.28 = conversion constant (meters to feet)

For example, the flow rate from the 1,000-gallon AST with friction is calculated as follows:

Flow Rate = 2.93 * 0.05 * 7.48 * 60 * 3.28 = 216 gallons/minute

Flow Rate/Oil Spread Distance Calculation														
Depiction on Site Plan	**Capacity (gal)**	**Tank Orientation**	**Height of Tank (ft)**	**Height of Tank (m)**	**Gravity**	**Puncture Area (ft^2)**	**V2 (m/sec)**	**Discharge Coefficient**	**V2, Assuming Friction (m/sec)**	**Flow Rate (gal/min)**	**Discharge Assuming Friction Coefficient (gal/min)**	**Zero Flow Rate (inches)**	**Void Space (%)**	**Spill Radius (ft)**
Emergency Generator Diesel Tanks (Gen 1B)	20,000	Horizontal	10.0	3.05	9.81	0.05	7.73	0.6	4.64	569	342	0.25	0.30	286
Emergency Generator Diesel Day Tank (Gen 1B)	1,000	Horizontal	4.0	1.22	9.81	0.05	4.89	0.6	2.93	360	216	0.25	0.30	64
Emergency Generator Diesel Tanks (Gen 2)	10,000	Horizontal	8	2.44	9.81	0.05	6.92	0.6	4.15	509	306	0.25	0.30	202
Emergency Generator Diesel Day Tanks (Gen 2)	1,000	Horizontal	4.0	1.22	9.81	0.05	4.89	0.6	2.93	360	216	0.25	0.30	64
Emergency Generator Diesel Day Tank (Building #16)	2,260	Horizontal	2.0	0.61	9.81	0.05	3.46	0.6	2.08	255	153	0.25	0.30	64
Emergency Generator Diesel Tank (North Campus Generator #1)	2,500	Horizontal	3.0	0.91	9.81	0.05	4.22	0.6	2.53	310	186	0.25	0.30	101
Emergency Generator Diesel Tank (North Campus Generator #2)	2,000	Horizontal	2.5	0.76	9.81	0.05	3.86	0.6	2.31	284	147	0.25	0.30	90
Emergency Generator Diesel Tank (North Campus Generator #3)	1,600	Horizontal	3.0	0.91	9.81	0.05	4.22	0.6	2.53	310	186	0.25	0.30	81
Emergency Generator Diesel Tank (North Campus Generator #4)	2,500	Horizontal	3.0	0.91	9.81	0.05	4.22	0.6	2.53	310	186	0.25	0.30	101
Emergency Generator Diesel Day Tank Tanks (North Campus Rear of Building)	400	Horizontal	1.5	0.46	9.81	0.05	3.00	0.6	1.80	221	132	0.25	0.30	29
Emergency Generator Diesel Day Tank (Bright Horizon Campus)	2,260	Horizontal	2.83	0.86	9.81	0.05	4.12	0.6	2.47	303	182	0.25	0.30	96

APPENDIX C

FUEL TRANSFER POLICIES

Generator Plant Fuel Transfer Protocols

1. Electrician on duty will call for fuel delivery when fuel levels get below 50%.
    a. Crown Oil 860-583-9222.
    b. Quinoco Cadwell 860-583-4609.
2. Electrician will contact Security to notify team when to expect delivery.
    a. Ext 6 – 2486.
3. Security will contact electrician on duty upon arrival of delivery, escort driver to the site and standby until electrician is on site.
    a. Facilities Electricians can be reached on Radio Channel 28.
4. Prior to the start of the fuel transfer the electrician will layout the spill mitigation as seen in the following:
    a. Spill mitigation equipment is located in each Generator Plant and Facility Electrician Vehicle.

5. The Fuel Delivery Drive must:
    a. Chock Wheels;
    b. Place drip pans under pump and hose fittings prior to loading truck;
    c. Ground/Bond their vehicle;
    d. Check connection tightness;
    e. Check that tank valves are shut off prior to disconnecting transfer piping.
6. Electrician will then fill out the proper fuel transfer paperwork and allow the driver to the transfer.
    a. For standard delivery Please utilize the Port 1 location with the 2” scully cap.
    b. For Tanker truck deliveries please utilize the Port 2 location with the 4” connection.
7. Upon completion the ESPN electrician on duty will sign the driver’s paper work, return spill mitigation to its proper location.
8. All associated paperwork shall be submitted to the ESPN Facility Electricians 1st Shift Supervisor.
9. **In case of an accidental spill, the electrician on duty will contact security at 6-2486 or Emergency Radio Channel 26, and utilize other spill response tools to mitigate environmental exposure.**

GENERATOR PLANT FUEL TRANSFER PROTOCOLS

1. Electrician on duty will call for fuel delivery when fuel levels get below 50%

    a. Crown Oil (860) 583-9222
    b. Quinoco Cadwell (860) 583-4609

2. Electrician will contact Security to notify team when to expect delivery.

    a. Ext. 6-2486

3. Security will contact electrician on duty upon arrival of delivery, escort driver to the site, and standby until electrician is on site.

    a. Facilities Electricians can be reached on Channel 28 Fac-Elec

4. Prior to the start of the fuel transfer the electrician will layout the spill mitigation equipment (catch basin mat and berm).

    a. Spill mitigation equipment is located in each Generator Plant.

5. Electrician will then fill out the proper fuel transfer paperwork and allow the drive to the transfer.

    a. For standard delivery utilize the Port 1 location with the 2” sully cap.
    b. For tanker truck deliveries please utilize the Port 2 location with the 4” connection.

6. Upon completion the electrician will sign the driver’s paperwork and return spill mitigation equipment to its proper location.

7. In case of an accidental release, the electrician on duty will notify Security (ext. 6-2486) and utilize other spill response tools to mitigate environmental exposure.

NOTICE TO TANK TRUCK DRIVERS

To prevent the release of substances hazardous to the environment, tank truck drivers entering this Facility are to comply with the following rules:

- during oil transfer, vehicles must be parked on concrete/asphalt, or other impermeable surface;
- the attendant must not overfill the truck or keep the nozzle open using a device or method other than his hand;
- coordinate oil transfer with Facility personnel during normal business hours;
- exercise caution when maneuvering to avoid damage to structures;
- inspect tank, fittings, and liquid level indicator prior to filling;
- place drip pans under pump and hose fittings prior to loading/unloading truck;
- the vehicle ignition must be turned off during filling;
- chocktruck wheels before starting to load/unload;
- remain with the vehicle while loading/unloading;
- drain loading/unloading line to storage tank and verify that drain valves are closed and in their standby and locked positions before disconnecting loading/unloading lines;
- inspect vehicle before departure to be sure loading/unloading lines have been disconnected and stowed and valves are closed;
- following transfer, product and product-impacted water collected in drip pans must be transferred into the truck, and drips or other minor spills not contained must be cleaned up immediately; and
- if a spill occurs, immediate steps must be taken to contain the spill, obtain help, and report the incident to the SPCC Coordinator.

APPENDIX D

PERSONNEL TRAINING RECORD

PERSONNEL TRAINING RECORD
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

Please note that training rosters and records are generated and maintained by the Disney Development Connection Learning Management System (LMS)

APPENDIX E

INSPECTION RECORDS AND INCIDENT REPORT FORMS

ESPN, INC.
BRISTOL, CONNECTICUT
Generator Safety Inspection
Visual Inspection Log
Note: This Log should be copied prior to use.

Date:	Time:	Inspectors Name (Print)		
		Inspectors Name (Signature)		

Item/Conditions to be inspected.	Generator 1 B		Generator 2		Obervations/Deficiency	Corrective Action & Date
	Yes	No	Yes	No		
Are no smoking signs posted by above ground fuel tanks?						
Are spill kits available?						
Oil Spill Cabinet?						
Flexible Storm Drain Cover?						
Are fire exinguishers fully charged?						
Is the facility fencing in good condition?						
Is the facility exterior lighting operational?						
Are the fire hydrants in good condition?						
Any debris/trash around the facility property?						

Comments

INCIDENT REPORT FORM

1. TIME AND DATE RELEASE DISCOVERED? _____

2. TIME AND DATE RELEASE STOPPED? _____

3. APPROXIMATE LOCATION AND TYPE OF ACCIDENT (E.G., FIRE, EXPLOSION, SPILL)?

   _____

   _____

4. MATERIAL RELEASED? _____

   APPROXIMATE AMOUNT (gallons)? _____

5. EXTENT OF INJURIES (IF ANY)? _____

   _____

6. WHAT DAMAGE TO PEOPLE OR THE ENVIRONMENT IS LIKELY?

   _____

7. ESTIMATED AMOUNT OF MATERIAL RECOVERED?

   _____

8. WHAT WAS DONE WITH RECOVERED MATERIAL?

   _____

9. ACTION TAKEN TO CONTROL THE PROBLEM AND PREVENT FURTHER PROBLEMS?

   _____

   _____

   _____

10. NOTIFICATIONS TO EXTERNAL AGENCIES? YES: _____ NO: _____

11. TIME NOTIFICATIONS MADE?

AGENCY: _____ TIME: _____

AGENCY: _____ TIME: _____

AGENCY: _____ TIME: _____

SIGNATURE (MANAGER) _____ DATE: _____

Appendix E
Incident Report Form

STI SP001 AST Record

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name	Name	Name
Number and Street	Number and Street	Number and Street
City, State, Zip Code	City, State, Zip Code	City, State, Zip Code

.

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: _____ Type: _____

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- **In the event of severe weather (snow, ice, wind storms) or maintenance (such as painting) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for water, debris, cracks or fire hazard	□Yes* □No □N/A	
1.2 Primary tank	Check for water	□Yes* □No	
1.3 Containment drain valves	Operable and in a closed position	□Yes □No* □N/A	
1.4 Pathways and entry	Clear and gates/doors operable	□Yes □No* □N/A	
2.0 Leak Detection			
2.1 Tank	Visible signs of leakage	□Yes* □No	
2.2 Secondary Containment	Visible signs of leakage from tank into secondary containment	□Yes* □No	
2.3 Surrounding soil	Visible signs of leakage	□Yes* □No □N/A	
2.4 Interstice	Visible signs of leakage	□Yes* □No □N/A	

Item	Task	Status	Comments
3.0 Tank Equipment			
3.1 Valves	a. Check for leaks.	□Yes* □No □N/A	
	b. Tank drain valves must be kept locked.	□Yes* □No □N/A	
3.2 Spill containment boxes on fill pipe	a. Inspect for debris, residue, and water in the box and remove.	□Yes* □No □N/A	
	b. Drain valves must be operable and closed.	□Yes* □No □N/A	
3.3 Liquid level equipment	a. Both visual and mechanical devices must be inspected for physical damage.	□Yes □No* □N/A	
	b. Check that the device is easily readable	□Yes □No* □N/A	
3.4 Overfill equipment	a. If equipped with a "test" button, activate the audible horn or light to confirm operation. This could be battery powered. Replace the battery if needed	□Yes □No* □N/A	
	b. If overfill valve is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	□Yes □No* □N/A	
3.5 Piping connections	Check for leaks, corrosion and damage	□Yes* □No	
4.0 Tank Attachments and Appurtenances			
4.1 Ladder and platform structure	Secure with no sign of severe corrosion or damage?	□Yes □No* □N/A	
5.0 Other Conditions			
5.1 Are there other conditions that should be addressed for continued safe operation or that may affect the site spill prevention plan?		□Yes* □No	

Additional Comments:

STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Remove promptly upon discovery standing water or liquid in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility must regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- Complete this checklist on an annual basis supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for: • Holes or cracks in containment wall or floor • Washout • Liner degradation • Corrosion • Leakage • Paint failure • Tank settling	□Yes* □No □N/A	
2.0 Tank Foundation and Supports			
2.1 Foundation	Settlement or foundation washout?	□Yes* □No	
2.2 Concrete pad or ring wall	Cracking or spalling?	□Yes* □No □N/A	

Item	Task	Status	Comments
2.3 Supports	Check for corrosion, paint failure, etc.	□Yes* □No □N/A	
2.4 Water drainage	Water drains away from tank?	□Yes □No* □N/A	
2.5 Tank grounding	Strap secured and in good condition?	□Yes □No* □N/A	
3.0 Cathodic Protection			
3.1 Gavlvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	□Yes □No* □N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms).	□Yes □No* □N/A	
	b. Record hour meter, ammeter and voltmeter readings.	□Yes □No* □N/A	
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure	□Yes* □No	
4.2 Steel condition	Check for: • Dents • Buckling • Bulging • Corrosion • Cracking	□Yes* □No	
4.3 Roof slope	Check for low points and standing water	□Yes* □No □N/A	
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components	□Yes* □No	

Item	Task	Status	Comments
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage.	□Yes* □No	
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation.	□Yes □No* □N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above only)	□Yes □No* □N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	□Yes □No* □N/A	
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger.)	□Yes □No* □N/A	
5.2.5 Fire and shear valves	a. Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely.	□Yes □No* □N/A	
	b. Valves must not be wired in open position.	□Yes □No* □N/A	

Item	Task	Status	Comments
	c. Make sure fusible element is in place and correctly positioned.	□Yes □No* □N/A	
	d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	□Yes □No* □N/A	
5.3 Interstitial leak detection equipment	Check condition of equipment, including: • The window is clean and clear in sight leak gauges. • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable.	□Yes □No* □N/A	
5.4 Spill containment boxes on fill pipe	a. If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit.	□Yes* □No □N/A	
	b. Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary.	□Yes* □No □N/A	
	c. Drain valves must be operable and closed	□Yes* □No □N/A	
5.5 Strainer	a. Check that the strainer is clean and in good condition.	□Yes □No* □N/A	

Item	Task	Status	Comments
5.5 Strainer	b. Access strainer basket and check cap and gasket seal as well as bolts.	□Yes □No* □N/A	
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary.	□Yes □No* □N/A	
	b. Check for leaks and decreased fuel flow	□Yes □No* □N/A	
5.7 Flame arrestors	Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	□Yes* □ No □N/A	
5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	□Yes □No* □N/A	
5.9 Liquid level equipment	a. Has equipment been tested to ensure proper operation?	□Yes □No* □N/A	
	b. Does equipment operate as required?	□Yes □No* □N/A	
	c. Follow manufacturer's instructions	□Yes □No* □N/A	
5.10 Overfill equipment	a. Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification.	□Yes □No* □N/A	
	b. Confirm device is suited for above ground use by the manufacturer	□Yes □No* □N/A	

Item	Task	Status	Comments
6.0 Insulated Tanks			
6.1 Insulation	Check condition of insulation for: • Missing sections • Areas of moisture • Mold • Damage	□Yes* □ No □N/A	
6.2 Insulation cover or jacket	Check for damage that will allow water intrusion	□Yes* No □N/A	
7.0 Miscellaneous			
7.1 Electrical wiring and boxes	Are they in good condition?	□Yes □No* □N/A	
7.2 Labels and tags	Ensure that all labels and tags are intact and readable.	□Yes □No* □N/A	

Additional Comments:

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Containers Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.

Item	Area: _____	Area: _____	Area: _____	Area: _____
1.0 AST Containment/Storage Area				
1.1 ASTs within designated storage area?	□Yes □No*	□Yes □No*	□Yes □No*	□Yes □No*
1.2 Debris, spills, or other fire hazards in containment or storage area?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No
1.3 Water in outdoor secondary containment?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No
1.4 Drain valves operable and in a closed position?	□Yes □No*	□Yes* □No	□Yes* □No	□Yes* □No
1.5 Egress pathways clear and gates/doors operable?	□Yes □No*	□Yes* □No	□Yes* □No	□Yes* □No

Item	Area: _____	Area: _____	Area: _____	Area: _____
2.0 Leak Detection				
2.1 Visible signs of leakage around the container or storage area?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No
3.0 Container				
3.0 Noticeable container distortions, buckling, denting or bulging?	□Yes* □No	□Yes* □No	□Yes* □No	□Yes* □No

Comments:

ESPN, Inc.

ELEVATORS/TRANSFORMERS
And ASSOCIATED CONTAINMENT STRUCTURES
FACILITY ELECTRICIANS INSPECTION FORM

Note: This log should be copied prior to use.

Date: _____ **Inspector's Name:** _____

Time: _____ **am / pm** **Inspector's Signature:** _____

Y = Yes N = No

Location of Transformer	Transformers											
	Bldg A	**Bldg B**	**Bldg 5(1)**	**Bldg 5(2)**	**Café**	**Bldg 13(1)**	**Bldg 13(2)**	**Bldg 4 (1)**	**Bldg 4 (2)**	**Gen 2 (1)**	**Gen 2 (2)**
Items/Conditions to be Checked											
Are transformers free of cracks, leaks, rusting and damage?											
Is there any evidence of releases of releases of hydraulic oil or dielectric fluid from transformers?											
Are secondary containment systems such as cement pads for transformers free of gaps, cracks and damage?											
Is adequate spill response equipment available and in good condition in Mechanical Rooms?											

Comments: _____

_____

_____

_____

APPENDIX F

SPILL, FIRE, AND SAFETY EQUIPMENT

SPILL, FIRE, AND SAFETY EQUIPMENT

The following safety equipment should be available to protect employees and provide containment of constituents in the event of a spill.

- Spill control/countermeasure materials:
    - Each kit, at a minimum, should include:
        - one drum;
        - oil dry, absorbent materials (or equivalent);
        - sorbent socks and pads;
        - shovels (if granulated material, such as Speedi-Dry, is used);
        - brooms (if granulated material, such as Speedi-Dry, is used); and
        - drain pans.
- Fire extinguishers:

Portable fire extinguishers and fire alarm pull stations are located throughout the Facility buildings.

ESPN Global
Security and Safety

Emergency / Safety Item locations

ESPN Facilities – Monthly Safety Audit

- **Facilities information**
- Building Name/Floor: Date Complete:
- Completed By:

- **General Areas**
- Are all walking or working surfaces free of tripping/slipping hazards?
-
- **Means of Egress**
- Are all aisles, doorways and exits unobstructed?
- Are stairways free and clear of debris?
- Are 44” aisles maintained?
- Are exit ways clearly marked?
- Emergency and fire exit lights operating?

- **Fire Protection**
- Are all fire extinguishers in place, charged and accessible?
- Are building evacuation procedures posted (by elevators)?
- Is sprinkler head clearance of 18” maintained?
-
- **Electrical Closets**
- Are electric panel boxes blocked /obstructed (3 ft clearance required)?
- Are electrical rooms free and clear of combustible materials and debris?
- **Emergency Equipment**
- Is emergency equipment (alarm pull boxes, eyewashes, showers, etc.) accessible and not blocked by equipment?
- Are spill kits accessible and fully stocked?
-
- **Storage Areas**
- Are all cylinders properly secured with straps or chains to prevent tipping/falling?

