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at

Los Alamos National Laboratory

ENVIRONMENTAL STUDY

CHARACTERIZATION REPORT # 67

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WASTEWATER STREAM CHARACTERIZATION FOR

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ENVIRONMENTAL STUDY

Prepared for:
THE LOS ALAMOS NATIONAL LABORATORY
Los Alamos, New Mexico

under Subcontract 9-XG8-2874P-1

by:
Santa Fe Engineering, Ltd.
1429 Second Street
Santa Fe, New Mexico 87505
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January, 1994

Updated Per ESH-8 Comments March 1994

EXECUTIVE SUMMARY

Buildings 30, 31, 36, 74, 128, 154, 165, 182, 183, 184, 187, 188, 189, 240, 241, 242, 255, 263, 274, 276, 277, 278, 279, 282, 283, 285, 293, 294, 303, 306, 311, 321, 322, 323, 324, 325, 358, 359, 393 and 397 at TA-46 were visited to document all drain piping and building outflows and to make permitting recommendations. The pipes exiting the building are as follows:

1. From building 46-30: one outfall to the site sanitary sewer, one permitted discharge (04A013), nine gas vapor vents to atmosphere, one gas bottle connection, two cooling water system connections, one pipe stub and three electrical conduit stubs,

2. from building 46-31: three outfalls to the site sanitary sewer system, one inactive permitted discharge (03A043), six storm water drains, eight fire suppression system drains, four steam system vapor vents, four cooling water system connections, eighteen gas vents or connections and one plumbing vent, three condensate drains to daylight, one compressed air tank pressure vent, one backflow preventer drain, one electrical conduit stub and one potable water system drain,

3. from buildings 46-36, 74, 189, 240, 242, 255, 263, 274, 276, 277, 279, 282, 283, 285, 293, 294, 303, 306, 311, 321, 323, 324, 325, 358, 359, 393, and 397 there are no drains. Building 46-278 has been removed from the site,

4. from building 46-128: one outfall to the site sanitary sewer system, two storm water drains, one water heater pressure relief valve drain and two condensate drains,

5. from building 46-154: one outfall to the site sanitary sewer system, nine storm water drains, two cooling water system connection stubs, two cooling water connections, one cooling water piping drain, three fire suppression system drains, fourteen gas connections and three pipe/vent stubs,

6. from building 46-165: one outfall to the site sanitary sewer system, one water heater pressure relief valve discharge to daylight and one evaporative cooler drain,

7 from building 46-182: one outfall to the site sanitary sewer system, one water heater pressure relief valve discharge, one evaporative cooler drain and one electrical conduit stub,

8. from building 46-183: one air-conditioning unit condensate drain,

9. from building 46-184: one air-conditioning unit condensate drain,

10. from building 46-187: one outfall to the site sanitary sewer system, one water heater pressure relief valve discharge and one electrical conduit stub,

11. from building 46-188: one outfall to the site sanitary sewer system, one water heater pressure relief valve discharge and one electrical conduit stub,

12. from building 46-241: one outfall to the site sanitary sewer system and one water heater pressure relief valve discharge.

Recommendations for repiping are provided to allow outfall consolidation to minimize permit maintenance requirements and to bring the facility into compliance with the Laboratory's NPDES Permit. Floor drain plugging is recommended where the potential of discharge of pollutants exists.

A waste stream Database has been prepared listing the waste water and flow rate for each outfall.

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1.0 INTRODUCTION

During February and March, 1993, Stephen C. Diamond of Santa Fe Engineering (SFE) toured buildings 30, 31, 36, 74, 128, 154, 165, 182, 183, 184, 187, 188, 189, 240, 241, 242, 255, 263, 274, 276, 277, 278, 279, 282, 283, 285, 293, 274, 303, 306, 311, 321, 322, 323, 324, 325, 358, 359, 393 and 397 at TA-46. The purpose of this study is to identify building drain piping and to characterize the wastewater flows and sources existing at the time of the visit. This report will not reflect any subsequent changes in piping or operation with the exception of corrective actions performed in building 46-31 during summer and fall of 1993. The Waste Stream Characterization Policy of September 10, 1992 was followed for this study. The following tasks were performed for this purpose:

1. Building drains and all piping exiting the building were identified and laid out in schematic form;

2. Wastewater sources were identified at each drain, and the wastewater was characterized according to flow rate and quality. The location of outfalls and their potential sources of discharge were determined. Potential pollutants were also noted;

3. Permit application for discharges of clean water were not prepared since these discharges do not require permitting at this time and,

4. Potential problems were identified and recommendations were made for repiping, floor drain plugging and spill containment, where deemed appropriate.