LEGEND

 – Fire Extinguisher

– First Aid Kit

– AED

 – Battery Recycle Bin

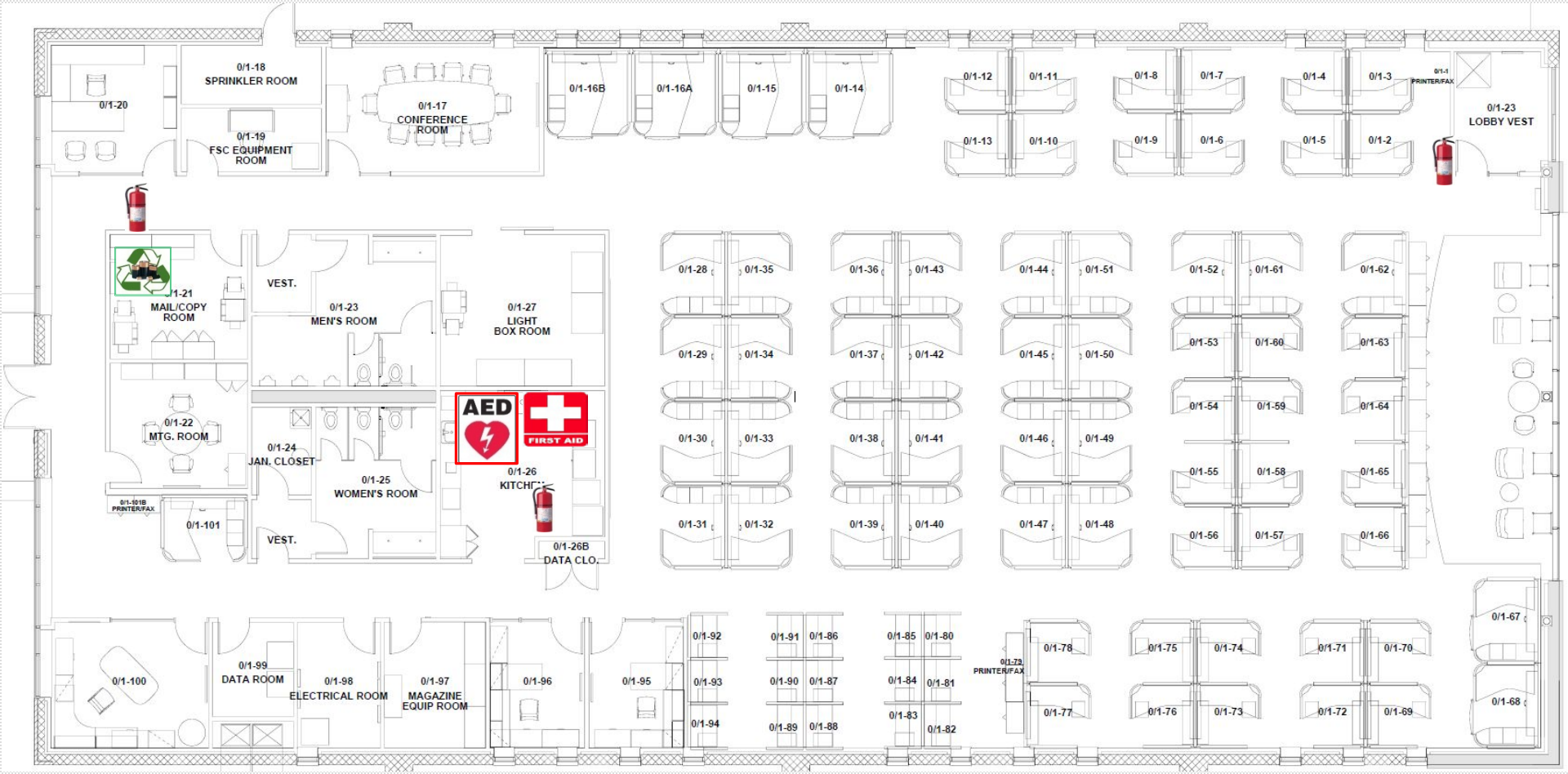
– Eye Wash Station

– Evacuation Chair

 – Hearing Protection

– Spill Response Kit / Storage

 – Eye Protection / Safety Glasses


0/1-18
SPRINKLER ROOM
0/1-20
0/1-19
FSC EQUIPMENT ROOM
0/1-17
CONFERENCE ROOM
0/1-16B
0/1-16A
0/1-15
0/1-14
0/1-12
0/1-11
0/1-8
0/1-7
0/1-4
0/1-3
0/1-1
PRINTER/FAX
0/1-23
LOBBY VEST
0/1-13
0/1-10
0/1-9
0/1-6
0/1-5
0/1-2
VEST.
0/1-21
MAIL/COPY ROOM
0/1-23
MEN'S ROOM
0/1-27
LIGHT BOX ROOM
AED
FIRST AID
0/1-22
MTG. ROOM
0/1-24
JAN. CLOSET
0/1-25
WOMEN'S ROOM
0/1-26
KITCHEN
0/1-101B
PRINTER/FAX
0/1-101
VEST.
0/1-26B
DATA CLO.
0/1-28
0/1-35
0/1-36
0/1-43
0/1-44
0/1-51
0/1-52
0/1-61
0/1-62
0/1-29
0/1-34
0/1-37
0/1-42
0/1-45
0/1-50
0/1-53
0/1-60
0/1-63
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0/1-33
0/1-38
0/1-41
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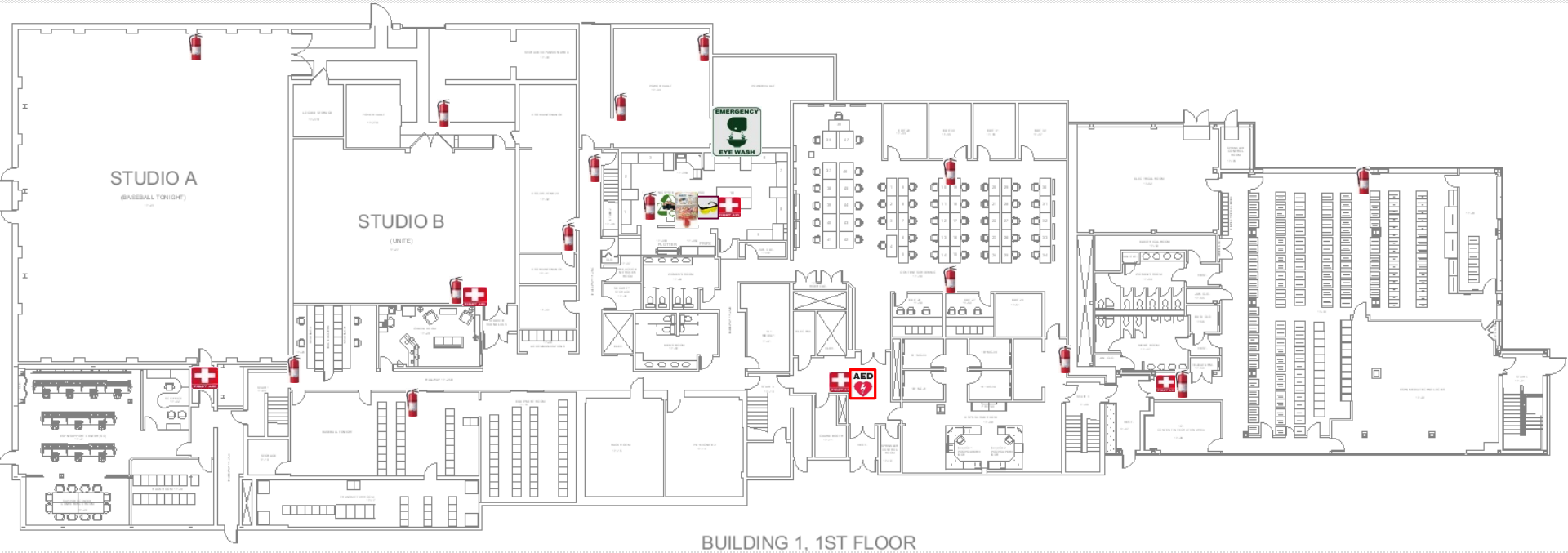
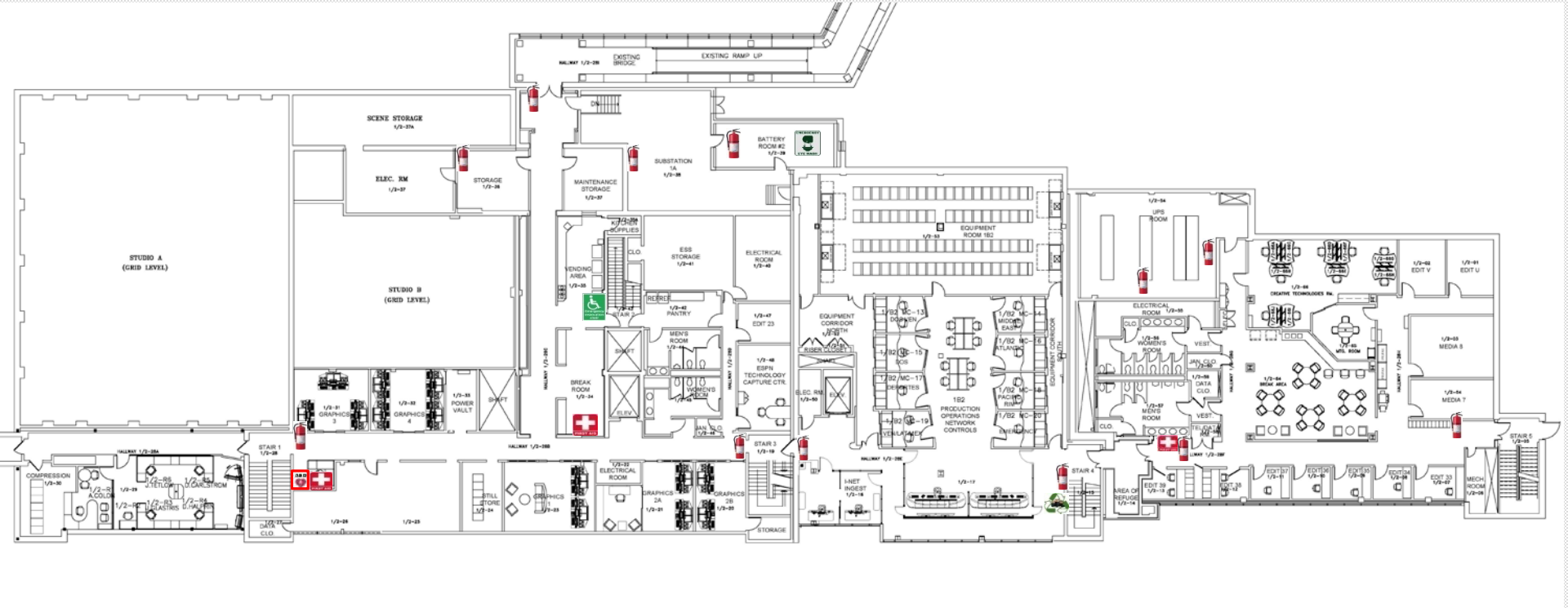
0/1-59
0/1-64
0/1-31
0/1-32
0/1-39
0/1-40
0/1-47
0/1-48
0/1-55
0/1-58
0/1-65
0/1-56
0/1-57
0/1-66
0/1-100
0/1-99
DATA ROOM
0/1-98
ELECTRICAL ROOM
0/1-97
MAGAZINE EQUIP ROOM
0/1-96
0/1-95
0/1-92
0/1-93
0/1-94
0/1-91
0/1-86
0/1-90
0/1-87
0/1-89
0/1-88
0/1-85
0/1-80
0/1-84
0/1-81
0/1-83
0/1-82
0/1-73
PRINTER/FAX
0/1-78
0/1-77
0/1-75
0/1-74
0/1-76
0/1-73
0/1-71
0/1-70
0/1-72
0/1-69
0/1-67
0/1-68

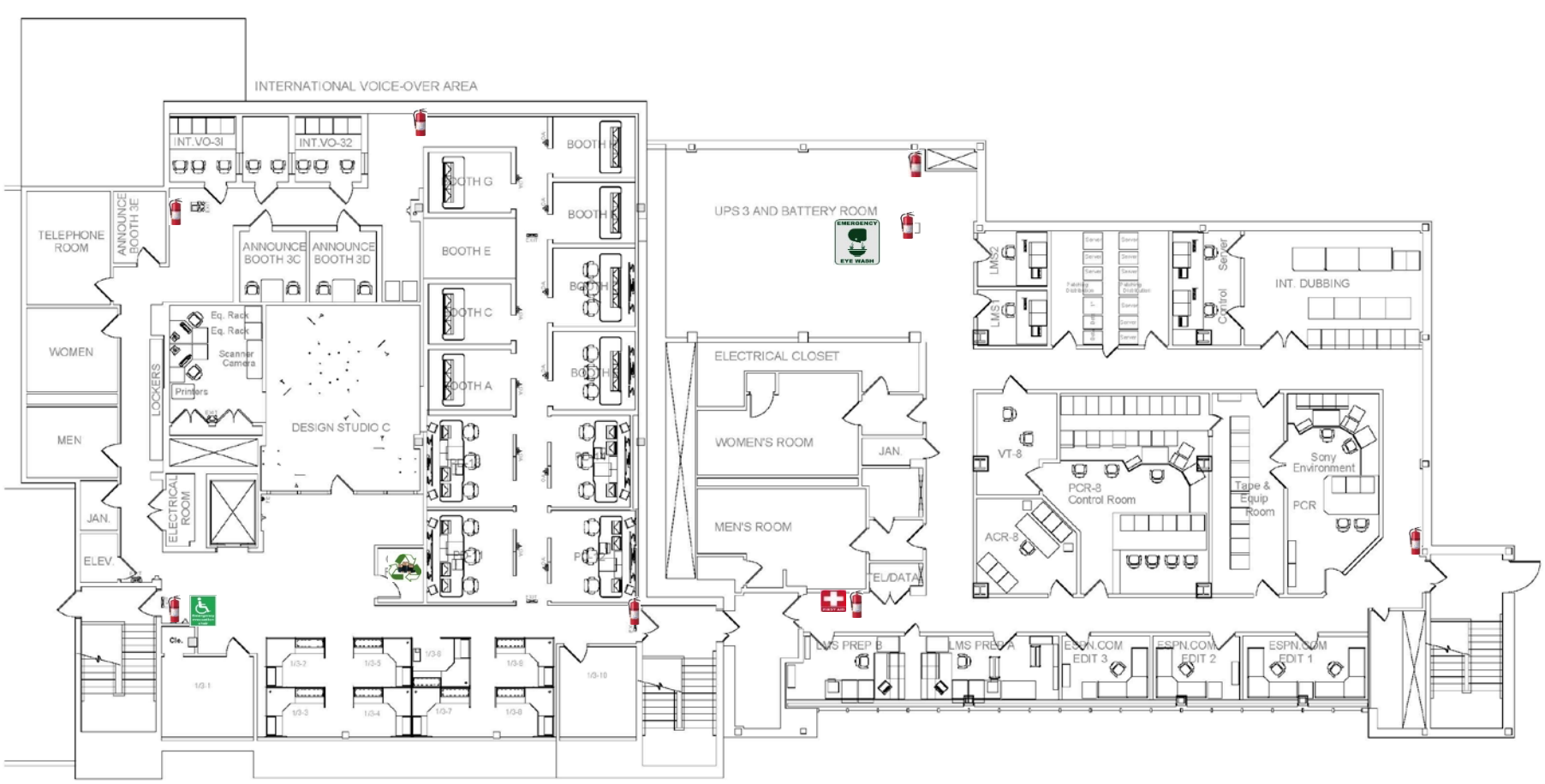
Bldg. 0



Bldg. 1, Floor 1

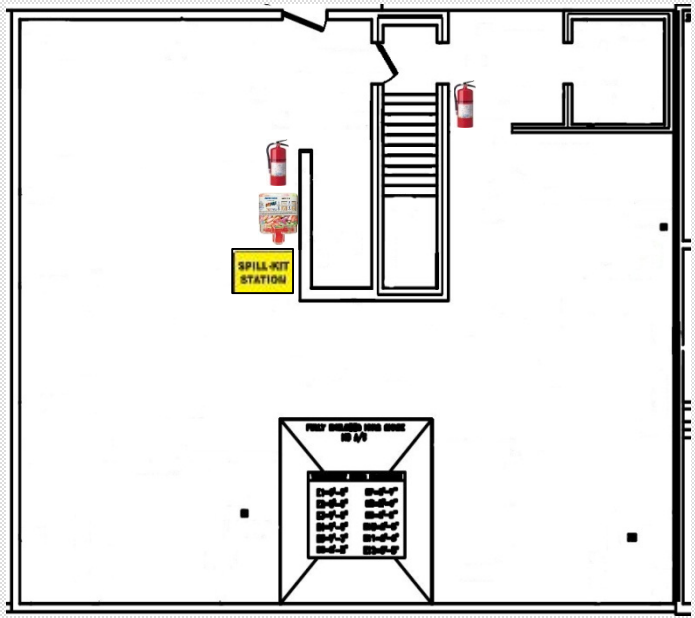


Bldg. 1, Floor 2



Bldg. 1, Floor 3

Penthouse B



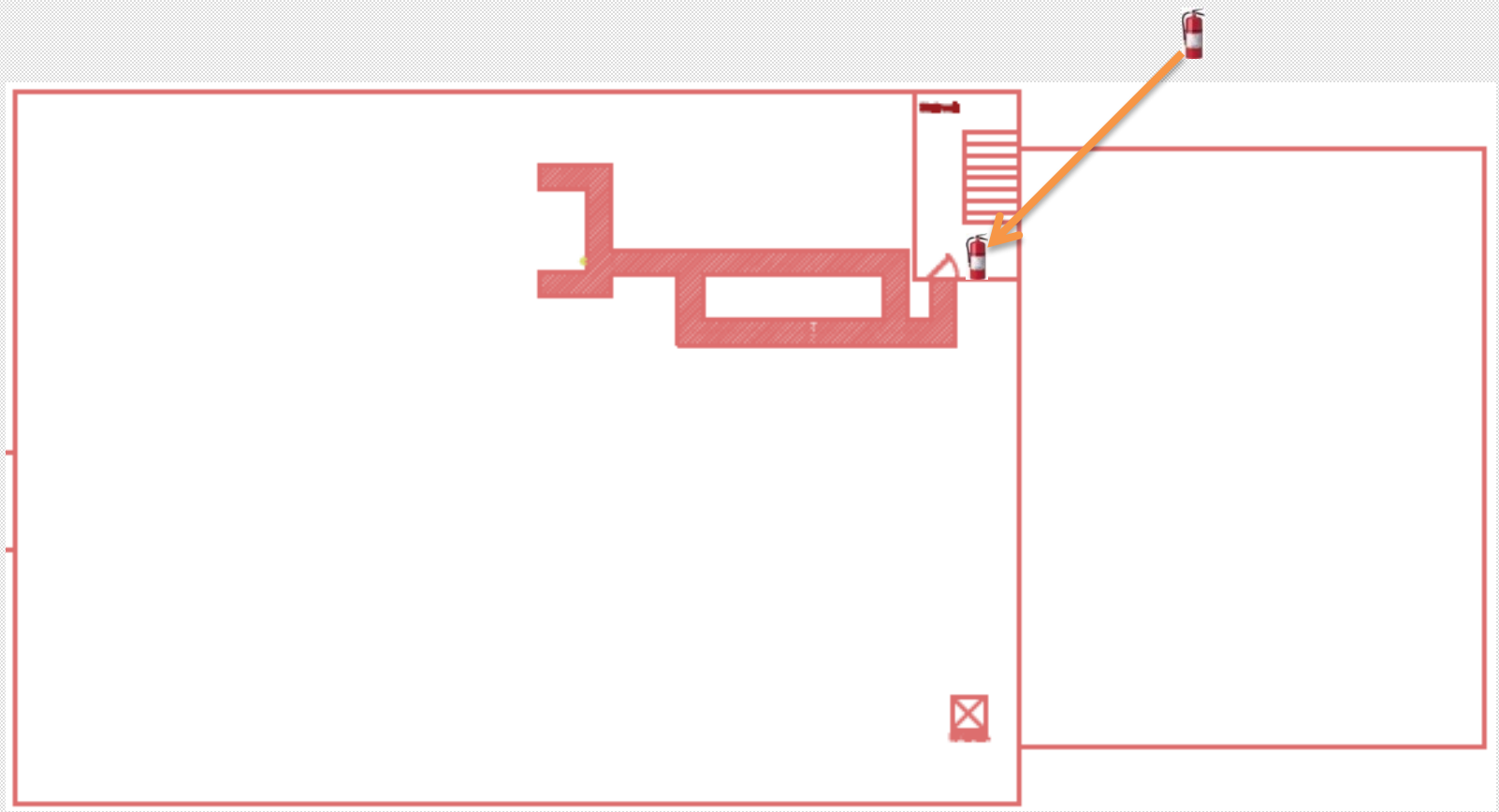
Penthouse C

Bldg. 1, Penthouses

Bldg. 2, Floor 1

Bldg. 2, Floor 2

Bldg. 2, Floor 3



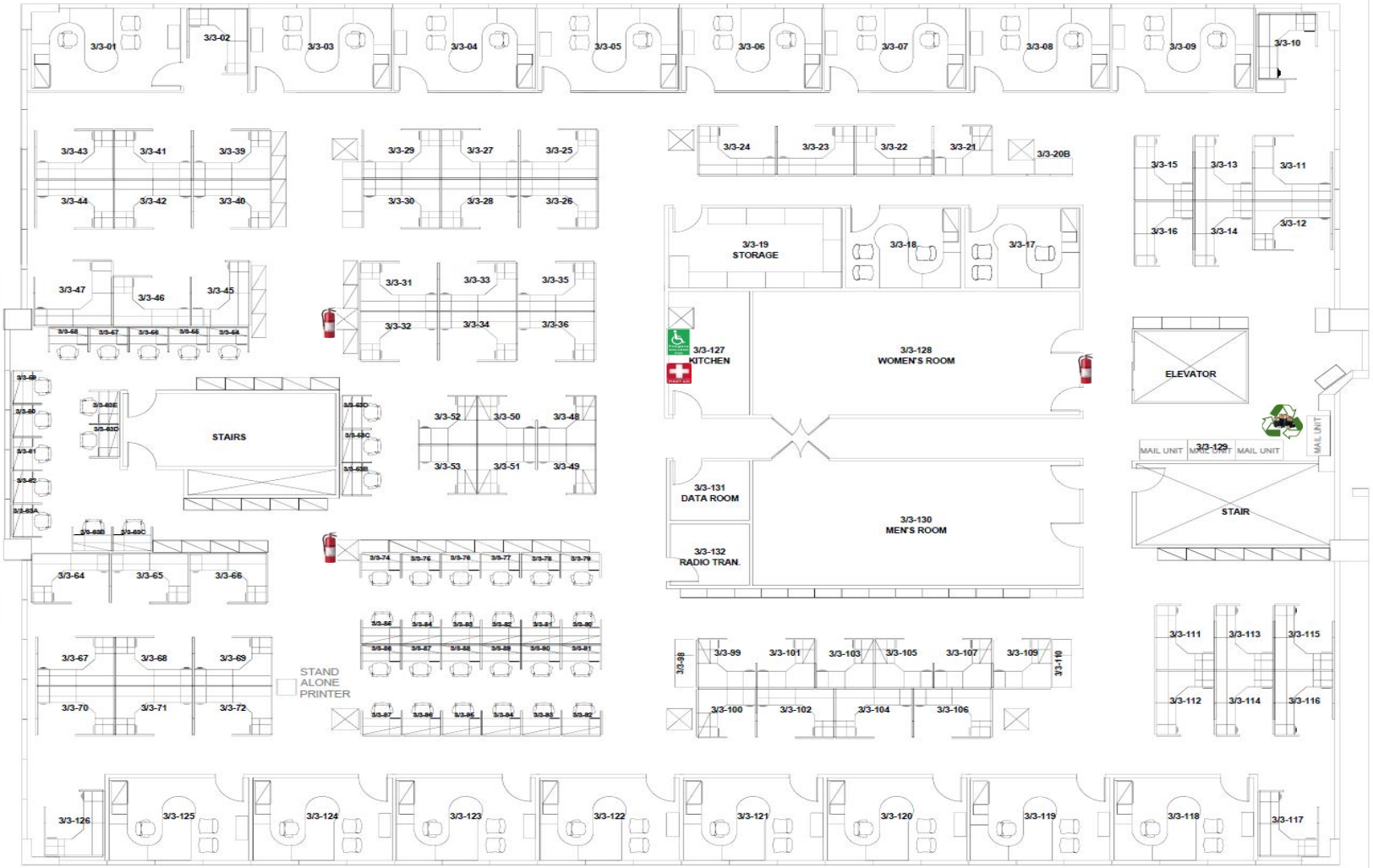
- Fire Extinguisher located at top of east stairwell