The field investigation proceeded by verifying drain schematic drawings prepared by SFE for the appropriate buildings (Figures 1 through 11) from drawings provided by Los Alamos National Laboratory (LANL) Facilities Engineering Division. The other buildings were visited to insure that no drains exist for the buildings. The following process was used to define drain piping and characterize the wastewater streams:

1. Laboratory engineering drawings were used to prepare the SFE drain piping schematics. The Solid Waste Stream Characterization conducted by IT Corporation was also reviewed. The National Pollutant Discharge Elimination System (NPDES) Permit, the 1990 NPDES Permit Application submitted by Los Alamos National Laboratory (LANL) in September, 1990, the latest Federal Facilities Compliance Agreement (FFCA) between the Department of Energy (DOE) and the Environmental Protection Agency (EPA) and the Administrative Order (AO) docket Number VI-92-1306 issued by EPA to the University of California were used for reference;

2. SFE verified drain piping by dye checking and

3. A site visit was performed to verify the SFE drain schematics and to identify potential outfall pipes exiting the building. The visit entailed a room by room inspection of wastewater sources and drains. Interviews with site personnel were conducted to assist in wastestream characterization.

2.0 FIELD INVESTIGATION

The pipes exiting the building have been assigned Outlet Piping Numbers. The four part number, sequentially, identifies the Technical Area where the pipe is located, the building from which the pipe discharges, the letters OPN to indicate that it is an Outlet Pipe Number and the unique number for the pipe. The piping exiting the building will be labeled for easy identification in the future.

Each drain has a unique identification number. Each number consists of three parts. The first part indicates the floor on which the drain is located. The second part has letters that indicate the type of drain (see Table 13). The final part is the unique number for the drain. For example, the first floor drain in the sequence on the basement floor of a building would be labeled BFD1. Similarly, the first Roof Drain in a sequence would be identified as RD1.

The functions of each pipe exiting from the buildings are listed in Appendix 1, Tables 1 through 11, with an abbreviations list in Table 13. Table 12 in Appendix 1 contains recommendation information that is not specific to individual drains. Appendix 2 contains the wastestream characterization database output, listing wastewater source, flow rates and periodicity information for each outfall drain. Completed EPA forms are in Appendix 3 for the appropriate outfalls. Appendix 4 provides dye study information. Flow schematics of the drains from each building are attached in Appendix 5 as Figures 1 through 11. Figure 12 of Appendix 5 is a site plan of TA-46.

3.0 RECOMMENDATIONS FOR BUILDINGS WITH NO DRAINS

Buildings 46-36, 74, 189, 240, 242, 255, 263, 274, 276, 277, 279, 282, 283, 285, 293, 294, 303, 306, 311, 321, 323, 324, 325, 358, 359, 393 and 397 have no drains or sources of water. These buildings are transportainers, storage sheds or office trailers. Building 46-278 has been removed from the site.

4.0 RECOMMENDATIONS FOR BUILDING 46-30

This structure is the hydraulics laboratory building. It is a high bay metal-skinned building. Table 1 of Appendix 1 is a list of the drains to the building outfalls and Figure 1 of Appendix 5 is a schematic of the drain systems.

4.1 Outfall 46-30-OPN-1

This outfall discharges to the site sanitary sewer collection system. Drains contributing to this outfall include a toilet, a urinal, sink drains (2), a floor drain, a water fountain and an equipment drain. No chemicals are drained into any of these drains. It is recommended that all of these drains be labeled "SANITARY WASTE ONLY - NO CHEMICAL DISPOSAL". No permitting is recommended and no EPA forms were prepared.

4.2 Outfall 46-30-OPN-2

This outfall discharges to daylight at the parking area adjacent to building 46-31. It is permitted as EPA 04A013. Drains contributing to this outfall include floor sinks (4), a floor drain, roof drains (4) and a trench drain. Floor drain 1FD1 is in a mechanical room and receives once-through cooling water from an air compressor. It is recommended that the water cooled air compressor be replaced with a

standard air-cooled unit and the floor drain plugged. The compressor tank drain should be containerized. Floor sinks 1FS1, 1FS2, 1FS3 and 1FS4 are plugged with debris and are not usable. These drains should be permanently plugged. Trench drain 1TD1 is not used and should be permanently plugged. The four roof drains can continue to discharge to the outfall as a storm water only outfall. Existing permit 04A013 can then be eliminated. A revised EPA form 2C has been prepared and is contained in Appendix 3.

4.3 Outfalls 46-30-OPN-3, 46-30-OPN-4, 46-30-OPN-5, 46-30-OPN-6, 46-30-OPN-7, 46-30-OPN-8, 46-30-OPN-9, 46-30-OPN-9, 46-30-OPN-10

These discharges to the atmosphere are various gas vents about the building. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

4.4 Outfall 46-30-OPN-11

This pipe to daylight is an unused gas bottle connection. No changes or permitting are recommended and no EPA forms were prepared.

4.5 Outfalls 46-30-OPN-12 and 46-30-OPN-13

These two insulated pipes to below grade are closed-loop cooling water supply and return lines from building 46-31. There is no discharge. No changes or permitting are recommended and no EPA forms were prepared.

4.6 Outfall 46-30-OPN-14

This is a disconnected pipe stub on the exterior of the building. It is recommended that it be removed. No permitting is recommended and no EPA forms were prepared.

4.7 Outfalls 46-30-OPN-15, 46-30-OPN-16 and 46-30-OPN-17

These are electrical conduit stubs through the building wall to allow for easy instrumentation wire installation/modification. No changes or permitting are recommended and no EPA forms were prepared.

5.0 RECOMMENDATIONS FOR BUILDING 46-31

Building 46-31 is a laser laboratory facility also known as Test Building #2. This building includes laboratories, offices, shops, restrooms and mechanical rooms. Table 2 of Appendix 1 lists the drains contributing to the building outfalls and Figure 2 of Appendix 5 shows a schematic of the drain systems. It should be noted that extensive corrective actions were performed at this building during the summer and fall of 1993 as Lab Job # 13373 under the direction of EM-8 and ENG-6. A visit was made to this building in December 1993 to verify the corrective actions. These changes are reflected in the discussion of this building.

5.1 Outfall 46-31-OPN-1

This outfall discharges to the site sanitary sewer system at TA-46. Drains contributing to this outfall include one nitric acid tank drain with valve, floor drains (8), lavatories (4), sink drains (6), non-emergency showers (2), toilets (3), urinals (2), cup drain (1) and one previously removed water fountain. Cup drain 1CD1 is in a fume hood that is labeled as containing hydrochloric acid, nitric acid

and potential radioactive contamination. It is recommended that this drain be disconnected and removed. It is also recommended that the acid tank, 1AT1, drain be immediately disconnected from the sewer. Containerizing the waste is suggested. Floor drains 1FD15 and 1FD16 are in restrooms and both are blocked with debris. It is recommended that these drains be repaired or permanently plugged. Sink drains 1SD2 and 1SD3 are located in a shop adjacent to the nitric acid tank. These should be labeled "SANITARY WASTE ONLY-NO CHEMICAL DISPOSAL". New sink drain 1SD24 in room 112 and sink drain 1SD11 in room 164 should also be labeled. No permitting is recommended and no EPA forms were prepared.

5.2 Outfall 46-31-OPN-2

This outfall discharges to daylight and is now a "storm water only" outfall. Drains contributing to this outfall include two roof drains only. Previous non-storm drains that contributed to this outfall have been removed or rerouted to the sanitary system as part of the recent corrective actions. No other changes or permitting are recommended and no EPA forms were prepared.

5.3 Outfall 46-31-OPN-3

This outfall previously discharged to daylight as EPA permit 03A043. The recent corrective actions (LAB JOB # 13373) connected this outfall to the sanitary sewer system via a new lift station and force line. It is recommended permit 03A043 be deleted. Cooling tower blowdown is now routed to sanitary along with the other drains connected to this outfall, however, cooling tower flows are quite small. Drains contributing to this outfall include two cup drains (in hoods), one emergency eyewash, floor drains (5), floor sinks (16), sink drains (10) and water fountains (2). The cup drains in the fume hoods were covered to prevent their

use, however, it is recommended that these drains be removed or containerized and the drain lines at the wall should be plugged permanently. Floor drain 1FD11 has a temporary (removable) plug. It should be permanently plugged. Floor sinks 1FS1, 1FS2 and 1FS3 should be labeled "SANITARY WASTE ONLY-NO CHEMICAL DISPOSAL". Floor sinks 1FS4, 1FS8, 1FS9, 1FS10, 1FS11, 1FS12, 1FS13, 1FS14 and 1FS15 could not be located. It is recommended that the operating group verify the status of these drains and, if found, that these be permanently plugged. Floor sink 1FS6 and sink drain 1SD7, which discharges directly to 1FS6, should be labeled. Floor sink 1FS7 is located in the main equipment room and receives the cooling tower drains and blowdown. It is recommended that this drain remain to serve the cooling tower. It is recommended that all sink drains be labeled. Water fountain 1WF1 has been removed. It is recommended that the drain connection be permanently plugged. No permitting is recommended and no EPA forms were prepared.