Bldg. 2, Rooftop

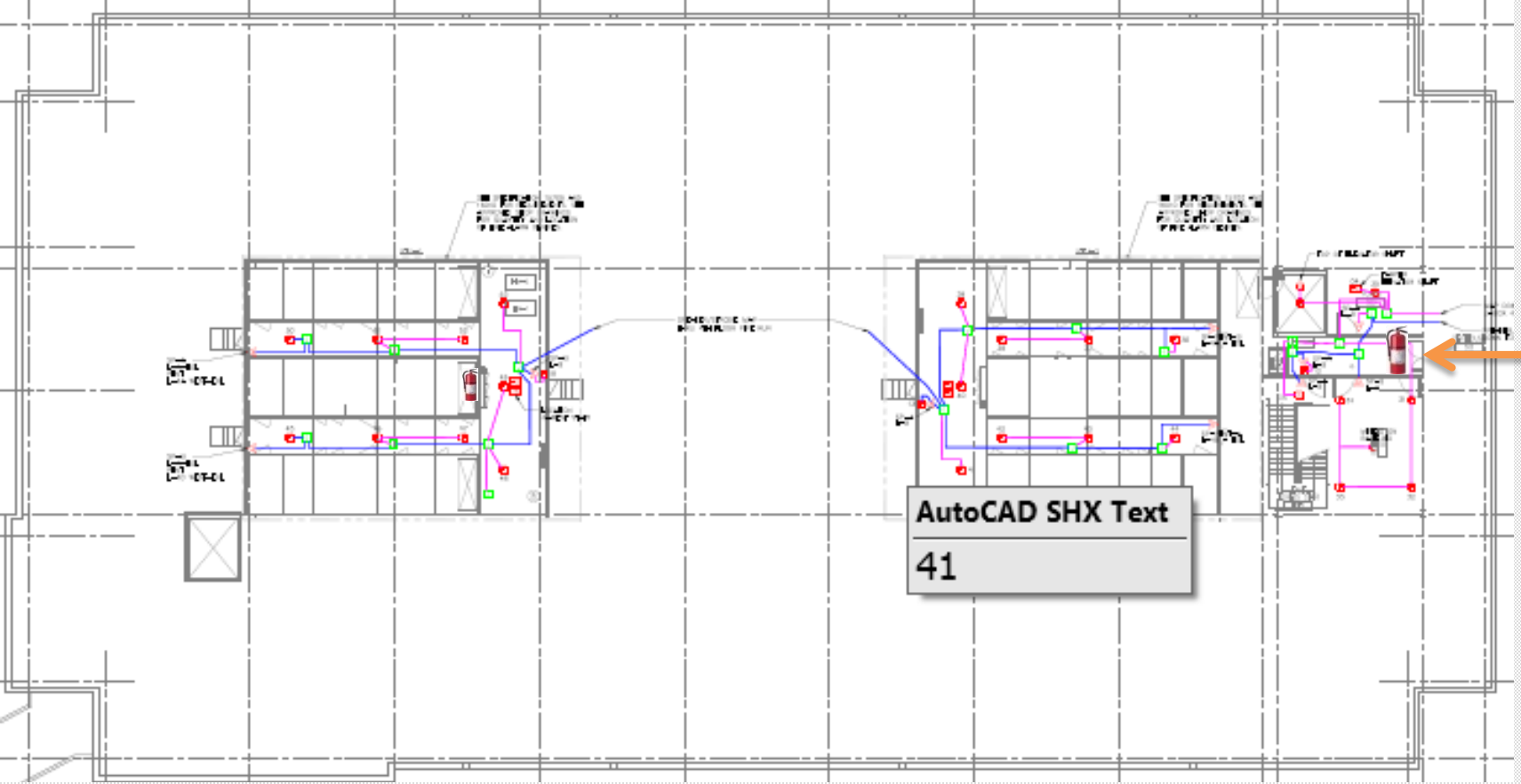
Bldg. 3, Basement

Bldg. 3, Floor 1

Bldg. 3, Floor 2

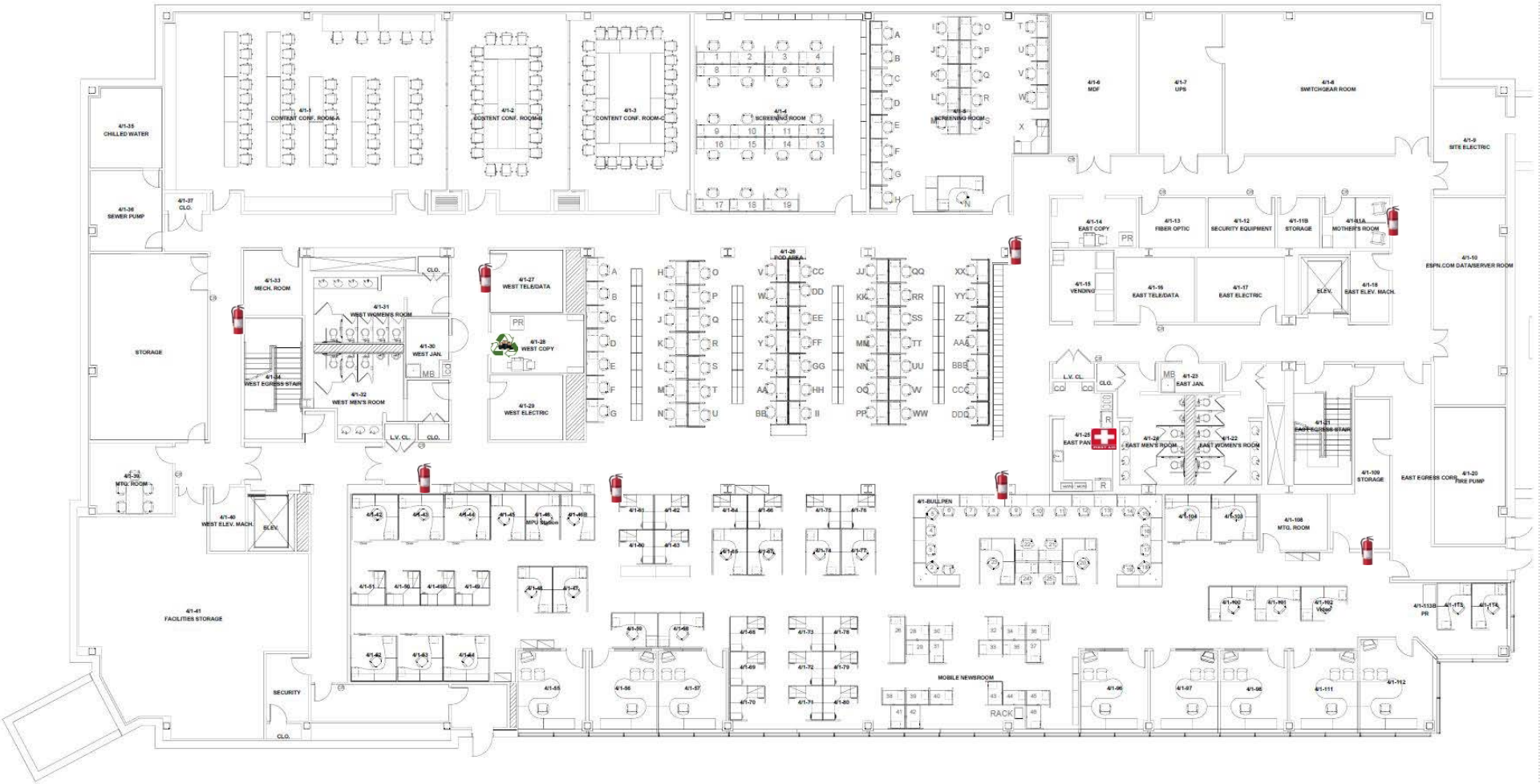


Bldg. 3, Floor 3



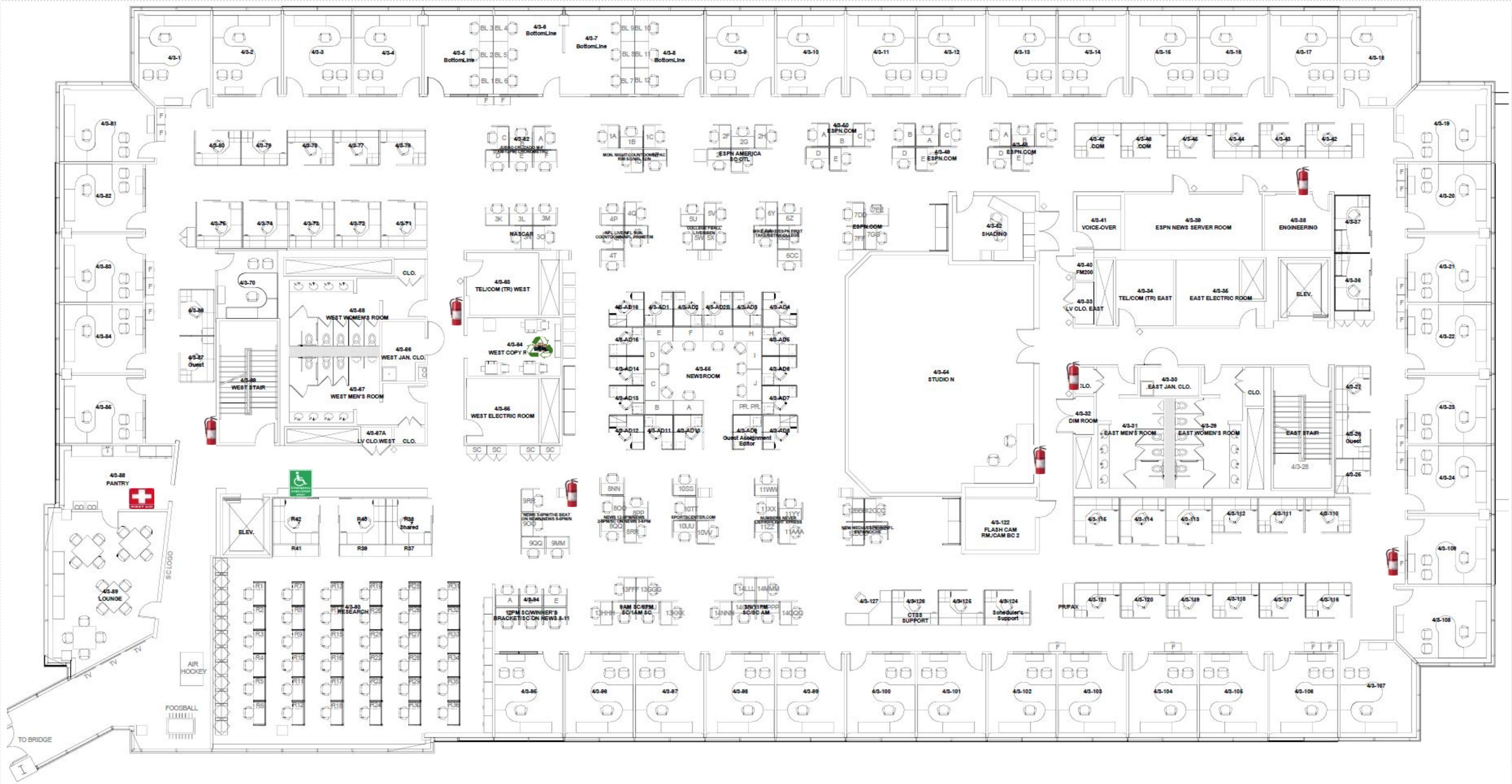
- Fire Extinguisher located at top of north stairwell