5.4 Outfall 46-31-OPN-4

This outfall originally discharged to daylight. Recent corrective actions (LAB JOB # 13373) have connected this outfall to the TA-46 site sanitary sewer system. Drains contributing to this outfall include cup drains (2), an equipment drain, floor drains (3) and sink drains (4). The cup drains in the hoods have been covered and the drains disconnected as part of the corrective actions. Floor drains 1FD12 and 1FD13 should be permanently plugged. Equipment drain 1ED1 and floor drain 1FD14 are located in equipment room 101 and receive various small flows from HVAC components. It is recommended that sinks 1SD17, 1SD18, 1SD21 and 1SD22 be labeled.

5.5 Outfall 46-31-OPN-5

This outfall discharges to a small seepage pit on the north side of the building. Drains contributing to this outfall previously included three sink drains which have been removed. Sink drain 1SD6 existed at the time of the initial inspection and was dye tested but has since been removed as part of the recent corrective actions. The drain line has been permanently plugged. It is recommended that the seepage pit be sampled for possible contaminants and decommissioned. It should be noted that one LANL archive drawing (C-3876B) shows this line as an "acid waste" line that was to be connected to an existing acid sewer manhole (#WA-61). However, site investigation reveals that this manhole does not exist nor is there a radioactive liquid waste sewer in the vicinity. No permitting is recommended and no EPA forms were prepared.

5.6 Outfall 46-31-OPN-6

This outfall is believed to discharge to the same seepage pit as 5.5 above. There appears to be a floor sink (1FS17) located in the center of room 151B. This area has been covered with floor tile but a depression in the center of the floor along with a metal plate beneath the tile at this location is indicative of this type of drain. Also, there is a pipe entering the sump identified in 5.5 above that could not be verified as to source. It is recommended that the operating group verify the possible presence and destination of this drain. If it exists, it is recommended that it be permanently plugged. No permitting is recommended and no EPA forms were prepared.

5.7 Outfalls 46-31-OPN-7 and 46-31-OPN-8

These two outfalls serve a single floor drain each, 1FD5 and 1FD6 respectively, located on the north side of room 151B. According to LANL archive drawing C-38765, these pipes were to run to daylight separately. Both of these drains were dye tested at the time of the original inspection with negative results. Both drains have been permanently plugged as part of the recent corrective actions performed. No permitting is recommended and no EPA forms were prepared.

5.8 Outfalls 46-31-OPN-9 and 46-31-OPN-10

These two discharges to daylight are both storm water outfalls. They are from an exterior gutter drain and a roof drain (RD6), respectively. No changes or permitting are recommended and no EPA forms were prepared.

5.9 Outfalls 46-31-OPN-11, 46-31-OPN-12, 46-31-OPN-13, 46-31-OPN-14, 46-31-OPN-15, 46-31-OPN-16, 46-31-OPN-17 and 46-31-OPN-18

These eight discharges to daylight are all fire suppression system (sprinkler) drains and are normally used once annually for testing. It is recommended that these be included in a general Laboratory Notice of Intent (NOI) to discharge. No permitting is recommended and no EPA forms were prepared.

5.10 Outfalls 46-31-OPN-19, 46-31-OPN-20 and 46-31-OPN-21

These three discharges to the atmosphere are vapor vents from the steam heating system in the building. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.11 Outfalls 46-31-OPN-22, 46-31-OPN-23, 46-31-OPN-24 and 46-31-OPN-25

These pipes exiting the building are supply (2) and return (2) cooling water loop lines to buildings 46-154 and 46-30, respectively. These are part of a closed-loop system and there is no discharge. No changes or permitting are recommended and no EPA forms were prepared.

5.12 Outfalls 46-31-OPN-26, 46-31-OPN-27, 46-31-OPN-28, 46-31-OPN-29, 46-31-OPN-30 and 46-31-OPN-31

These discharges to the atmosphere are gas vapor vents and no liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.13 Outfalls 46-13-OPN-32, 46-31-OPN-33, 46-31-OPN-34 and 46-31-OPN-35

These pipes exiting the building are inlet connections for various gases employed in the building. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.14 Outfalls 46-31-OPN-36 and 46-31-OPN-37

These two pipes are a gas pipe stub and a gas vent, respectively. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.15 Outfalls 46-31-OPN-38, 46-31-OPN-39, 46-31-OPN-40, 46-31-OPN-41, 46-31-OPN-42 and 46-31-OPN-43

These discharges to the atmosphere are all gas vapor vents. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.16 Outfall 46-31-OPN-44

This discharge to the atmosphere is a vapor vent from the steam heating system in the building. No liquids are discharged. No changes are recommended and no EPA forms were prepared.

5.17 Outfall 46-31-OPN-45

This pipe is a plumbing system air vent and no liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.18 Outfalls 46-31-OPN-46, 46-31-OPN-47 and 46-31-OPN-48

These three outfalls to daylight are condensate drain lines from air-conditioning coils in the building. It is recommended that these occasional discharges be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

5.19 Outfall 46-31-OPN-49

This discharge to the atmosphere is a compressed air pressure relief valve discharge. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

5.20 Outfall 46-31-OPN-50

This outfall to daylight is the drain from a potable water backflow preventer. It is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

5.21 Outfall 46-31-OPN-51

This pipe exiting the building is an electrical conduit stub. No changes or permitting are recommended and no EPA forms were prepared.

5.22 Outfall 46-31-OPN-52

This outfall to daylight is a drain line for the potable water system in the building. It is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

5.23 Outfalls 46-31-OPN-53, 46-31-OPN-54, 46-31-OPN-55 and 46-31-OPN-56

These four outfalls to daylight are all new storm water discharges from roof drains created as part of the recent corrective actions. No changes or permitting are recommended and no EPA forms were prepared.

6.0 RECOMMENDATIONS FOR BUILDING 46-128

Building 46-128 is a modular office building. Table 3 of Appendix 1 lists the drains contributing to the building outfalls and Figure 3 of Appendix 5 is a schematic of the drain systems.

6.1 Outfall 46-128-OPN-1

This outfall discharges to the site sanitary sewer system at TA-46. Drains contributing to this outfall include lavatories (2), toilets (2), one urinal and one water fountain. No changes or permitting are recommended and no EPA forms were prepared.

6.2 Outfalls 46-128-OPN-2 and 46-128-OPN-3

These discharges to daylight are storm water gutter drains. No changes or permitting are recommended and no EPA forms were prepared.

6.3 Outfall 46-128-OPN-4

This outfall to daylight is the occasional discharge of a water heater PRV. It is recommended that this be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

6.4 Outfalls 46-128-OPN-5 and 46-128-OPN-6

These discharges to daylight are condensate from air conditioning coils. It is recommended that these occasional discharges be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

7.0 RECOMMENDATIONS FOR BUILDING 46-154

This building is a laser laboratory facility. Table 4 of Appendix 1 lists the drains contributing to the thirty-five identified outfalls and Figure 4 of Appendix 5 is a schematic of the drain systems.

7.1 Outfall 46-154-OPN-1

This outfall discharges to the TA-46 site sanitary sewer system. Drains contributing to this outfall include floor drains (3), lavatories (3), sink drains (6), toilets (3), urinals (2) and a water fountain. It is recommended that floor drain 1FD3, located in an office, be permanently plugged. It is also recommended that the building manager insure that all sink drains, 1SD1 through 1SD6, are properly

labeled with "SANITARY WASTE ONLY-NO CHEMICAL DISPOSAL". No permitting is recommended and no EPA forms were prepared.

7.2 Outfalls 46-154-OPN-2, 46-154-OPN-3, 46-154-OPN-4, 46-154-OPN-5, 46-154-OPN-6, 46-154-OPN-7, 46-154-OPN-8, 46-154-OPN-9 and 46-154-OPN-10

These nine outfalls to daylight are all storm water drains from the building. No changes or permitting are recommended and no EPA forms were prepared.

7.3 Outfalls 46-154-OPN-11 and 46-154-OPN-12

These two pipes exiting the building are stubs for additional connections to the cooling water system from building 46-31. No changes or permitting are recommended and no EPA forms were prepared.

7.4 Outfalls 46-154-OPN-13, 46-154-OPN-14 and 46-154-OPN-15

These discharges to daylight are drains for the fire suppression system. It is recommended that these be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

7.5 Outfalls 46-154-OPN-16, 46-154-OPN-17, 46-154-OPN-18, 46-154-OPN-19, 46-154-OPN-20, 46-154-OPN-21, 46-154-OPN-22, 46-154-OPN-23, 46-154-OPN-24, 46-154-OPN-25, 46-154-OPN-26, 46-154-OPN-27, 46-154-OPN-28 and 46-154-OPN-29

These fourteen pipes exiting the building are all connections for various types of gas used in the building. No liquids are discharged. No changes or permitting are recommended and no EPA forms were prepared.

7.6 Outfall 46-154-OPN-30

This outfall is a 3/4" - 1.0" diameter plastic tube (Tygon) through the wall of the building. It is no longer connected to anything. It is recommended that it be removed. No permitting is recommended and no EPA forms were prepared.

7.7 Outfalls 46-154-OPN-31 and 46-154-OPN-32

These two pipes exiting the building are a pipe stub and a vent stub, respectively. No changes or permitting are recommended and no EPA forms were prepared.