Bldg. 3, Roof

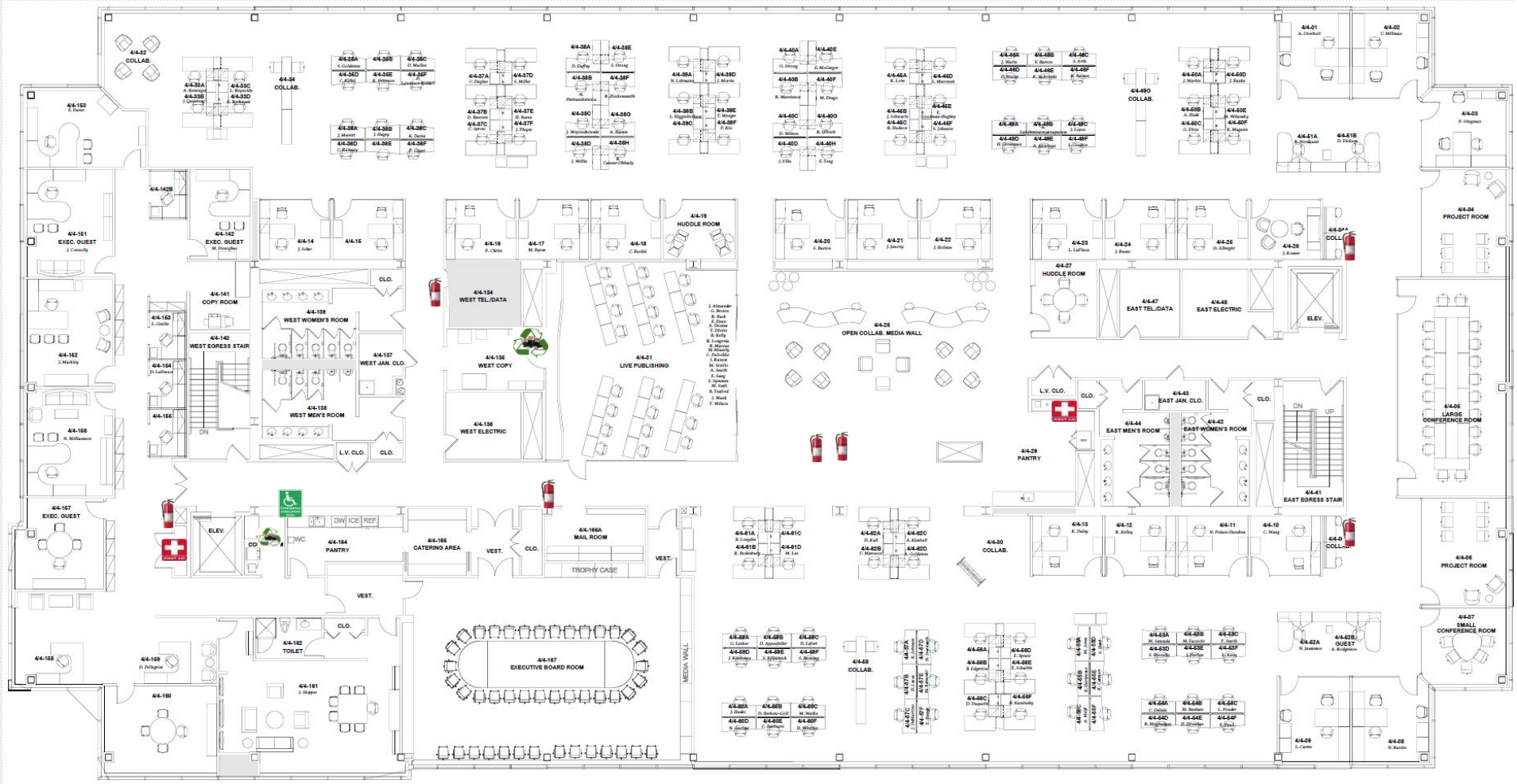


Bldg. 4, Floor 1

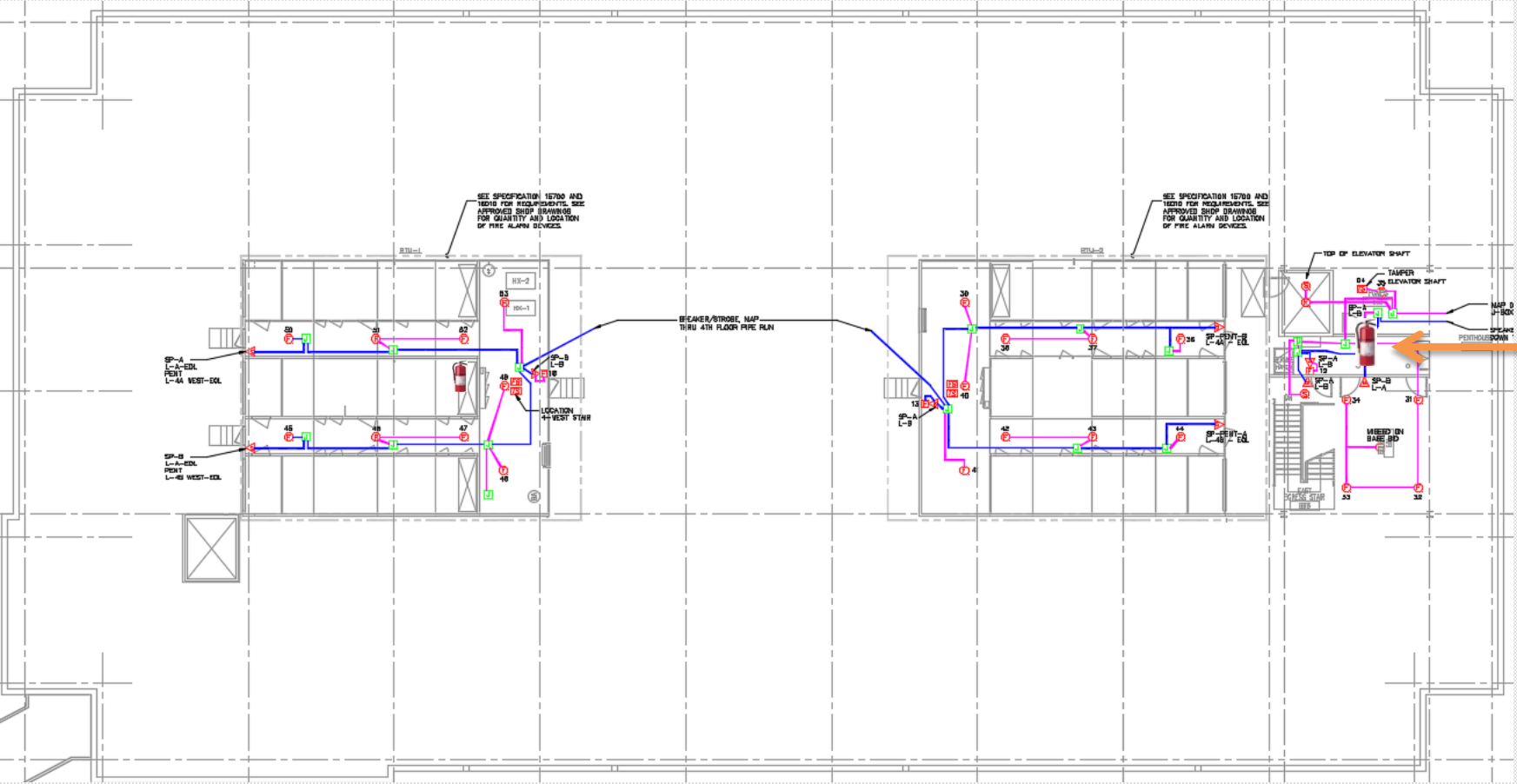
Bldg. 4, Floor 2



Bldg. 4, Floor 3



Bldg. 4, Floor 4



- Fire Extinguisher located inside penthouse at top of east stairwell

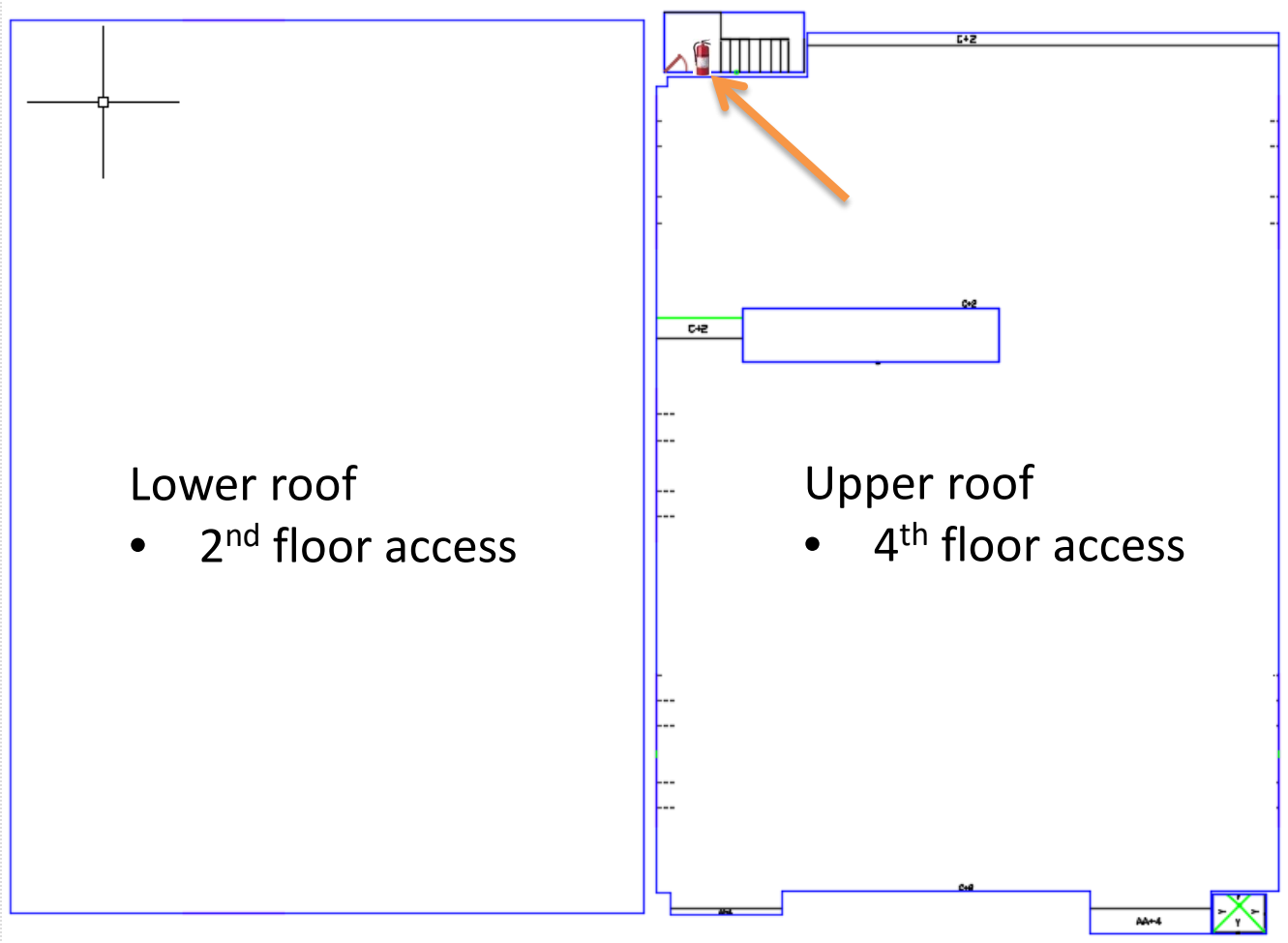
Bldg. 4, Roof

Bldg. 5, Basement

Bldg. 5, Floor 1

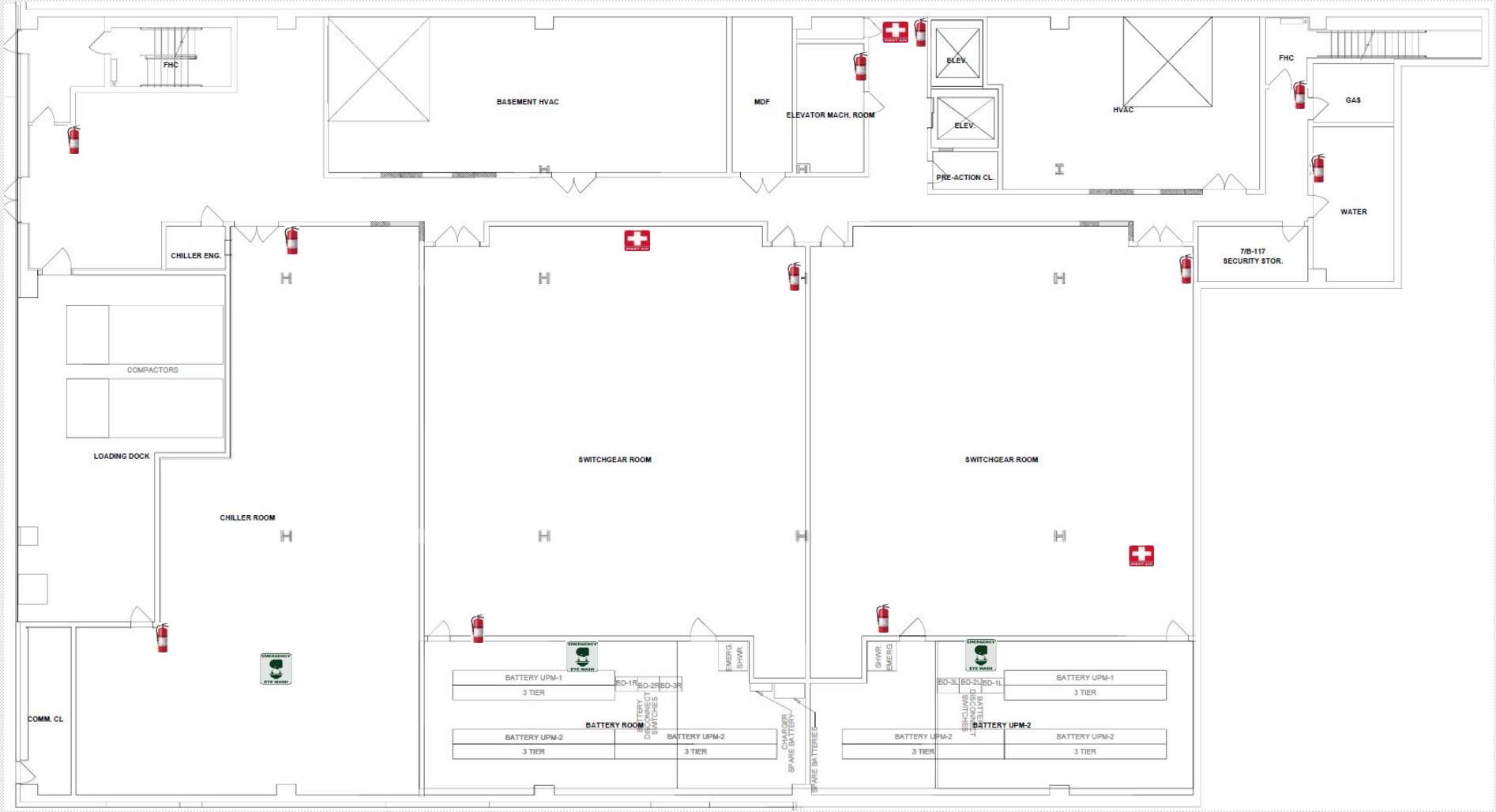
Bldg. 5, Floor 2

Bldg. 5, Floor 3

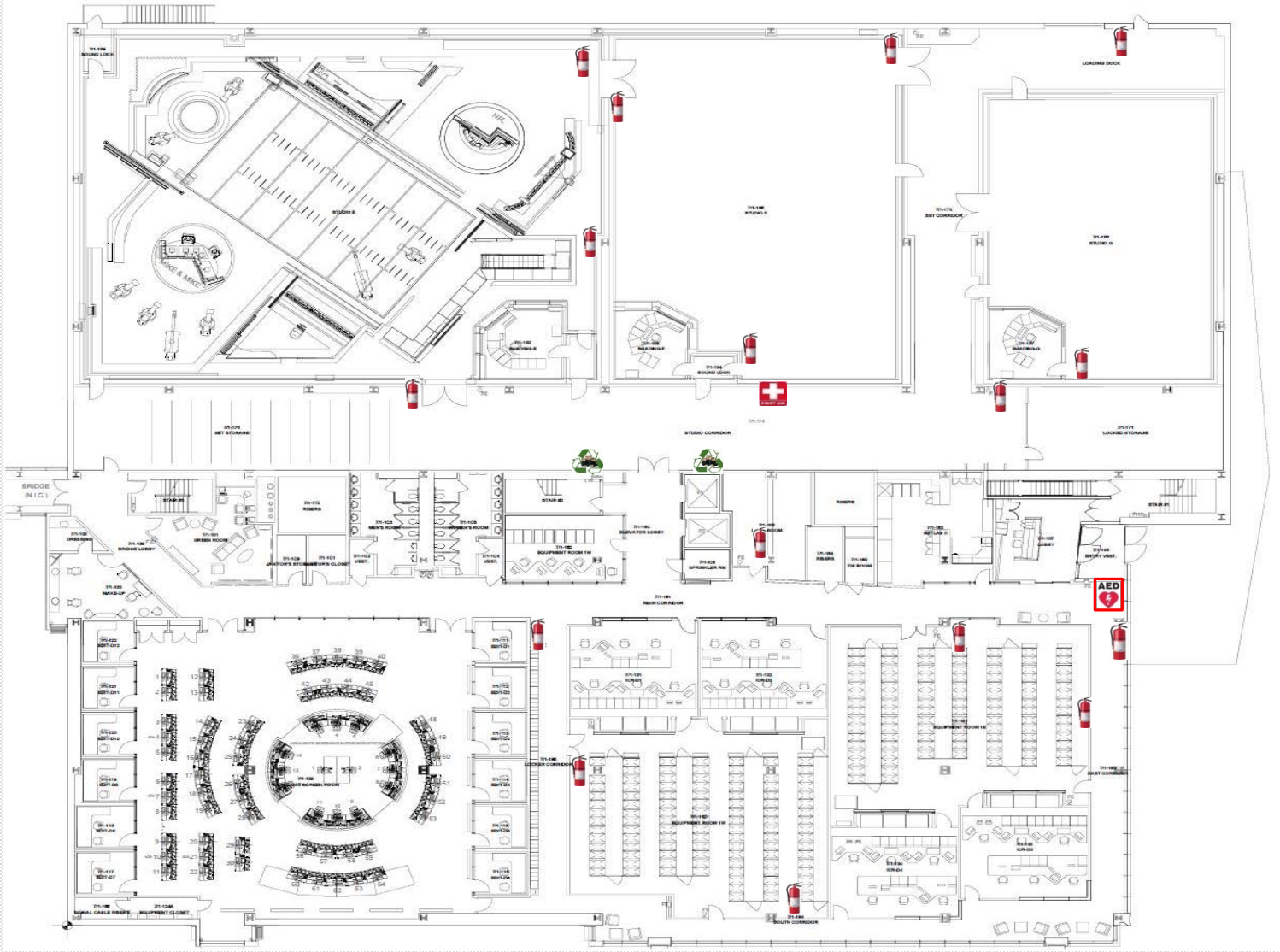


- Fire Extinguisher located at top of south stairwell

Bldg. 5, Roof

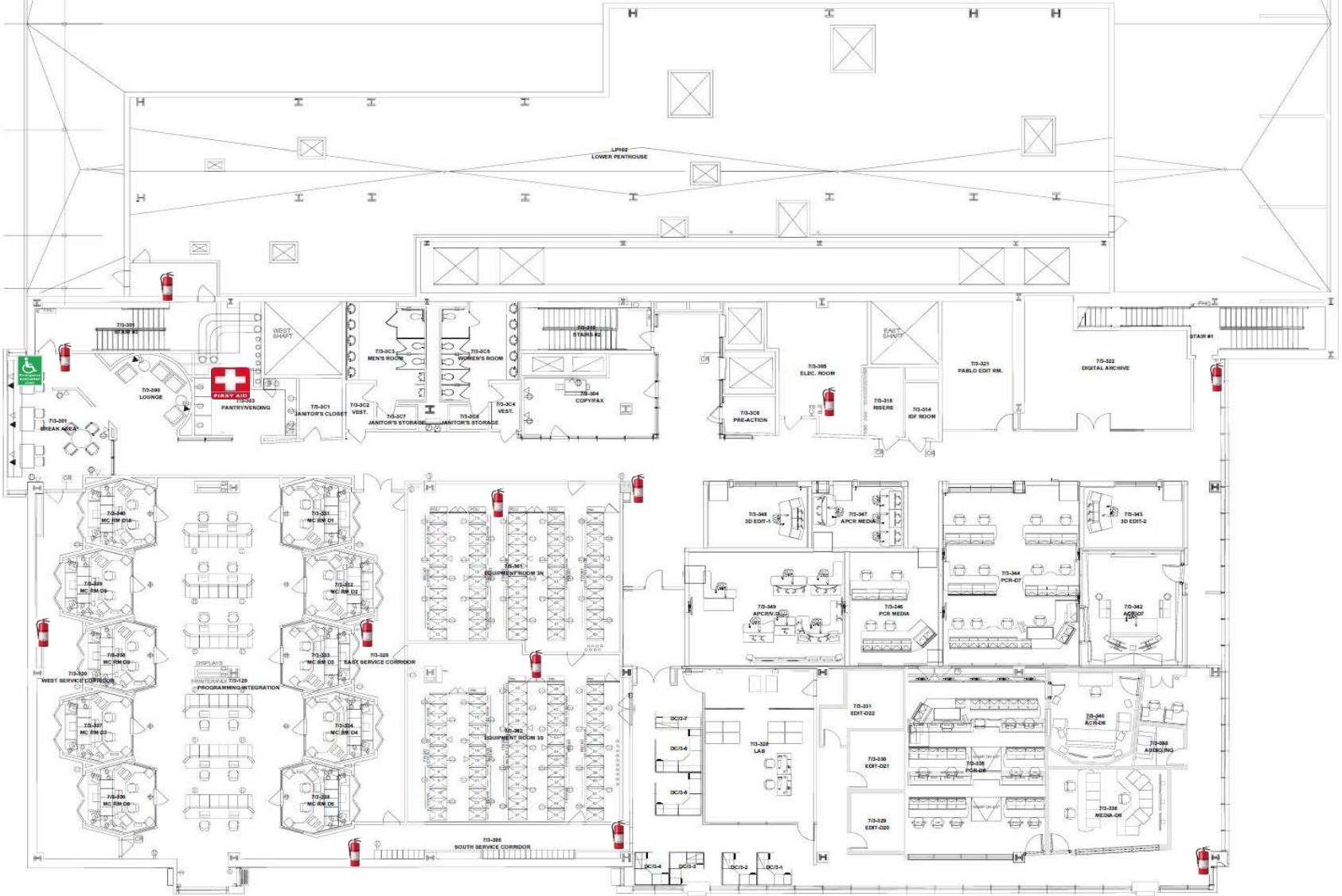


Bldg. 7, Basement

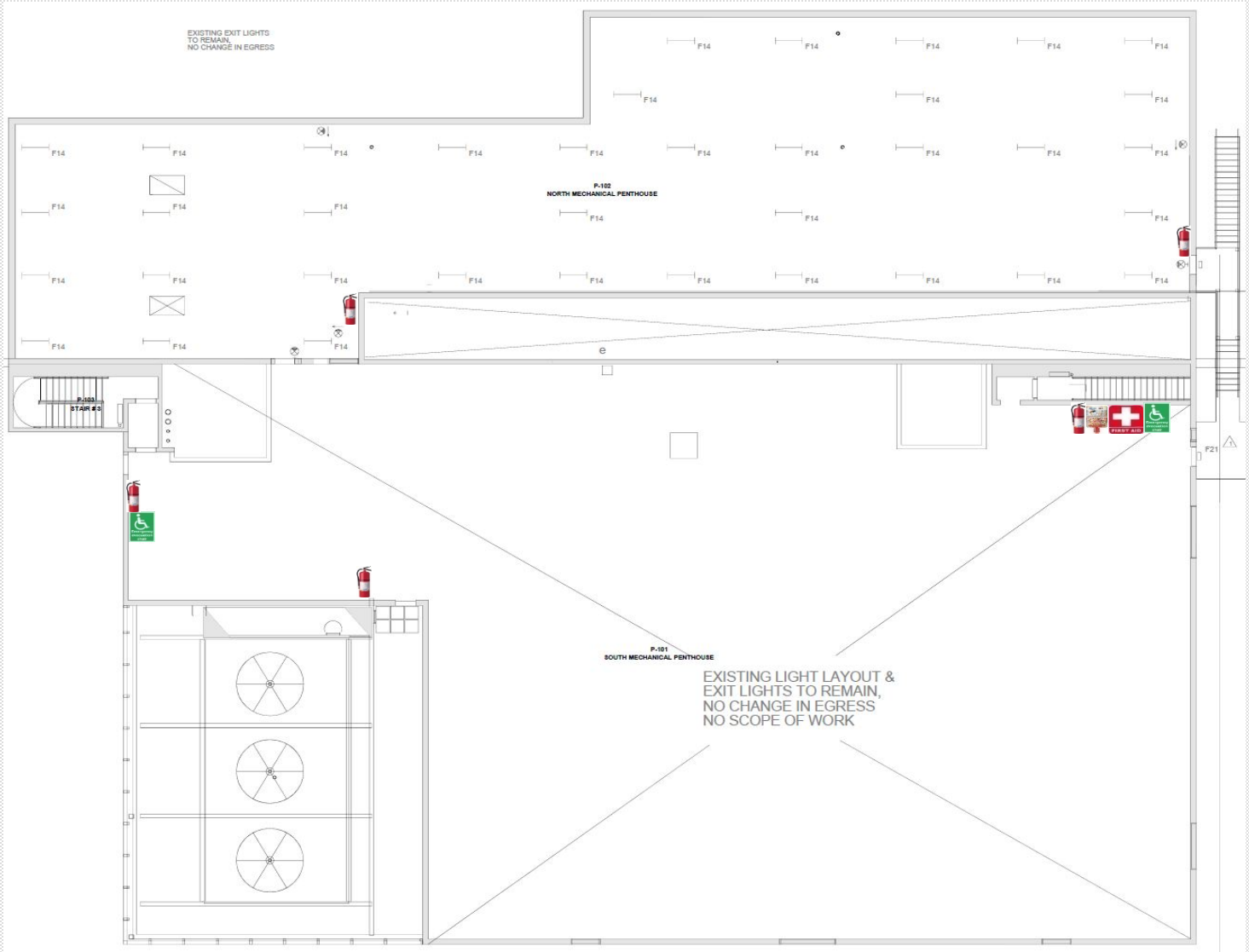


Bldg. 7, Floor 1

Bldg. 7, Floor 2



Bldg. 7, Floor 3



Bldg. 7, Penthouses

Bldg.8 1st Floor

Safety Items:

- AED:
  - North Entrance

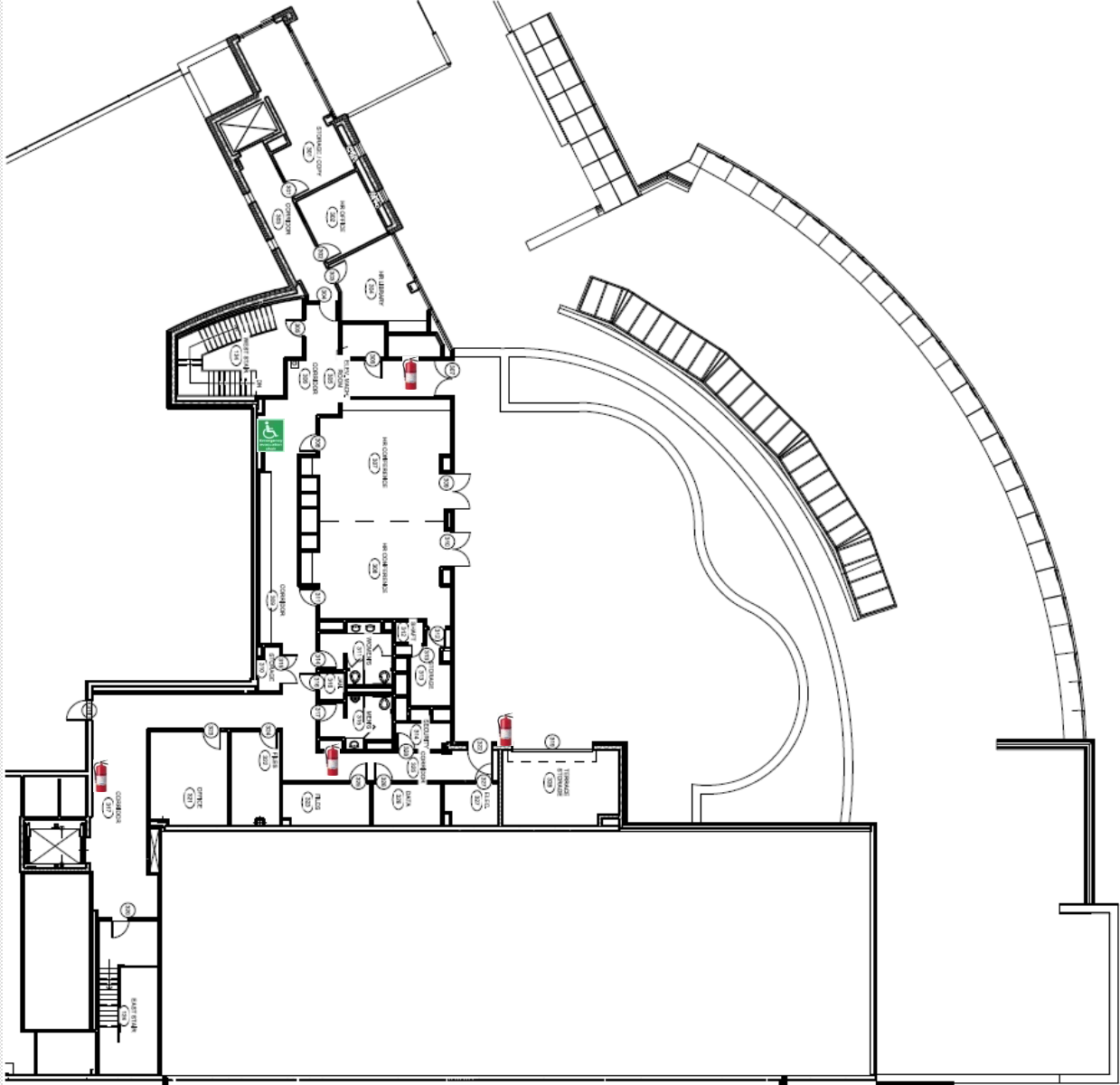
- First Aid (wall mounted)
  - Center hallway
  - Locker rooms

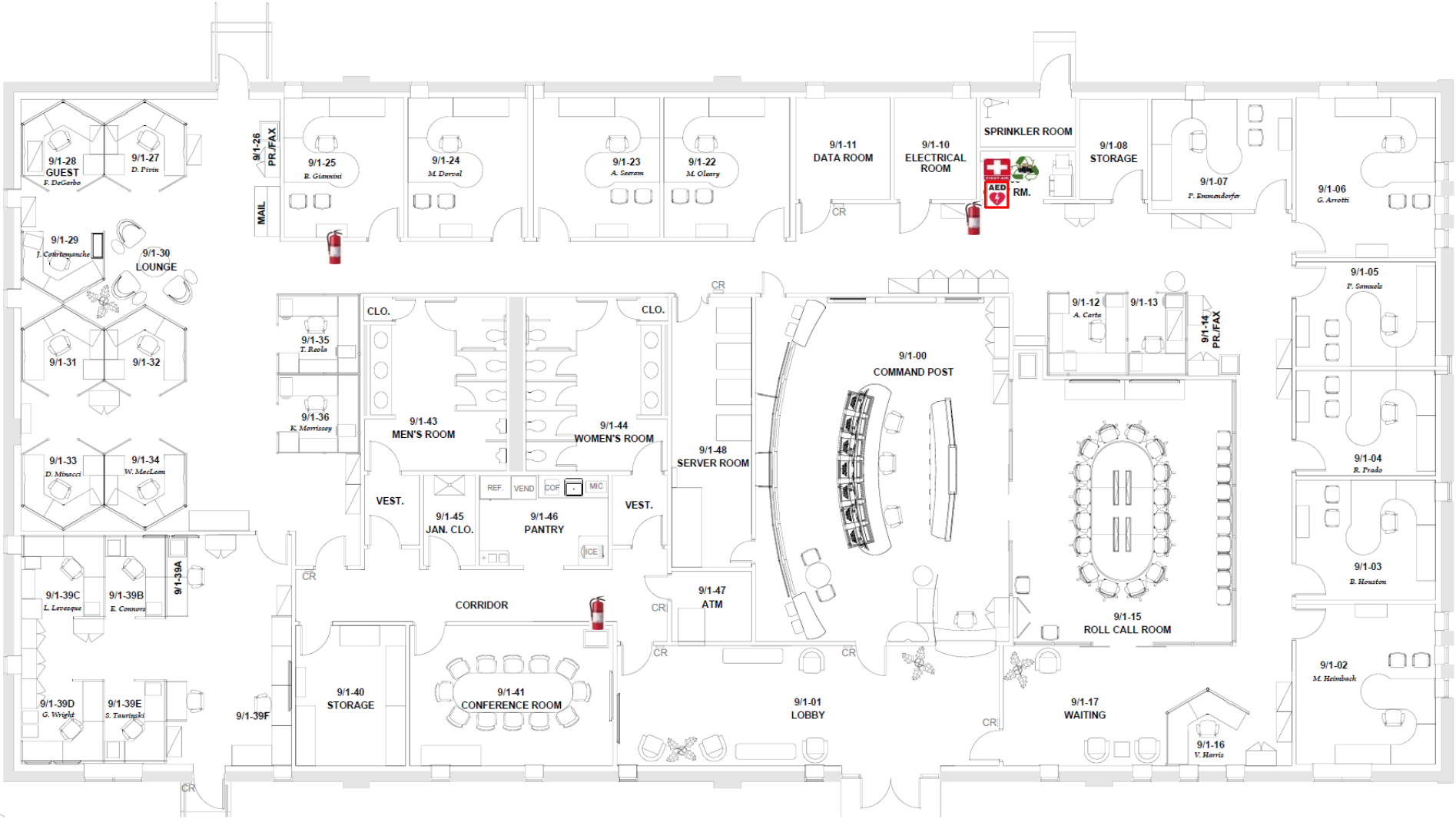
- Eye Wash mobile cart:
  - Electrical room