7.8 Outfall 46-31-OPN-33

This outfall to daylight is a valved drain line for the closed-loop cooling water system distribution piping in the building. Discharge would only occur if there is a need to drain the system. It is recommended that this infrequent discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

7.9 Outfalls 46-154-OPN-34 and 46-154-OPN-35

These two pipes exiting the building to below grade are the cooling water system supply and return lines from building 46-31. This is a closed-loop system and there is no discharge. No changes or permitting are recommended and no EPA forms were prepared.

8.0 RECOMMENDATIONS FOR BUILDING 46-165

Building 46-165 is a modular office building. Table 5 of Appendix 1 lists the drains contributing to the building outfalls and Figure 5 of Appendix 5 is a schematic of the drain systems.

8.1 Outfall 46-165-OPN-1

This outfall discharges to the site sanitary sewer system at TA-46. Drains contributing to this outfall include lavatories (2), sink drains (2), a shower, toilets (2), a urinal and a water fountain. No changes or permitting are recommended and no EPA forms were prepared.

8.2 Outfall 46-165-OPN-2

This discharge to daylight is a water heater PRV discharge. It is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

8.3 Outfall 46-165-OPN-3

This discharge to daylight is an evaporative cooler drain. It discharges once or twice per year. It is recommended that this be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

9.0 RECOMMENDATIONS FOR BUILDING 46-182

Building 46-182 is a modular office building. Table 6 of Appendix 1 lists the drains and Figure 6 of Appendix 5 is a schematic of the drain system.

9.1 Outfall 46-182-OPN-1

This outfall discharges to the site sanitary sewer system at TA-46. Drains contributing to this outfall include lavatories (2), toilets (2), a urinal and a water fountain. No changes or permitting are recommended and no EPA forms were prepared.

9.2 Outfall 46-182-OPN-2

This discharge to daylight is a single drain line serving pressure relief valves at two water heaters. It is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

9.3 Outfall 46-182-OPN-3

This discharge to daylight is an evaporative cooler drain. It discharges once or twice per year. It is recommended that this be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

9.4 Outfall 46-182-OPN-4

This pipe exiting the building is an electrical conduit stub. No changes or permitting are recommended and no EPA forms were prepared.

10.0 RECOMMENDATIONS FOR BUILDING 46-183

This building is an office trailer. Table 7 of Appendix 1 lists the single outfall from this building and Figure 7 of Appendix 5 is a schematic of the structure. The single outfall, 46-183-OPN-1, is condensate from an air conditioning unit and it is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

11.0 RECOMMENDATIONS FOR BUILDING 46-184

This building is an office trailer. Table 8 of Appendix 1 lists the single outfall from this building and Figure 8 of Appendix 5 is a schematic of the structure. The single outfall, 46-184-OPN-1, is condensate from an air conditioning unit and it is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

12.0 RECOMMENDATIONS FOR BUILDING 46-187

Building 46-187 is a modular office structure. Table 9 of Appendix 1 lists the drains and Figure 9 of Appendix 5 is a schematic of the drain systems.

12.1 Outfall 46-187-OPN-1

This outfall discharges to the site sanitary sewer system at TA-46. Drains contributing to this outfall include lavatories (2), toilets (2), a urinal and a water fountain. No changes or permitting are recommended and no EPA forms were prepared.

12.2 Outfall 46-187-OPN-2

This discharge to daylight is a single drain line serving pressure relief valves at two water heaters. It is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

12.3 Outfall 46-187-OPN-3

This discharge to daylight is an evaporative cooler drain. It discharges once or twice per year. It is recommended

that this be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

13.0 RECOMMENDATIONS FOR BUILDING 46-188

Building 46-188 is a modular office structure. Table 10 of Appendix 1 lists the drains and Figure 10 of Appendix 5 is a schematic of the drain systems.

13.1 Outfall 46-188-OPN-1

This outfall discharges to the site sanitary sewer system at TA-46. Drains contributing to this outfall include lavatories (2), toilets (2), a urinal and a water fountain. No changes or permitting are recommended and no EPA forms were prepared.

13.2 Outfall 46-188-OPN-2

This discharge to daylight is a single drain line serving pressure relief valves at two water heaters. It is recommended that this occasional discharge be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

13.3 Outfall 46-188-OPN-3

This discharge to daylight is an evaporative cooler drain. It discharges once or twice per year. It is recommended that this be included in a general Laboratory NOI. No permitting is recommended and no EPA forms were prepared.

14.0 RECOMMENDATIONS FOR BUILDING 46-241

Building 46-241 is a small office trailer. Table 11 of Appendix 1 lists the drains and Figure 11 of Appendix 5 is a schematic of the system.

14.1 Outfall 46-241-OPN-1

This outfall is a sanitary sewer line hung beneath the trailer. It is not currently connected to the site sanitary sewer and the line is capped off. Also, there is no water service to this structure. There is a lavatory and a toilet connected to the capped sewer line, however, both are inactive. No changes or permitting are recommended and no EPA forms were prepared.

14.2 Outfall 46-241-OPN-2

This outfall to daylight is the discharge line from a water heater PRV. There is no water service to this building and the water heater is inactive. Because this unit has no water source there are no changes or permitting recommended. No EPA forms were prepared.

15.0 CONCLUSION

This document provides the information to characterize buildings 30, 31, 74, 128, 154, 165, 182, 183, 184, 187, 188, 189, 240, 241, 242, 255, 263, 274, 276, 277, 278, 279, 282, 283, 285, 293, 274, 303, 306, 311, 321, 322, 323, 324, 325, 358, 359, 393 and 397 at TA-46.

Outlet pipes from the buildings are as follows:

EPA form 2C:

1. 46-30-OPN-2 (04A013)

Buildings with no drains:

1.	46-36	2.	46-74	3.	46-189	4.	46-240
5.	46-242	6.	46-255	7.	46-263	8.	46-274
9.	46-276	10.	46-277	11.	46-279	12.	46-282
13.	46-283	14.	46-285	15.	46-293	16.	46-284
17.	46-303	18.	46-306	19.	46-311	20.	46-321
21.	46-323	22.	46-324	23.	46-325	24.	46-358
25.	46-359	26.	46-393	27.	46-397		

Buildings removed from the site:

1. 46-278

Discharges to the site sanitary sewer collection system:

1.	46-30-OPN-1	2.	46-31-OPN-1	3.	46-31-OPN-3
4.	46-31-OPN-4	5.	46-128-OPN-1	6.	46-154-OPN-1
7.	46-165-OPN-1	8.	46-182-OPN-1	9.	46-187-OPN-1
10.	46-188-OPN-1	11.	46-241-OPN-1		

Discharges to the Radioactive Liquid Waste System:

None

Discharges of storm water:

1.	46-31-OPN-9	2.	46-31-OPN-10	3.	46-31-OPN-2
4.	46-31-OPN-53	5.	46-31-OPN-54	6.	46-31-OPN-55
7.	46-31-OPN-56	8.	46-128-OPN-2	9.	46-128-OPN-3
10.	46-154-OPN-2	11.	46-154-OPN-3	12.	46-154-OPN-4
13.	46-154-OPN-5	14.	46-154-OPN-6	15.	46-154-OPN-7
16.	46-154-OPN-8	17.	46-154-OPN-9	18.	46-154-OPN-10

Gas Vapor, Steam or Plumbing Vents:

1.	46-30-OPN-3	2.	46-30-OPN-4	3.	46-30-OPN-5
4.	46-30-OPN-6	5.	46-30-OPN-7	6.	46-30-OPN-8
7.	46-30-OPN-9	8.	46-30-OPN-10	9.	46-31-OPN-19
10.	46-31-OPN-20	11.	46-31-OPN-21	12.	46-31-OPN-26
13.	46-31-OPN-27	14.	46-31-OPN-28	15.	46-31-OPN-29
16.	46-31-OPN-30	17.	46-31-OPN-31	18.	46-31-OPN-37
19.	46-31-OPN-38	20.	46-31-OPN-39	21.	46-31-OPN-40
22.	46-31-OPN-41	23.	46-31-OPN-42	24.	46-31-OPN-43
25.	46-31-OPN-44	26.	46-31-OPN-45	27.	46-31-OPN-49
28.	46-154-OPN-32				

Fire Suppression System (Sprinkler) Drains:

1.	46-31-OPN-11	2.	46-31-OPN-12	3.	46-31-OPN-13
4.	46-31-OPN-14	5.	46-31-OPN-15	6.	46-31-OPN-16
7.	46-31-OPN-17	8.	46-31-OPN-18	9.	46-154-OPN-13
10.	46-154-OPN-14	11.	46-154-OPN-15		

Gas System Connections or Stubs:

1.	46-30-OPN-11	2.	46-31-OPN-32	3.	46-31-OPN-33
4.	46-31-OPN-34	5.	46-31-OPN-35	6.	46-31-OPN-36
7.	46-154-OPN-16	8.	46-154-OPN-17	9.	46-154-OPN-18
10.	46-154-OPN-19	11.	46-154-OPN-20	12.	46-154-OPN-21
13.	46-154-OPN-22	14.	46-154-OPN-23	15.	46-154-OPN-24
16.	46-154-OPN-25	17.	46-154-OPN-26	18.	46-154-OPN-27
19.	46-154-OPN-28	20.	46-154-OPN-29		