Bldg.8 2nd Floor

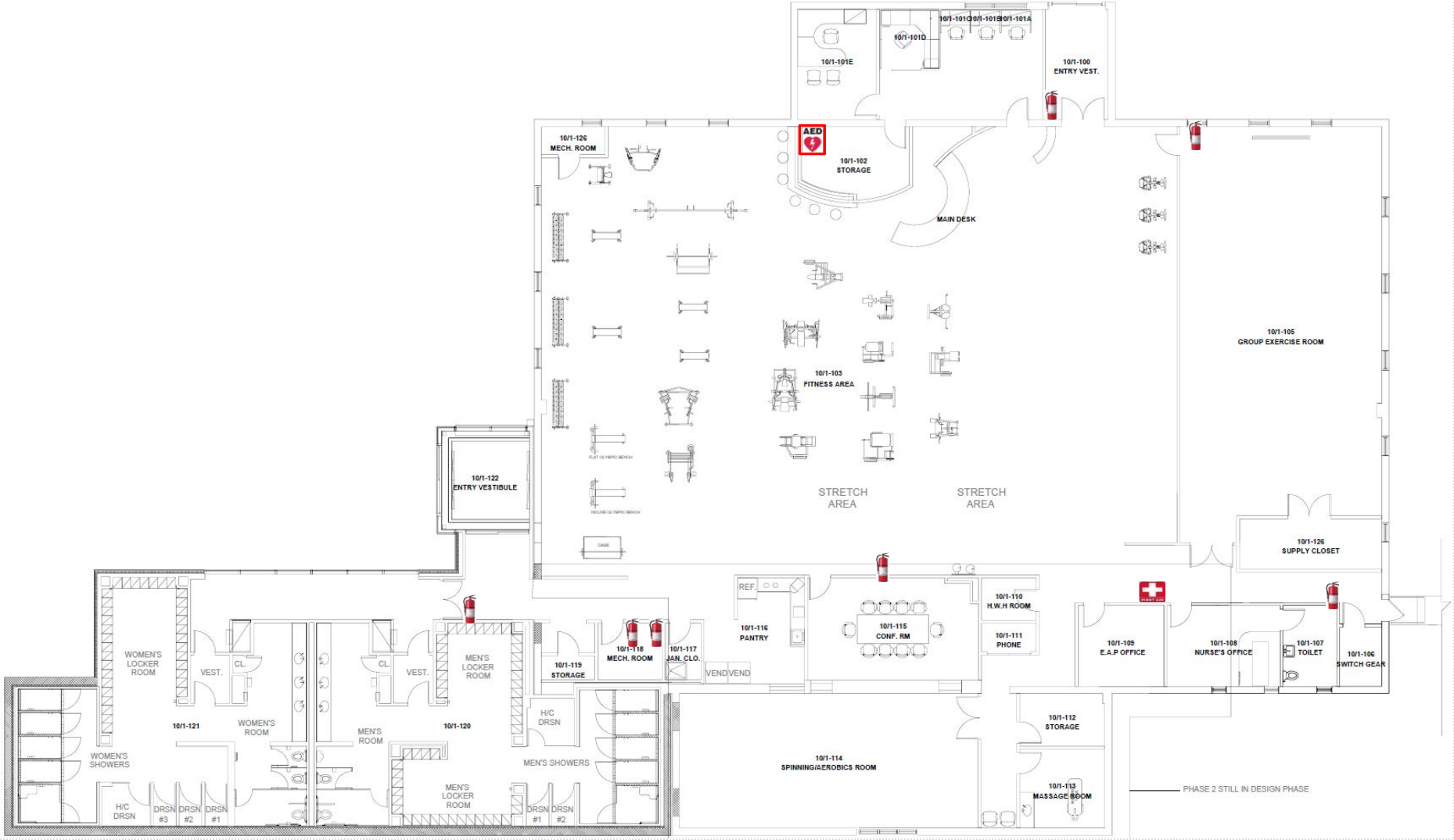
Safety Items:

- Evacuation Chair:
  - Main hallway

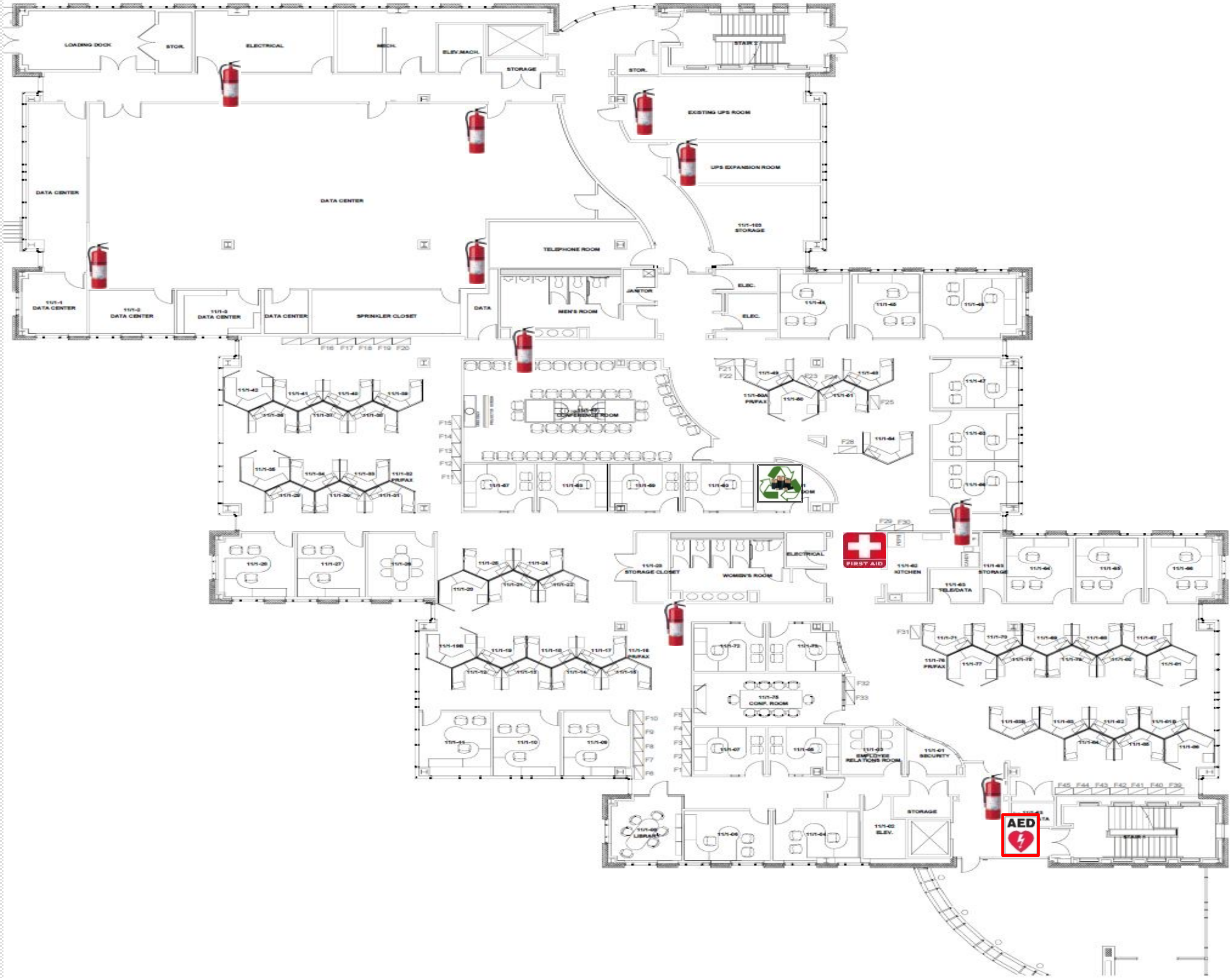



9/1-28
GUEST
F. DeGarbo
9/1-27
D. Pivin
9/1-26
PR./FAX
MAIL
9/1-25
B. Giannini
9/1-24
M. Dorval
9/1-23
A. Seeram
9/1-22
M. Olsary
9/1-11
DATA ROOM
9/1-10
ELECTRICAL ROOM
SPRINKLER ROOM
AED
RM.
9/1-08
STORAGE
9/1-07
P. Emmendorfer
9/1-06
G. Arrotti
9/1-29
J. Cointemanche
9/1-30
LOUNGE
9/1-31
9/1-32
9/1-33
D. Minacci
9/1-34
W. MacLean
9/1-39A
9/1-39C
L. Levesque
9/1-39B
E. Connors
9/1-39D
G. Wright
9/1-39E
S. Taurinski
9/1-39F
CR
CLO.
CLO.
9/1-35
T. Reola
9/1-36
K. Morrissey
9/1-43
MEN'S ROOM
9/1-44
WOMEN'S ROOM
VEST.
REF.
VEND
COF
MIC
ICE
9/1-45
JAN. CLO.
9/1-46
PANTRY
VEST.
9/1-48
SERVER ROOM
9/1-00
COMMAND POST
9/1-12
A. Carta
9/1-13
9/1-14
PR./FAX
9/1-05
P. Samuels
9/1-04
R. Prado
9/1-03
B. Houston
9/1-02
M. Heimback
CORRIDOR
9/1-47
ATM
9/1-15
ROLL CALL ROOM
9/1-40
STORAGE
9/1-41
CONFERENCE ROOM
9/1-01
LOBBY
9/1-17
WAITING
9/1-16
V. Harris

Bldg. 9


10/1-101E
10/1-101D
10/1-101C
10/1-101B
10/1-101A
10/1-100
ENTRY VEST.
AED
10/1-126
MECH. ROOM
10/1-102
STORAGE
MAIN DESK
10/1-105
GROUP EXERCISE ROOM
10/1-103
FITNESS AREA
10/1-122
ENTRY VESTIBULE
STRETCH
AREA
STRETCH
AREA
10/1-126
SUPPLY CLOSET
REF.
10/1-110
H.W.H ROOM
10/1-116
PANTRY
10/1-115
CONF. RM
10/1-111
PHONE
10/1-109
E.A.P OFFICE
10/1-108
NURSE'S OFFICE
10/1-107
TOILET
10/1-106
SWITCH GEAR
WOMEN'S
LOCKER
ROOM
VEST.
CL.
CL.
VEST.
MEN'S
LOCKER
ROOM
10/1-119
STORAGE
10/1-118
MECH. ROOM
10/1-117
JAN. CLO.
VEND
VEND
10/1-121
WOMEN'S
ROOM
10/1-120
MEN'S
ROOM
H/C
DRSN
WOMEN'S
SHOWERS
MEN'S SHOWERS
H/C
DRSN
DRSN
#3
DRSN
#2
DRSN
#1
MEN'S
LOCKER
ROOM
DRSN
#1
DRSN
#2
10/1-114
SPINNING/AEROBICS ROOM
10/1-112
STORAGE
10/1-113
MASSAGE ROOM
PHASE 2 STILL IN DESIGN PHASE

Bldg. 10



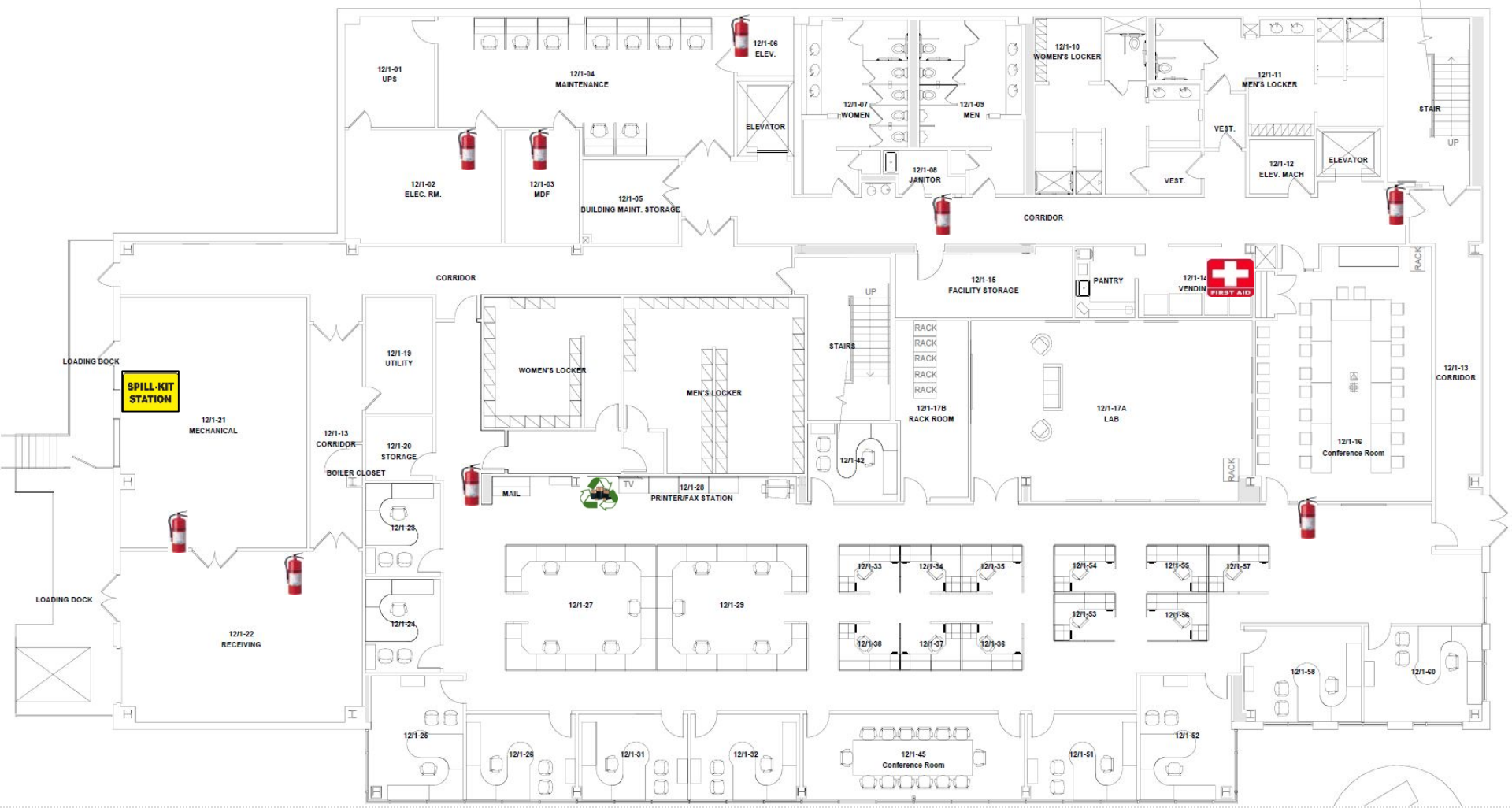
Bldg. 11, Floor 1

Bldg. 11, Floor 2

Bldg. 11, Floor 3

- Fire Extinguishers located at doorways leading in and out of all 3 penthouses

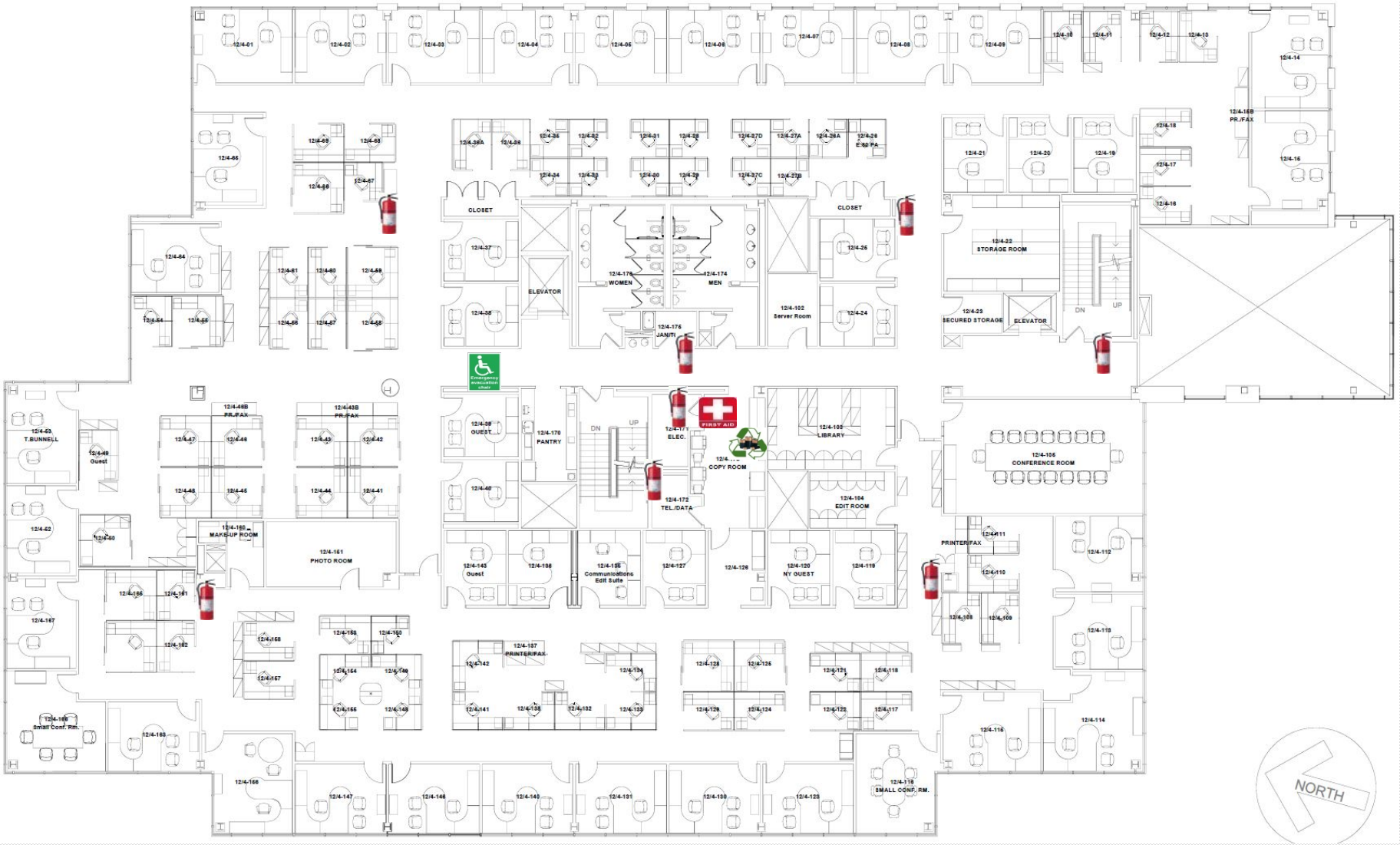
Bldg. 11, Roof / Penthouses



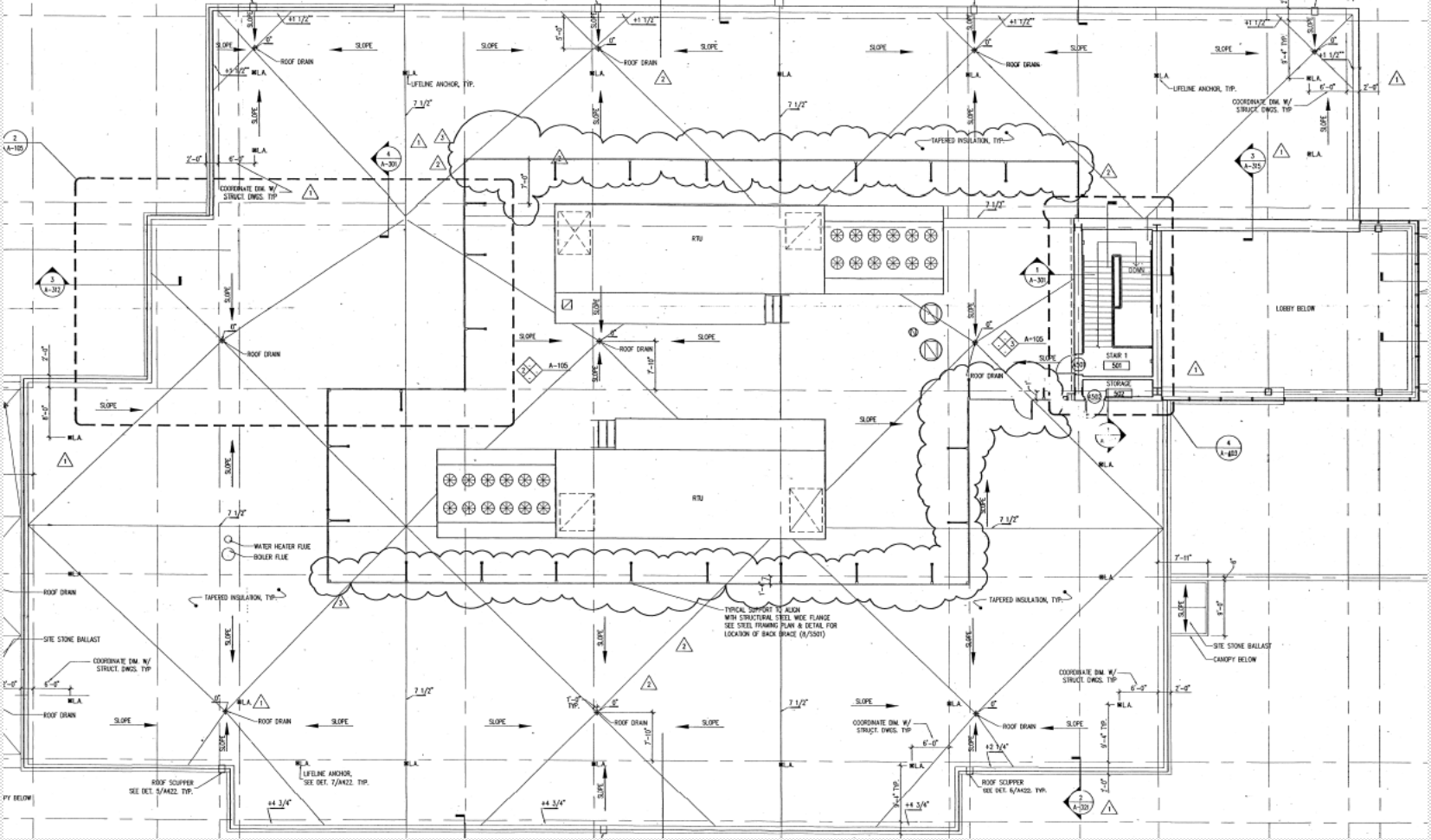
Bldg. 12, Floor 1

Bldg. 12, Floor 2

Bldg. 12, Floor 3



Bldg. 12, Floor 4



- Fire Extinguisher located at top of south stairwell

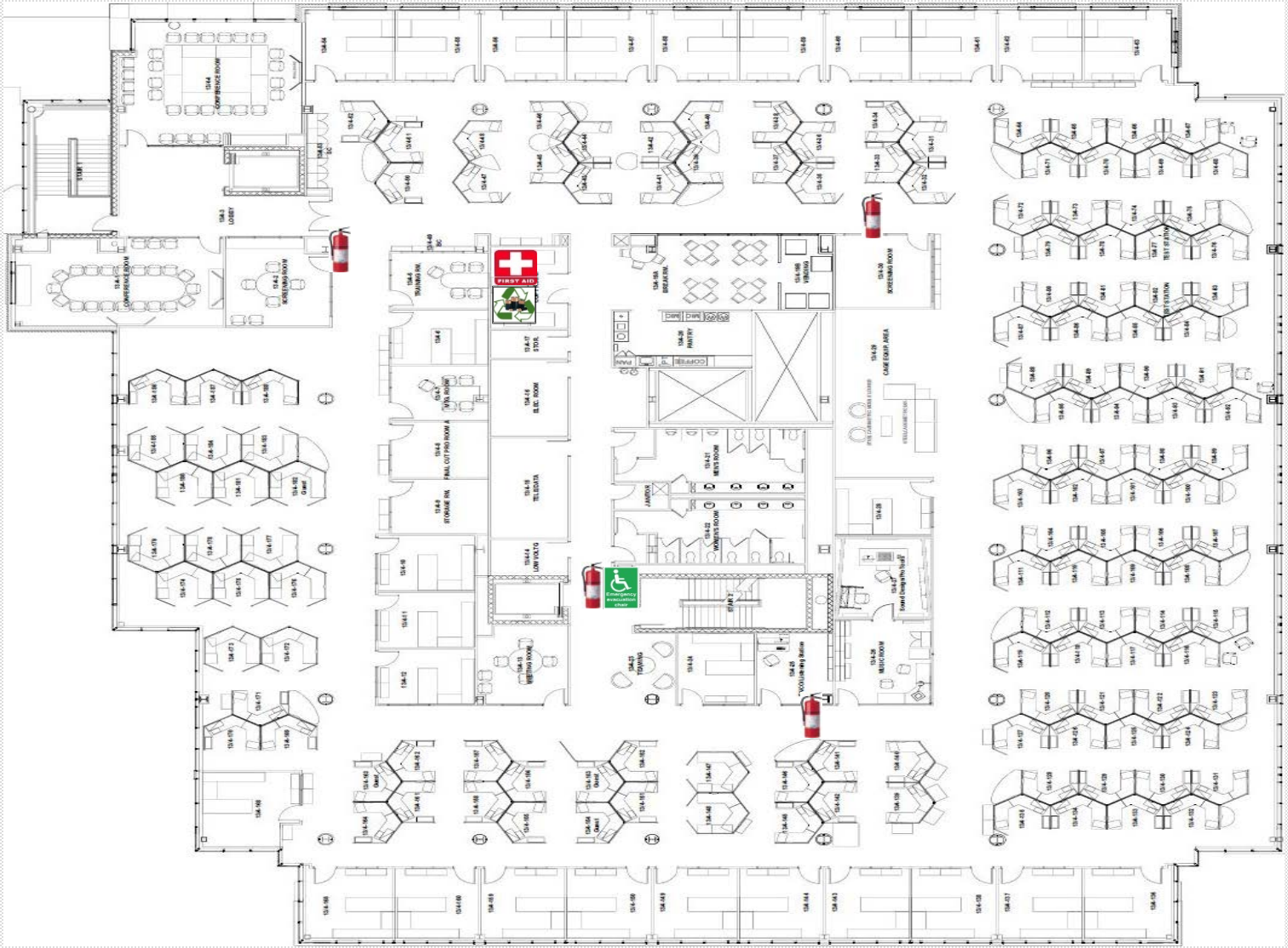
Bldg. 12, Roof

Bldg. 13, Basement

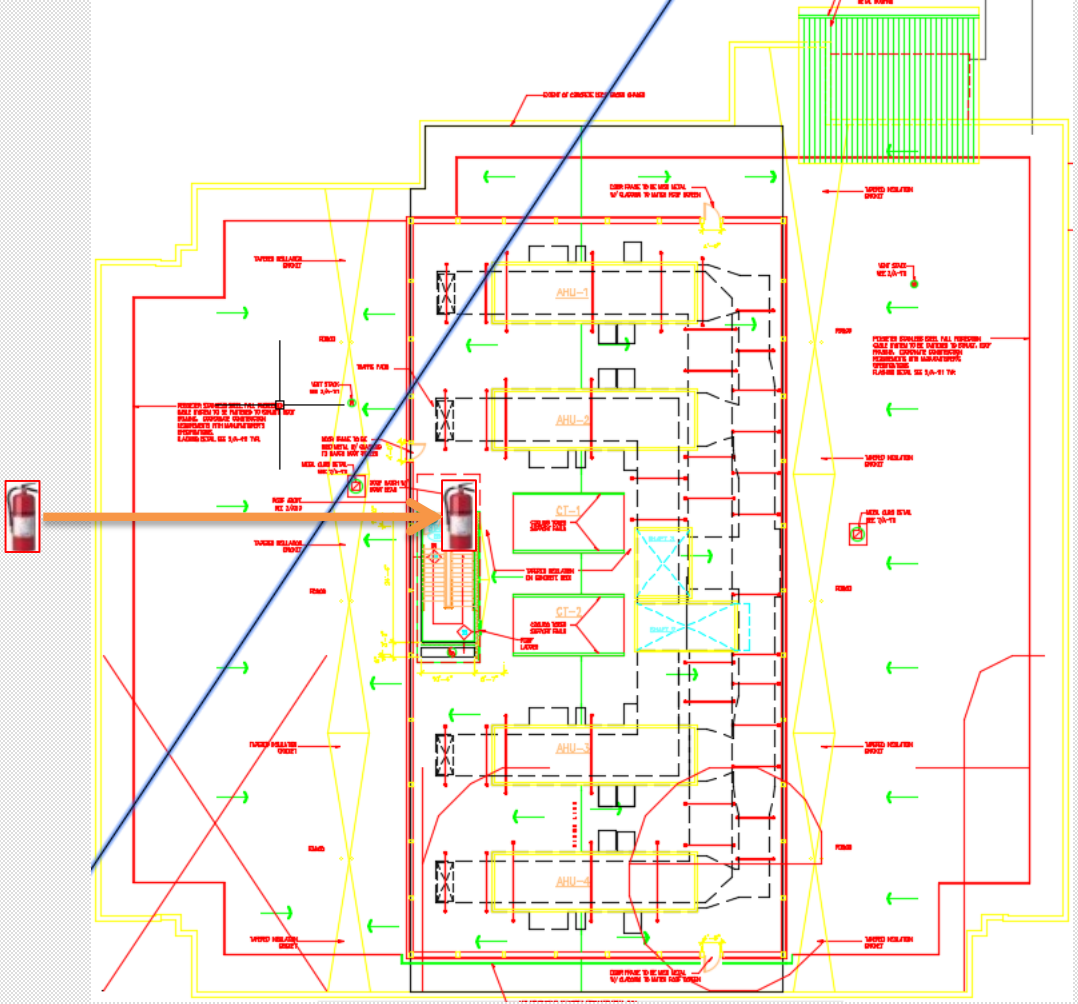
Bldg. 13, Floor 1

Bldg. 13, Floor 2

Bldg. 13, Floor 3



Bldg. 13, Floor 4



- Fire Extinguisher located at top of south stairwell

Bldg. 13, Roof

Bldg.14 Basement

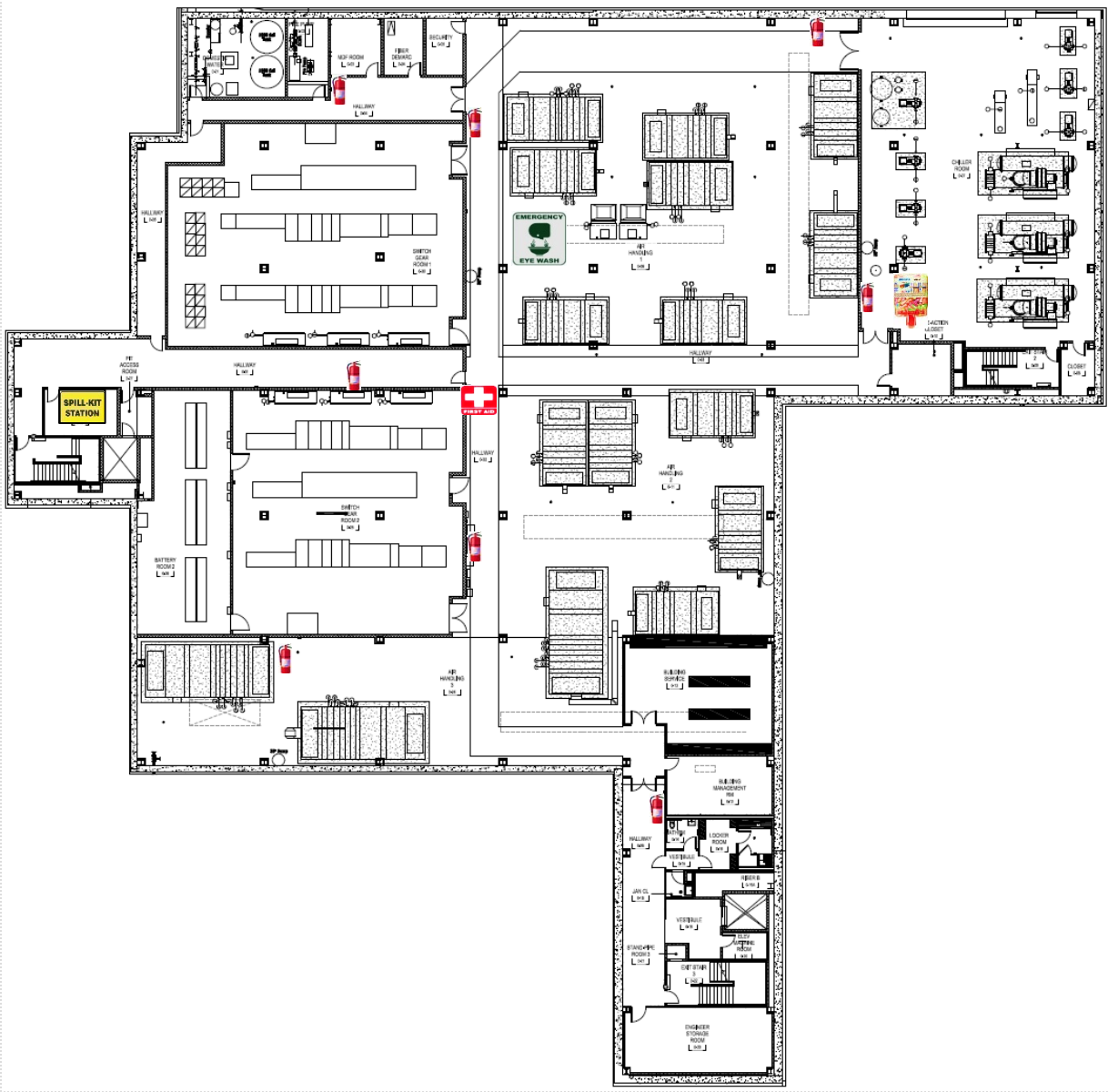
Safety Items:

- Hearing Protection:
  - Chiller room

- First Aid (wall mounted)
  - Center hallway

- Spill response kit/bag:
  - Elevator Room

- Eye Wash mobile cart:
  - Basement central



Bldg.14 Floor 1

Safety Items:

- ❑ Hearing Protection
  - Rack room A: 14/1-13
  - Rack room B: 14/1-15
  - Rack room C: 14/1-35
  - Rack room D: 14/1-36
  - Rack room E: 14/1-38
  - Rack room F: 14/1-39
  - Rack room G: 14/1-27
  - Rack room H: 14/1-29
  - Rack room J: 14/1-26
  - Rack room K: 14/1-28

- ❑ Battery Recycling
  - Copy Room

- ❑ First Aid Kit (soft shell)
  - Security: desk drawer
  - South Kitchenette
  - Center Kitchenette

- ❑ AED
  - Security: under fire panel

Bldg.14 Floor 2

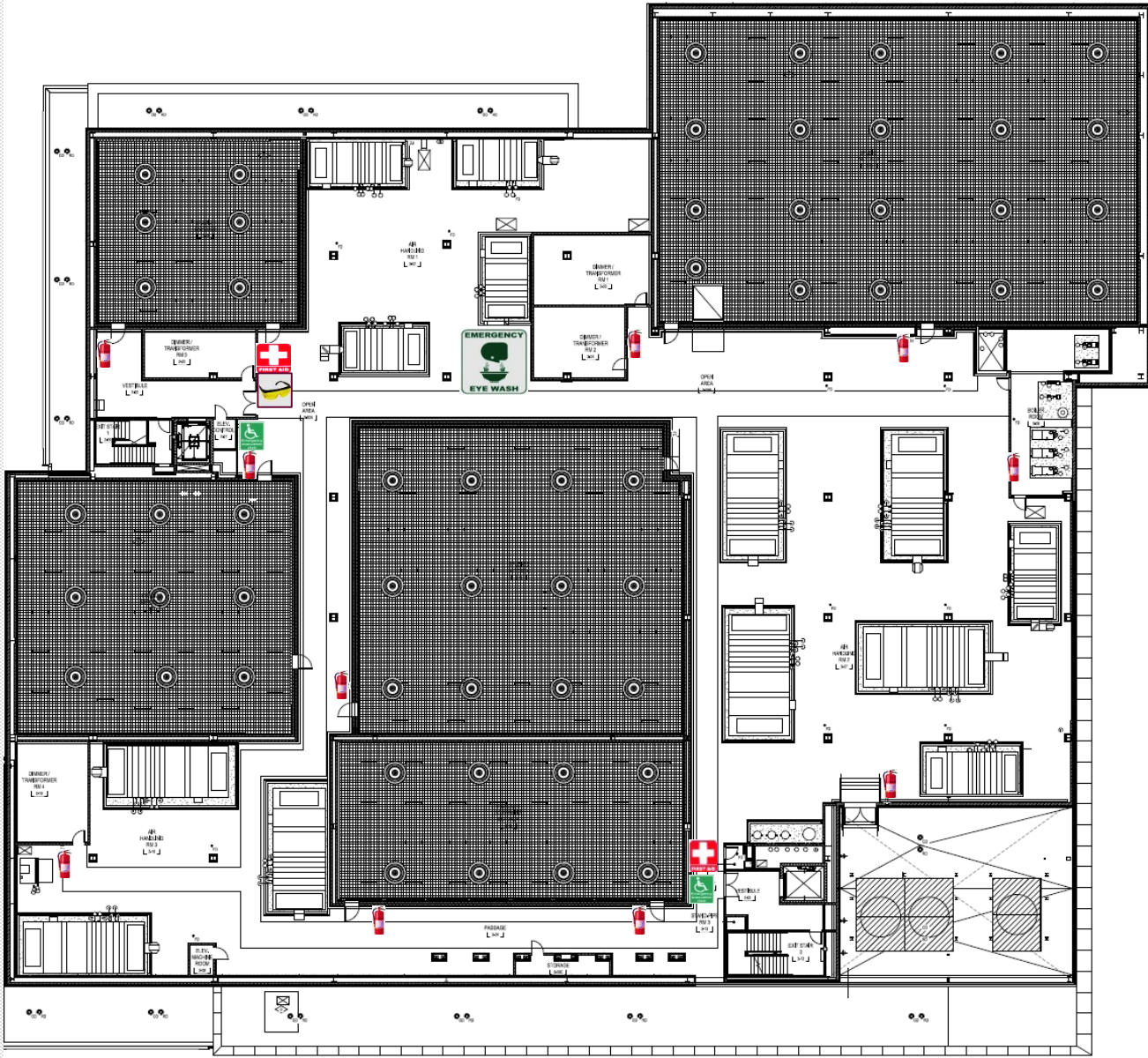
Safety Items:

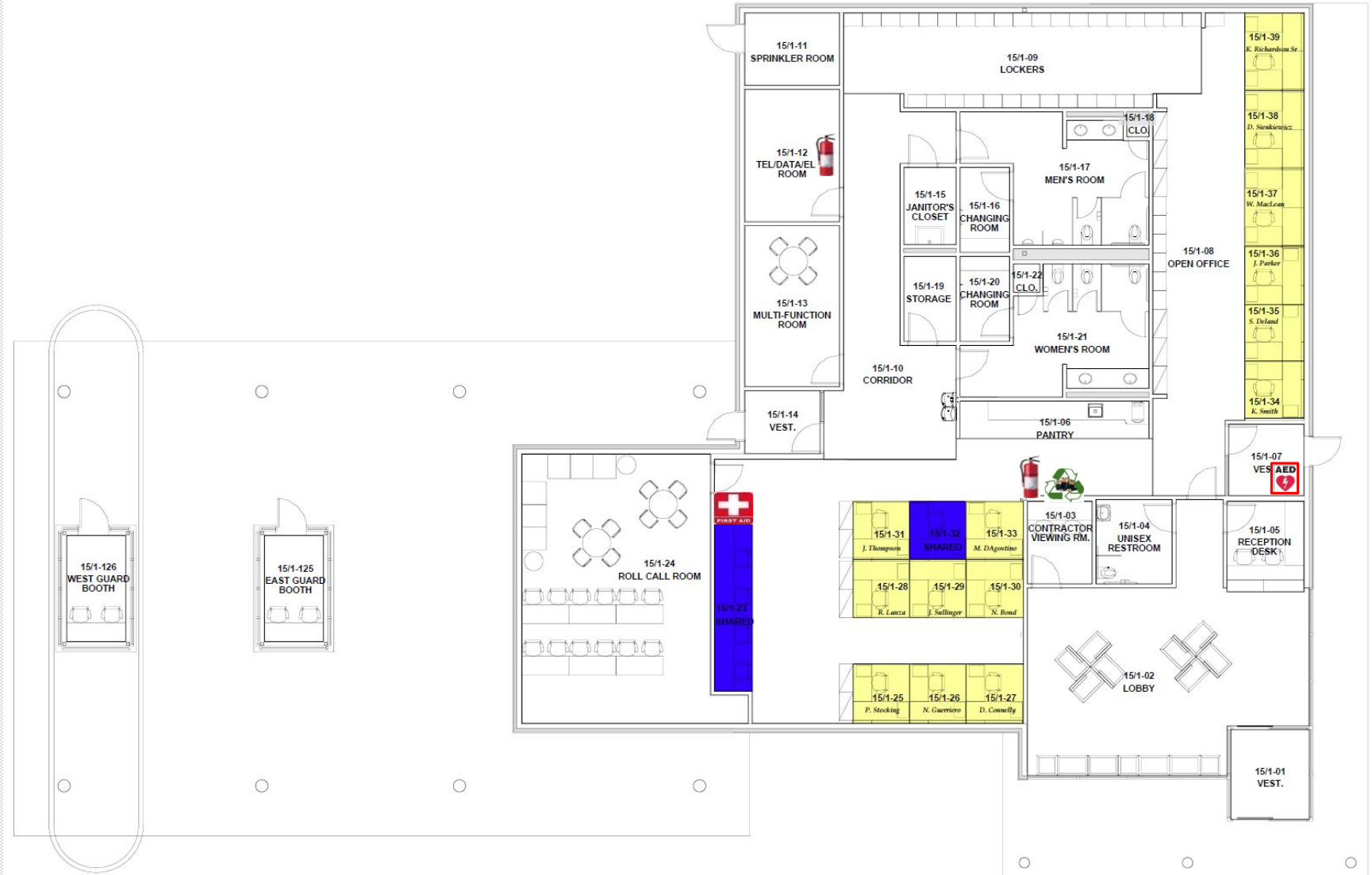
- ❑ Hearing Protection 
  - Rack room S: 14/2-21
- ❑ Battery Recycling 
  - Copy Room: 14/2-16
  - Scene Dock: large container
- ❑ First Aid Kit: 
  - Kitchenette: bag-large
  - Security: wall mounted
- ❑ AED 
  - Security: wall mounted

Bldg.14
Mezzanine

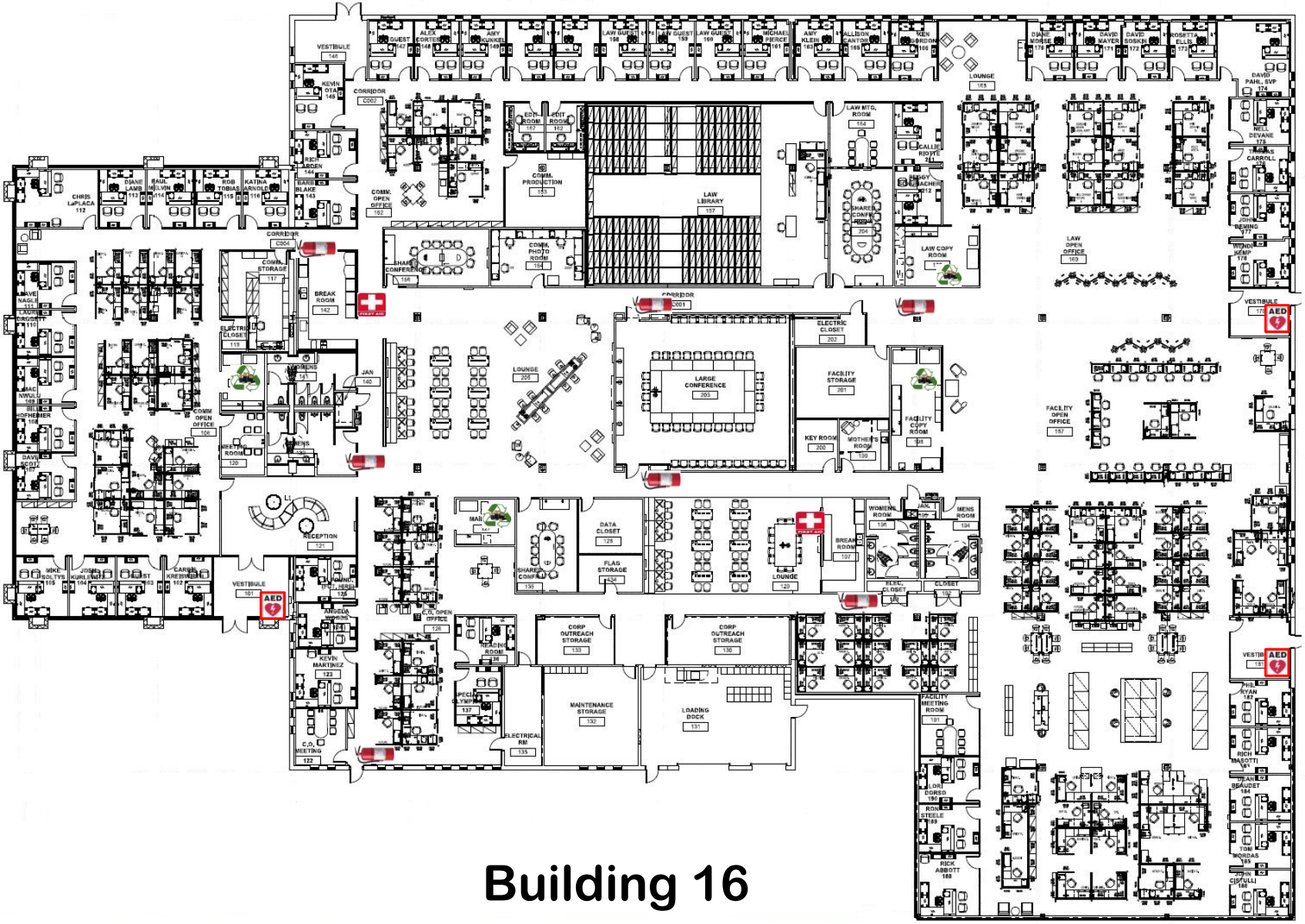
Safety Items:

- Eye Protection 
  - Mezzanine northwest
- First Aid (near stairwells) 
  - Northwest (wall mounted)
  - Southeast (wall mounted)
- Eye Wash mobile cart: 
  - Mezzanine center area
- Evacuation Chair 
  - East Stairwell
  - West Stairwell

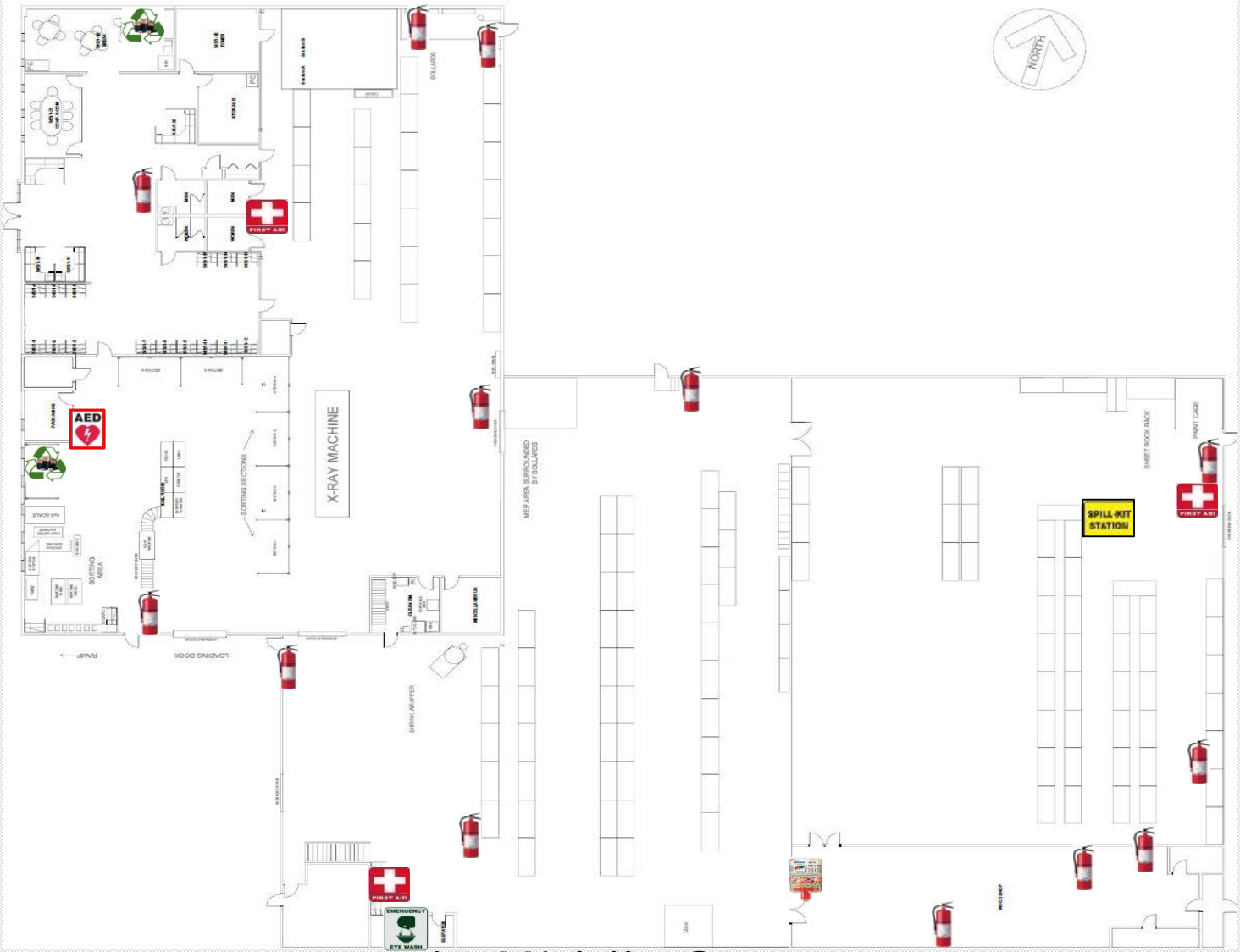



15/1-11
SPRINKLER ROOM
15/1-09
LOCKERS
15/1-39
K. Richardson Sr.
15/1-12
TEL/DATA/EL
ROOM
15/1-18
CLO.
15/1-38
D. Sienkiewicz
15/1-17
MEN'S ROOM
15/1-15
JANITOR'S
CLOSET
15/1-16
CHANGING
ROOM
15/1-37
W. MacLean
15/1-08
OPEN OFFICE
15/1-36
J. Parker
15/1-22
CLO.
15/1-19
STORAGE
15/1-20
CHANGING
ROOM
15/1-13
MULTI-FUNCTION
ROOM
15/1-21
WOMEN'S ROOM
15/1-35
S. Deland
15/1-10
CORRIDOR
15/1-34
K. Smith
15/1-14
VEST.
15/1-06
PANTRY
15/1-07
VES
AED
15/1-126
WEST GUARD
BOOTH
15/1-125
EAST GUARD
BOOTH
15/1-24
ROLL CALL ROOM
FIRST AID
15/1-23
SHARED
15/1-31
J. Thompson
15/1-32
SHARED
15/1-33
M. DAgostino
15/1-03
CONTRACTOR
VIEWING RM.
15/1-04
UNISEX
RESTROOM
15/1-05
RECEPTION
DESK
15/1-28
R. Lanza
15/1-29
J. Sullinger
15/1-30
N. Bond
15/1-02
LOBBY
15/1-25
P. Stocking
15/1-26
N. Guerriero
15/1-27
D. Connelly
15/1-01
VEST.

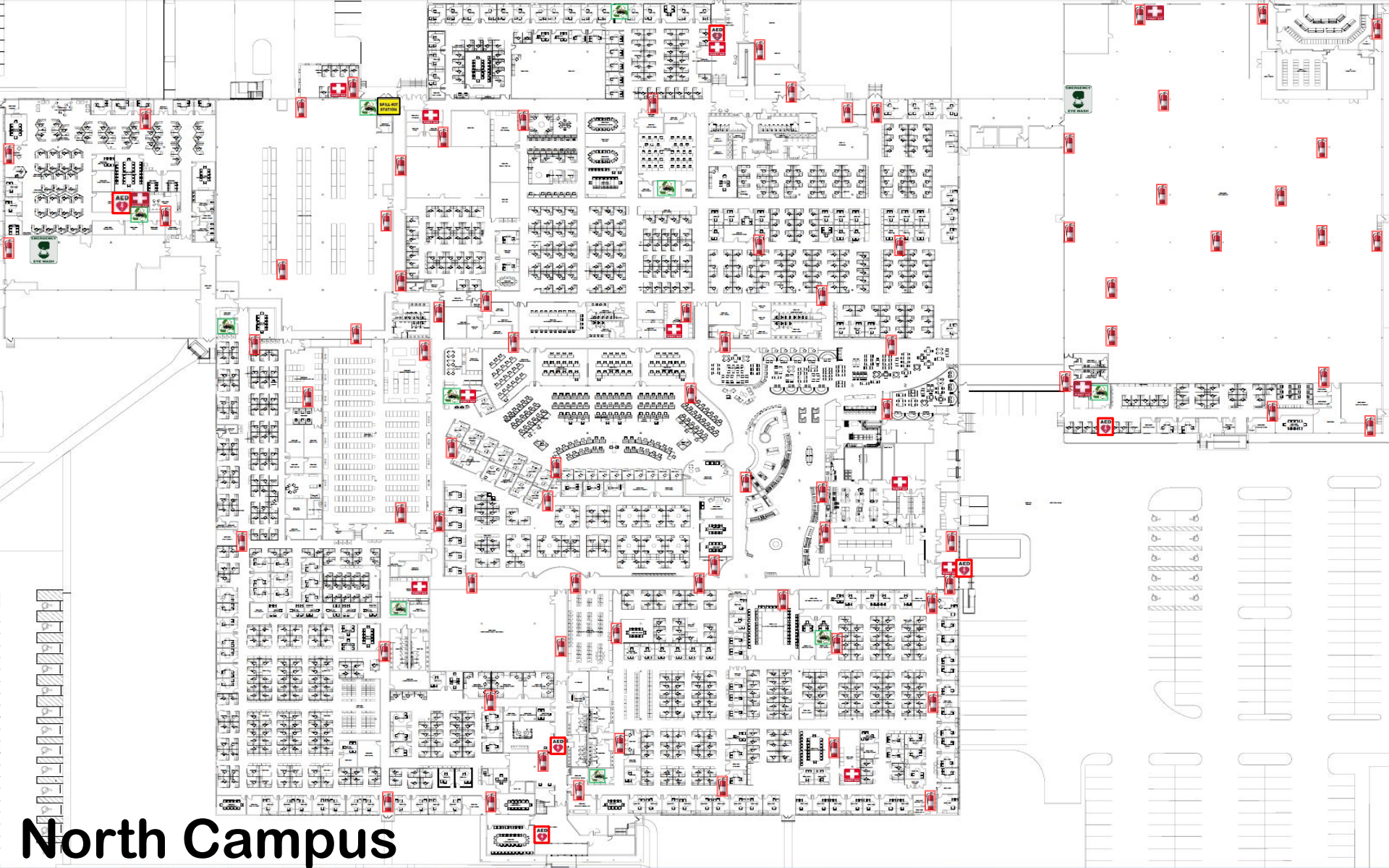
Bldg. 15


VESTIBULE
CORRIDOR
LAW LIBRARY
LARGE CONFERENCE
FACILITY STORAGE
LOUNGE
RECEPTION
BREAK ROOM
MAINTENANCE STORAGE
LOADING DOCK
CORP OUTREACH STORAGE
AED

Building 16



545 Middle Street

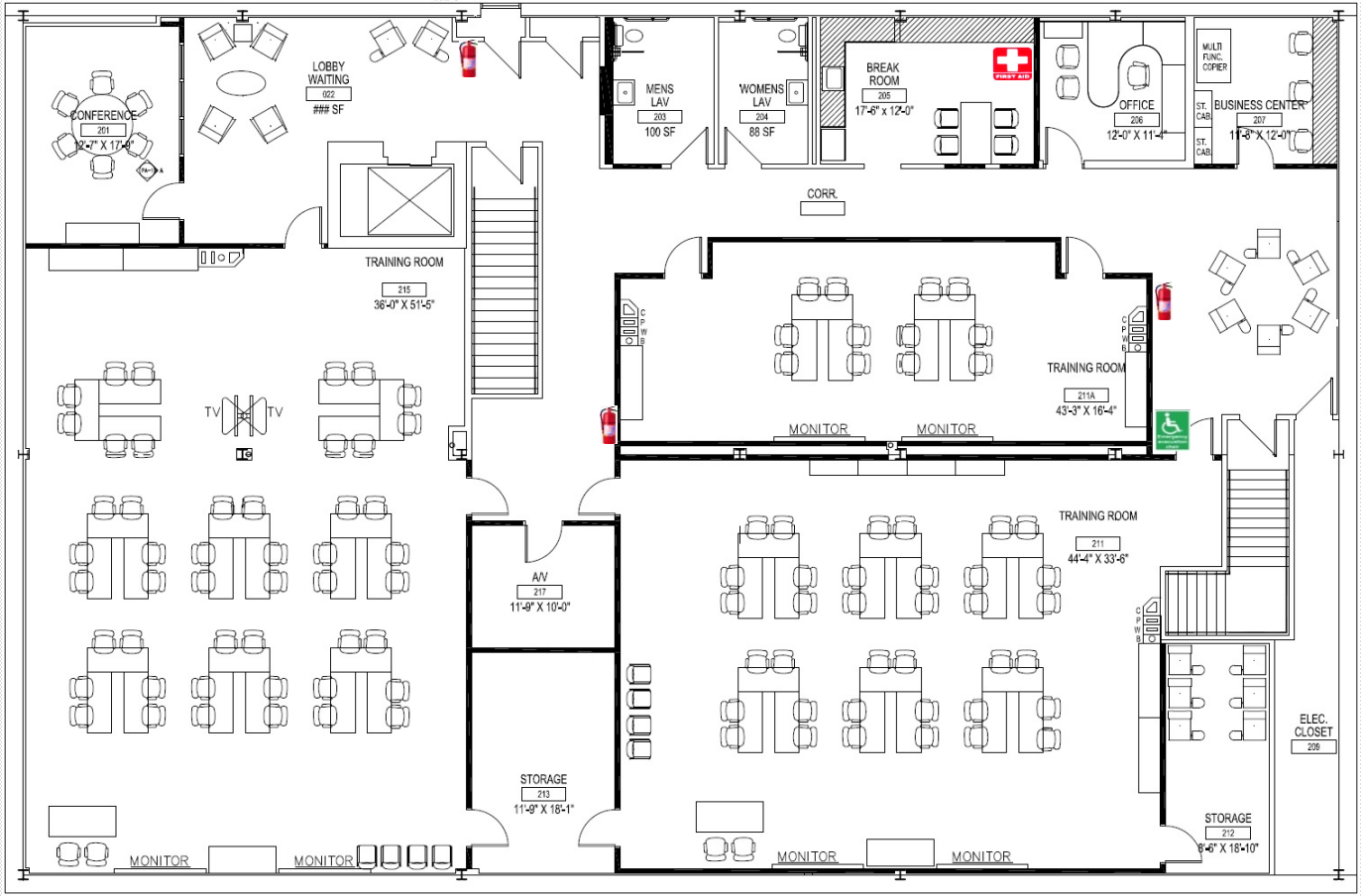

North Campus

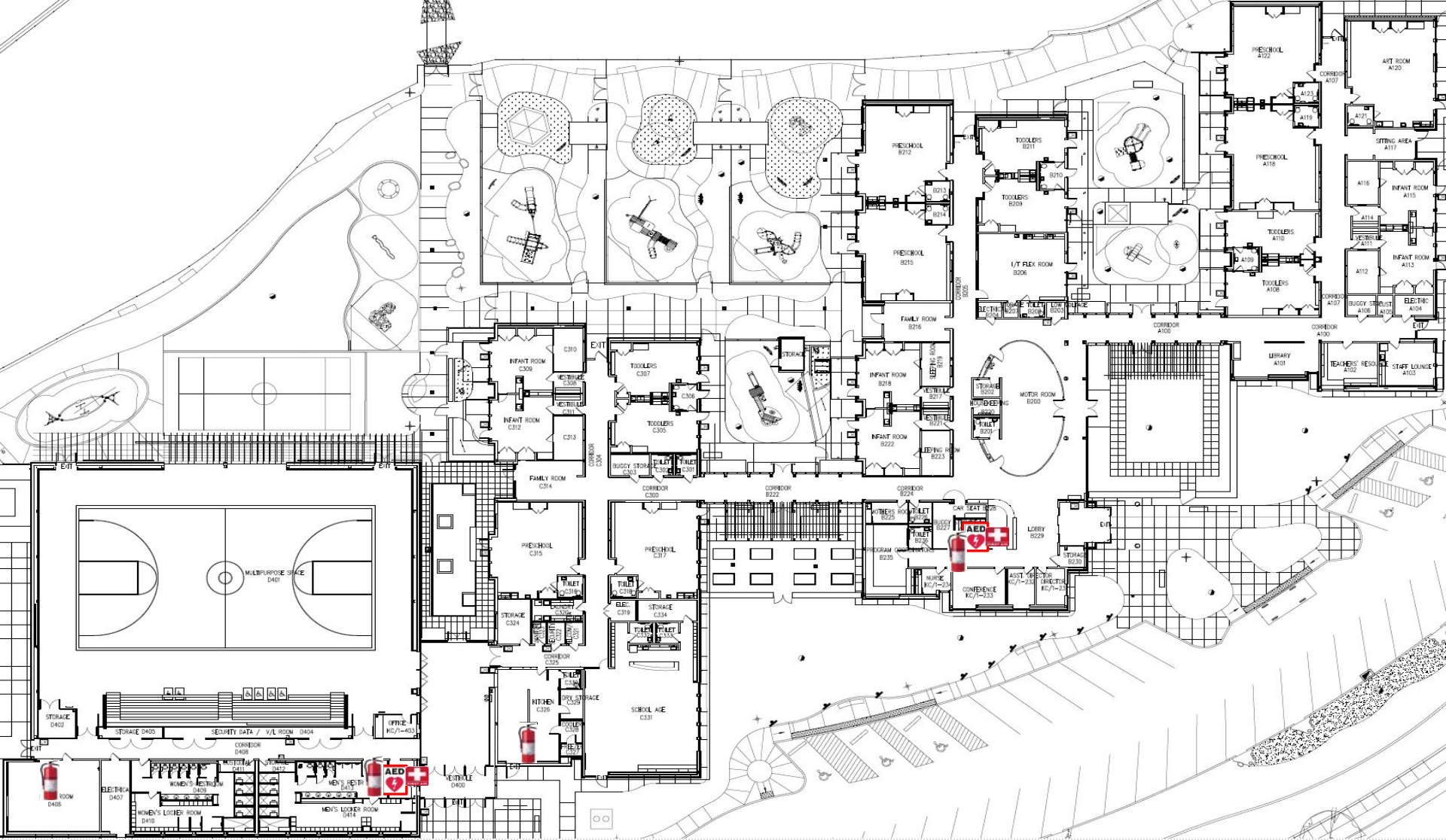
North Campus
2nd Floor

Safety Items:

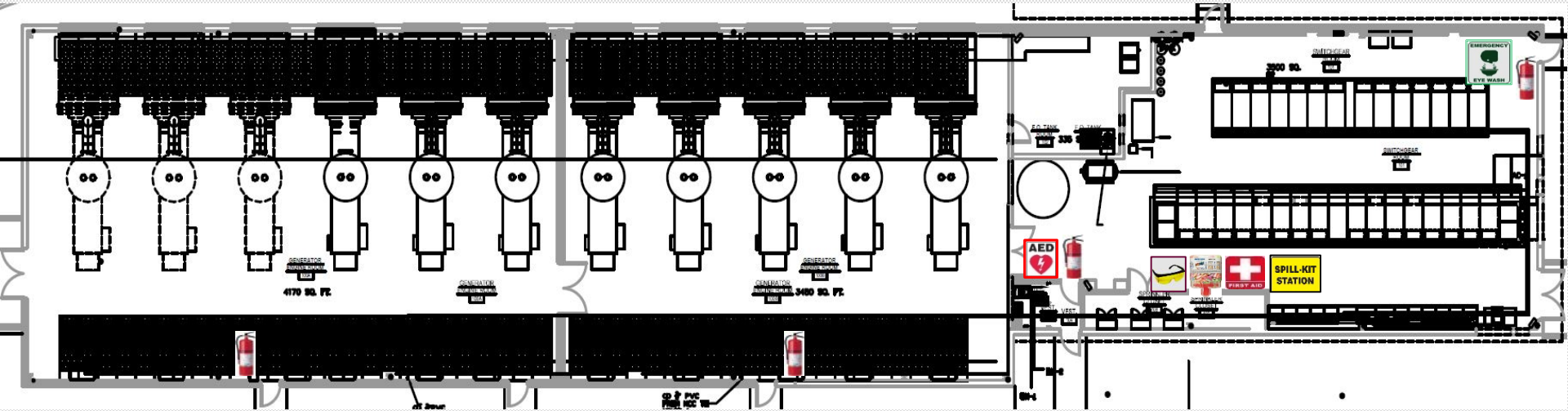
- ❑ First Aid
  - Kitchenette

- ❑ Evacuation Chair
  - South Stairwell

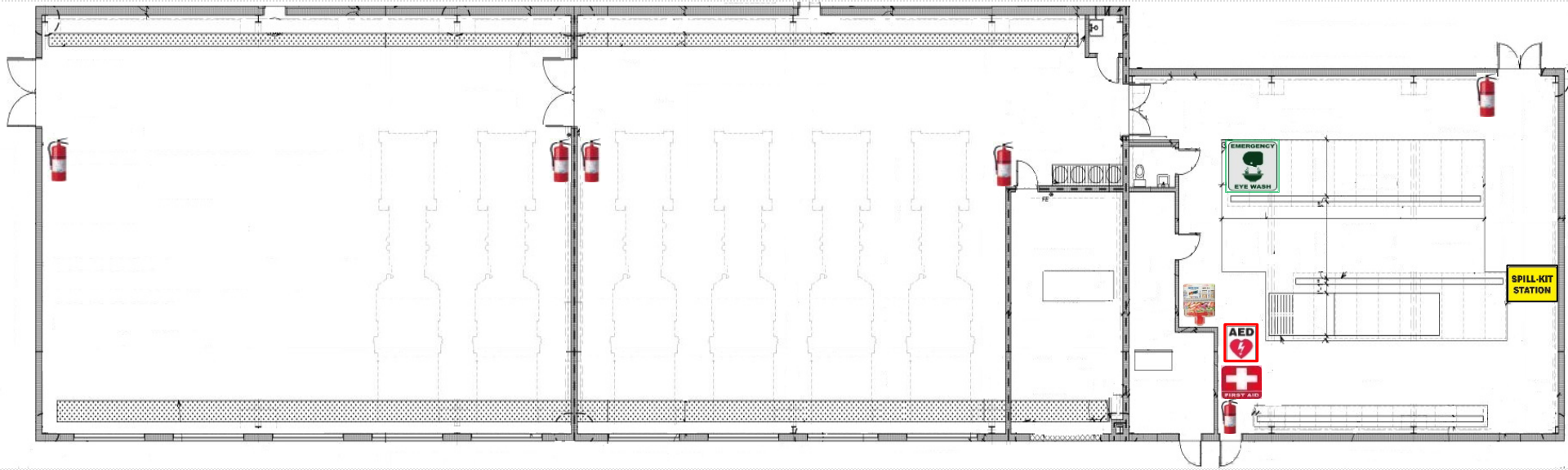



MULTIPURPOSE SPACE D401
STORAGE D402
STORAGE D405
SECURITY DATA / V/L ROOM D404
OFFICE KC/1-403
CORRIDOR D408
ELECTRICAL D407
WOMEN'S RESTROOM D409
WOMEN'S LOCKER ROOM D410
MEN'S RESTR D413
MEN'S LOCKER ROOM D414
VESTIBULE D400
AED
KITCHEN C326
SCHOOL AGE C331
PRESCHOOL C315
PRESCHOOL C317
FAMILY ROOM C314
INFANT ROOM C309
INFANT ROOM C312
TODDLERS C307
TODDLERS C305
CORRIDOR C300
CORRIDOR C325
STORAGE C324
STORAGE C334
PRESCHOOL B212
PRESCHOOL B215
FAMILY ROOM B216
INFANT ROOM B218
INFANT ROOM B222
SLEEPING ROOM B223
TODDLERS B211
TODDLERS B209
I/T FLEX ROOM B206
CORRIDOR B225
CORRIDOR B222
CORRIDOR B224
MOTOR ROOM B200
LOBBY B229
CONFERENCE KC/1-233
NURSE KC/1-234
ASST. DIRECTOR KC/1-232
DIRECTOR KC/1-231
STORAGE B230
PRESCHOOL A122
ART ROOM A120
PRESCHOOL A118
SITTING AREA A117
INFANT ROOM A115
TODDLERS A110
INFANT ROOM A113
TODDLERS A108
CORRIDOR A107
CORRIDOR A100
LIBRARY A101
TEACHERS' RESOURCE A102
STAFF LOUNGE A103
BUGGY STORAGE A106
ELECTRIC A104

Kids Center



Generator Plant 2



Generator Plant 1B

APPENDIX G

EMERGENCY CONTACTS AND SPILL RESPONSE PROCEDURE

OIL SPILL NOTIFICATION FLOW CHART
ESPN INC
BRISTOL, CONNECTICUT 06010

The following summarizes the response procedures to be implemented in the event of an oil release. For additional response procedures refer to the Facility Contingency, SPCC, and Spill Response Plans.

INTERNAL NOTIFICATION AND RESPONSE

If a spill is discovered, the individual discovering the spill will immediately take action to stop the spill and then notify the SPCC Coordinator of Global Security and Safety Department.

SPCC COORDINATOR/PRIMARY EMERGENCY CONTACT:
Global Security Command Post (24 hours) – (860) 766-2486

After receiving notification of the spill the SPCC Coordinator will be responsible for actions and will supervise efforts to provide containment of the spill to prevent to exacerbation of the spill. Clean-up crews, under the direction of the SPCC Coordinator, should isolate or repair the source of the leak/spill to prevent additional spillage. Clean-up crews will utilize spill clean-up materials provided and employ Safe Work Practices.

The SPCC Coordinator will evaluate the need and if required will contact additional assistance (i.e., an outside clean-up contractor). The contact information for the outside clean-up contractor is listed below:

Clean Harbors
(800) 645-8265 (24-hour emergency)
(860) 583-8917 (Bristol, CT office)

FEDERAL AND STATE NOTIFICATION

WATER: The SPCC Coordinator will notify the National Response Center (NRC) if the spill results in a discharge of quantity of oil into surface waters or wetlands. If the spill results in the release of more than 1,000 gallons of oil into or upon a river, or if it is the second oil spill event (>42 gallons) into such river within a twelve-month period, the SPCC Coordinator will notify the USEPA. The SPCC Coordinator will notify the CTDEEP immediately of any spill or release of oil.

LAND: The SPCC Coordinator will notify the CTDEEP immediately of any spill or release of oil.

CT DEEP Spill Hotline – (860) 424-3338 or (866) 337-7745
USEPA – (888) 372-7341
National Response Center – (800) 424-8802

The SPCC Coordinator will prepare an Incident Report Form upon completion of spill clean-up and ensure the required notification forms and reports are submitted to the appropriate regulatory agencies.

LOCAL NOTIFICATION

The following local agencies will be called to provide assistance at the facility as needed:

Bristol Fire Department	**Bristol Police Department**	**Bristol Hospital**	**Ambulance**
181 N Main St Bristol, CT 06010 Phone: (860) 584-7964 Emergency Number: 911	131 N Main St #1 Bristol, CT Phone: (860) 584-3011 Emergency Number: 911	41 Brewster Rd Bristol, CT 06010 Phone: (860)-585-3000 Emergency Number: 911	911

1. **Recover or Clean-up Spills <10 Gallons**. As much material as possible should be recovered and reused where appropriate. Liquids absorbed by solid materials shall be shoveled into open-top container, mobilize spill clean-up crew; locate the source of spill and immediately stop discharge, if possible; block off the area to prevent traffic flow from entering the spill area; notify people in the immediate area. Protect nearby catch basins and/or condensation drains with sorbent booms; deploy spill clean-up materials (e.g., sorbent boom, sorbent pads, granular adsorbent material, etc.) as appropriate.

2. **Recover or Clean-up Spills ≥10 Gallons.** Mobilize the spill clean-up crew and notify the SPCC Coordinator; locate the source of spill and immediately stop the discharge, if possible; if there is a potential for fire, call the fire department immediately; notify and mobilize spill clean-up contractor (the current spill contractor is Clean Harbors; block off the area to prevent traffic flow from entering the spill area; deploy spill clean-up materials (e.g., sorbent boom, sorbent pads, granular adsorbent material, etc.) as appropriate. Try to contain the spill until the spill contractor arrives. Initiate the following actions for spills expected to flow towards catch basin: 1) Protect the catch basins with booms, sandbags or earthen dikes; 2) Use a shovel to create a dike and control the flow of the spill; and 3) Fuel entering catch basins must be removed by the spill clean-up contractor as soon as possible.

3. **Prepare an Internal Report.** After the spill has been controlled and/or cleaned, the SPCC Coordinator will complete the Incident Report Form recording the details of the incident. If the spill is equal to or in excess of a reportable quantity, a copy of the spill record form should be submitted to the USEPA.

4. **Evaluate the SPCC Plan** and amend if necessary. Determine the cause of the incident and evaluate the spill response procedures. Correct any deficiencies and amend the SPCC Plan accordingly. Update Oil Spill History (page ii of SPCC Plan), to describe the event after each significant spill incident.

This spill response procedure should be posted in the critical areas of the Facility, near the spill response equipment, to aid in a quick, effective response. Personnel working in the areas will be notified as to where the procedures are posted.

Appendix G
Emergency Contacts and Spill Response Procedure

7. Spill Response

Chemical or fuel spills/releases can occur due to a breached storage vessel, during fuel transfers, from equipment failures or maintenance-related issues.

Spill types are broken into three different categories. Each category has its own specific clean-up response plan. Follow the steps outlined below:

Step 1 Response

The Command Center will immediately dispatch Security personnel to the scene to initiate spill response actions. The action from Security will include placing absorbent material (speedy dry, absorbent pads) on the spill, protecting drains with flexible berms, cushions, or mats, and rerouting pedestrians away from the area.

Safety Data Sheet

A copy of the Chemical Safety Data Sheet (SDS) can be obtained immediately through the ESPN SDS Database: Safety Data Sheet Inventory

Safety Data Sheets (SDS) are also posted outside of mechanical rooms where water treatment chemicals are stored.

Emergency Communication Response

The Global Security Command Post will send a notification via GENS to the appropriate emergency management team. Utilize the appropriate spill response template located in the GENS system (SPILL – BRSTOL).

Step 2 Notifications

All chemical or fuel spills, regardless of quantity, shall be reported immediately to the Global Security and Safety Command Center @ (860) 766-2486 (6-2486).

The Global Security Command Center will report the spill to the CT Department of Environmental & Energy Protection (DEEP) Emergency Response Unit.
CT DEEP 860-424-3338 or 1-866-337-7745.

The report message shall include:

- the location of the spill (building, parking lot, etc)
- the size and type of substance, material or waste;
- the date and the cause of the incident;
- if streams, storm drains or soil have been impacted;
- the name and address of the person making the report.

Step 3 Determining the spill type, and clean-up response

The final step is to determine the spill type. Spill types are broken into three different categories. Each category has its own specific clean-up response.

Type 1

Incidental spills are ones, which are limited in quantity and exposure potential, they do not pose a safety or health hazard, they do not have the potential to become an emergency within a short period of time, and they do not threaten waterways or storm drains.

An incidental spill is limited to a small area (8 x 8-foot).

Examples of an incidental spill would be those involving vehicle leaks. (engine oil, transmission fluid, hydraulic fluid, small amounts of gasoline, vehicle coolant or brake fluid).

Incidental spills can be controlled by the Security personnel by applying absorbent material to the affected area and by coordinating with the Facilities Maintenance team for clean up and disposal.

Action

Contact the Facilities Operations Leadership Team via e-mail indicating the spill location, type of spill, and all other pertinent information.

- Coe, Ron; Ron.Coe@espn.com
- Fraello, Colleen; Colleen.M.Fraello@espn.com
- Hislop, Tom; Tom.Hislop@espn.com
- Palmisano, Wendy; Wendy.A.Palmisano@espn.com
- Pearson, Nate; Nate.Pearson@espn.com
- Rodriguez, Carlos; Carlos.A.Rodriguez@espn.com

Type 2

Bodily fluid spills are ones, which contain blood or bodily fluids. Clean-up and disinfectant response will be conducted by Building One Facility Services.

Action

The GOC will create a clean-up work order through Maximo. CT DEEP does not need to be notified.

Type 3

Emergency spills are ones, which can pose a significant safety or health hazard. The material is ignitable, corrosive, reactive, toxic, threatens waterways, or is beyond ESPN ability to safely abate.

Examples of emergency spills include incidents occurring or involving chemicals stored in UPS battery rooms, generator plants, elevator rooms, boiler rooms, chiller plants, penthouses or spills covering large areas (greater than an 8 x 8-footprint).

ESPN has a service contract in place with Clean Harbors for responding to such emergency spills.

Action

Immediately call Clean Harbors at (800) 645-8265.

Special Instructions – Off-Site Locations

383 Middle Street

For responding to incidents involving Winstanley contractors/vendors/employees, the Global Security Command Center will follow steps 1, 2 and then notify Winstanley property management staff (Rosa Szkula, RSzkula@winent.com) with all spill pertinent information.

Clean-up efforts will be coordinated by the Winstanley property management team. Do not call Clean Harbors.

Special Instructions

Generator fuel spills from refilling operations

The Global Security Command Post will follow steps 1, 2, and 3 for emergency spills. The Facility Engineering team will close the emergency shut-off valve.

Defensive actions will be taken to protect storm drains, people and property.

All ignition sources in the area of the spill, including open flames, electrical devices, spark-producing tools, and equipment shall be removed.

The responding security personnel will be responsible for routing pedestrian and vehicular traffic away from the area of the spill.

Glycol/chilled water spills

The Global Security Command Post will follow steps 1, 2, and 3 for emergency spills involving chilled water and contact the Facility HVAC tech on duty. If a leak or spill occurs in chilled water piping, the HVAC staff will close valves as necessary.

Spill barriers or plugs are located near rooftop drains in Penthouse 1B and C.

6. CO2 Fire Suppression System, Generator II and IB Plant

Service Representative: Stuart L. White Company, 203-878-6311

Trouble and alarm conditions on the Kidde Panel are transmitted automatically to the Simplex Fire Alarm Panel in the Generator II Plant and to the FCI Fire Alarm Panel in the Generator IB Plant. Trouble conditions on the panel should be reported immediately to the Building Systems Technician, a Facilities Electrician, or a member of the Safety Department in order of priority.

The Kidde System utilizes Carbon Dioxide to suppress a fire. Carbon Dioxide is a Carbonate Anhydride. It is a powerful cerebral vasodilator. Exposure to high concentrations of CO2, above the 5% range can be harmful. At such concentrations, symptoms similar to oxygen deprivation may be expected, i.e. headache, nausea, dizziness, loss of consciousness or death.

CO2 reduces the oxygen level in the air and can cause suffocation leading to coma and death. High concentration exposure can cause a faint acidic taste, leading to paralysis of the breathing control centers of the nervous system. **No one shall be allowed to enter the fuel storage room unless the CO2 system is disabled according to Lock out/Tag out procedures.**

a) Response in Generator II Plant – Fuel Storage Room

1. An alarm at the Kidde Panel will be automatically transmitted to the building Alarm Panel. Building signals (horns/strobes) shall activate automatically. The alarm should be acknowledged at the Fire alarm Panel by depressing the alarm acknowledge button. **Fuel supply to the Generators and day-tanks shall be shut-down.**
2. The fire department should be called immediately and the building evacuated.
3. Contact the Service Representative immediately for emergency service.
4. No re-entry of the building should be permitted until the fire department has inspected the building.
5. If the Fire Department permits re-entry, the Facilities Electrician on duty should be directed to the Generator II building to assist the Fire Department in restoring the Kidde Panel to normal.
6. If it is determined to be a false alarm, record the device in alarm.
7. If the heat detector in alarm fails to reset, the detector must be replaced. There are 2 types of heat detectors located in this room: 1 type for pre-action sprinkler release; and the 2nd type for the CO2 system. Stuart White will be the service contractor for the CO2 heat detectors and Environmental Systems Corp.(860-953-8800) will service the pre-action heat detectors.

8. If the panel aborts the reset, await the arrival of the service representative and restore power to the Liebert units by disconnecting the relay from the Kidde panel to the units.

b) Sequence of Operation

1) First Detector in Alarm	A) Panel shows 'Alarm' B) CO2 Agent Horn/Strobes activate C) HVAC shutdown accomplished D) Fuel Pumps are shut down (Generators Run until out of fuel) E) Building Fire Alarm System activates F) 20 second delay until release
2) Manual Release	A) Panel shows 'Alarm' B) Discharge of agent **after 20 seconds**

7. Spill Response

Revision Log

Version #	Date of Revision	Revised by	Summary of Revision
1	1/26/2021	Jeff Courtemanche	Updated Contact Information for response personnel
1	2/1/2021	Jeff Courtemanche	Updated Winstanley response information
1	8/23/2021	Jeff Courtemanche	Updated Clean Harbors Call information
1	9/21/2021	Jeff Courtemanche	Disney Alerts clarification placed into the document.

Chemical or fuel spills/releases can occur due to a breached storage vessel, during fuel transfers, from equipment failures or maintenance-related issues.

Spill types are broken into three different categories. Each category has its own specific clean-up response plan. Follow the steps outlined below:

Step 1 - Response

The Command Center will immediately dispatch Security personnel to the scene to initiate spill response actions. The action from Security will include placing absorbent material (speedy dry, absorbent pads) on the spill, protecting drains with flexible berms, cushions, or mats, and rerouting pedestrians away from the area.

Safety Data Sheet

A copy of the Chemical Safety Data Sheet (SDS) can be obtained immediately through the ESPN SDS Database: Safety Data Sheet Inventory

Safety Data Sheets (SDS) are also posted outside of mechanical rooms where water treatment chemicals are stored.

Emergency Communication Response – Disney Alerts (Everbridge)

Determine if an Everbridge communication is necessary by assessing the following (not needed for incidental spills):

1. Is there a safety threat to employees or the immediate vicinity?
2. Is there a health hazard to employees or the immediate vicinity?
3. Could the cleanup process affect nearby areas (storm drains/waterways)?
4. Is there potential to become an emergency within a short time frame (check with onsite security supervisor as to what "short time frame" will be as each incident may need to be addressed differently)?
5. Will the spill or the cleanup block campus access?
6. Will the spill or the cleanup affect business operations?

If the answer to any of the above questions is yes then the Global Security Command Post will send a notification via DISNEY ALERTS to the appropriate emergency management team. Utilize the appropriate spill response template located in the DISNEY ALERTS system (SPILL – BRSTOL).

Step 2 - Notifications

All chemical or fuel spills, regardless of quantity, shall be reported immediately to the Global Security and Safety Command Center @ (860) 766-2486 (6-2486).

The Global Security Command Center will report chemical or fuel spills regardless of quantity to the CT Department of Environmental & Energy Protection (DEEP) Emergency Response Unit.

CT DEEP 860-424-3338 or 1-866-337-7745.

The report message shall include:

- The location of the spill (building, parking lot, etc.)
- The size and type of substance, material or waste;
- The date and the cause of the incident;
- If streams, storm drains or soil have been impacted;
- The name and address of the person making the report.

Step 3 - Determining the spill type, and clean-up response

The final step is to determine the spill type. Spill types are broken into three different categories. Each category has its own specific clean-up response.

Type 1

Incidental spills are ones, which are limited in quantity and exposure potential, they do not pose a safety or health hazard, they do not have the potential to become an emergency within a short period of time, and they do not threaten waterways or storm drains.

An incidental spill is limited to a small area (8 x 8-foot).

Examples of an incidental spill would be those involving vehicle leaks. (engine oil, transmission fluid, hydraulic fluid, small amounts of gasoline, vehicle coolant or brake fluid).

Incidental spills can be controlled by the Security personnel by applying absorbent material to the affected area and by coordinating with the Facilities Maintenance team for clean up and disposal.

Action

Incidental spills do **not** require a Disney Alert message to be sent.

Contact the Facilities Operations Leadership Team via e-mail indicating the spill location, type of spill, and all other pertinent information.

- Hislop, Tom; Tom.Hislop@espn.com
- Morrissey, Kelly; KELLY.M.MORRISSEY@ESPN.COM
- Palmisano, Wendy; Wendy.A.Palmisano@espn.com
- Pearson, Nate; Nate.Pearson@espn.com
- Rodriguez, Carlos; Carlos.A.Rodriguez@espn.com

Type 2

Bodily fluid spills are ones, which contain blood or bodily fluids. Clean-up and disinfectant response will be conducted by Building One Facility Services.

Action

The GOC will create a clean-up work order through Maximo. CT DEEP does not need to be notified.

Type 3

Emergency spills are ones, which can pose a significant safety or health hazard. The material is ignitable, corrosive, reactive, toxic, threatens waterways, or is beyond ESPN ability to safely abate.

Examples of emergency spills include incidents occurring or involving chemicals stored in UPS battery rooms, generator plants, elevator rooms, boiler rooms, chiller plants, penthouses or spills covering large areas (greater than an 8 x 8-footprint).

ESPN has a service contract in place with Clean Harbors for responding to such emergency spills.

Action

For any Emergency Spills immediately call Clean Harbors at (800) 645-8265.

You may be asked for information pertaining to our company, the following information may be relayed to them if necessary to expedite their response to the campus:

PO # 4506279217 (expires Oct 1, 2020)
EPA ID: CVS024248900
ESPN Company Address: 1 ESPN Plaza – Bristol, CT 06010
ESPN Company Code: ESP0119
ESPN Account Rep: Dave Pannuto, Clean Harbors Environmental Services, 761 Middle Street, Bristol, CT 06010
Mobile: 860.836.4533
Email: pannutod@cleanharbors.com
Web: www.cleanharbors.com

Special Instructions – Off-Site Locations

383 Middle Street

For responding to incidents involving Winstanley contractors/vendors/employees, the Global Security Command Center will follow steps 1 & 2, and then notify Winstanley property management staff in the following order:

- Notify Rosa Szykula via telephone: 860-881-1520
- Notify Rosa Szykula via email RSzykula@winent.com
- If you were unable to contact Rosa Szykula via the above two options contact Winstanley main telephone: 860-838-5042

Clean-up efforts will be coordinated by the Winstanley property management team. Do not call Clean Harbors.

Special Instructions

Generator fuel spills from refilling operations

The Global Security Command Post will follow steps 1, 2, and 3 for emergency spills. The Facility Engineering team will close the emergency shut-off valve.

Defensive actions will be taken to protect storm drains, people and property.

All ignition sources in the area of the spill, including open flames, electrical devices, spark-producing tools, and equipment shall be removed.

The responding security personnel will be responsible for routing pedestrian and vehicular traffic away from the area of the spill.

Glycol/chilled water spills

The Global Security Command Post will follow steps 1, 2, and 3 for emergency spills involving chilled water and contact the Facility HVAC tech on duty. If a leak or spill occurs in chilled water piping, the HVAC staff will close valves as necessary.

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