Air-Conditioning Condensate:

1.	46-31-OPN-46	2.	46-31-OPN-47	3.	46-31-OPN-48
4.	46-128-OPN-5	5.	46-128-OPN-6	6.	46-128-OPN-1
7.	46-184-OPN-1				

Circulating Cooling Water System Lines or Stubs:

1.	46-30-OPN-12	2.	46-30-OPN-13	3.	46-31-OPN-22
4.	46-31-OPN-23	5.	46-31-OPN-24	6.	46-31-OPN-25
7.	46-154-OPN-11	8.	46-154-OPN-12	9.	46-154-OPN-33
10.	46-154-OPN-34	11.	46-154-OPN-35		

Evaporative Cooler Drains:

1.	46-165-OPN-3	2.	46-182-OPN-3

Water Heater Pressure Relief Valve Discharges:

1. 46-128-OPN-4	2. 46-165-OPN-2	3. 46-182-OPN-2
4. 46-187-OPN-2	5. 46-188-OPN-2	6. 46-241-OPN-2

Stubs, Electrical Conduit or Pipe:

1. 46-30-OPN-14	2. 46-30-OPN-15	3. 46-30-OPN-16
4. 46-30-OPN-17	5. 46-31-OPN-51	6. 46-154-OPN-30
7. 46-154-OPN-31	8. 46-182-OPN-4	9. 46-187-OPN-3
10. 46-188-OPN-3		

Backflow Preventer Drains:

1. 46-31-OPN-50

Potable Water System Drains:

1. 46-31-OPN-52

Recommended corrective actions are outlined in Tables 1 through 11 as well as in the above text. Corrective action should be performed as soon as practicable to minimize the chance of unpermitted discharge of pollutants.

TABLE 1: TA 46-30 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-30-OPN-1 SANITARY	1ED1	OPEN BAY AREA	101	LABEL	NO
	1FD2	RESTROOM	104	LABEL	
	1SD1	RESTROOM	104	LABEL	
	1SD2	OPEN BAY AREA	101	LABEL	
	1TL1	RESTROOM	104	LABEL	
	1UR1	RESTROOM	104	LABEL	
	1WF1	OPEN BAY AREA	101	LABEL	
46-30-OPN-2 (04A013)	1FD1	MECHANICAL ROOM	102	PLUG/DELETE	YES
	1FS1	OPEN BAY AREA	101	PLUG/DELETE	
	1FS2	OPEN BAY AREA	101	PLUG/DELETE	
	1FS3	OPEN BAY AREA	101	PLUG/DELETE	
	1FS4	OPEN BAY AREA	101	PLUG/DELETE	
	RD1	ROOF	EXT	NO CHANGE	
	RD2	ROOF	EXT	NO CHANGE	
	RD3	ROOF	EXT	NO CHANGE	
	RD4	ROOF	EXT	NO CHANGE	
	1TD1	BAY AREA TRENCH	105	PLUG/DELETE	
46-30-OPN-3	N/A	GAS VENT	106	NO CHANGE	NO
46-30-OPN-4	N/A	GAS VENT	106A	NO CHANGE	NO
46-30-OPN-5	N/A	GAS VENT	105	NO CHANGE	NO
46-30-OPN-6	N/A	GAS VENT	105	NO CHANGE	NO
46-30-OPN-7	N/A	GAS VENT	107	NO CHANGE	NO
46-30-OPN-8	N/A	GAS VENT	105	NO CHANGE	NO
46-30-OPN-9	N/A	GAS VENT	101	NO CHANGE	NO
46-30-OPN-10	N/A	GAS VENT	106	NO CHANGE	NO
46-30-OPN-11	N/A	GAS BOTTLE CONN	105	NO CHANGE	NO
46-30-OPN-12	N/A	COOLING WTR CONN	105	NO CHANGE	NO
46-30-OPN-13	N/A	COOLING WTR CONN	105	NO CHANGE	NO
46-30-OPN-14	N/A	PIPE STUB	EXT	REMOVE	NO
46-30-OPN-15	N/A	ELECT COND STUB	105	NO CHANGE	NO
46-30-OPN-16	N/A	ELECT COND STUB	105	NO CHANGE	NO
46-30-OPN-17	N/A	ELECT COND STUB	105	NO CHANGE	NO

TABLE 2: TA 46-31 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-31-OPN-1 SANITARY	1AT1	NITRIC ACID TANK	170	REMOVE/CONTAIN	NO
	1CD1	ELECT LAB	172	REMOVE	
	1FD15	RESTROOM	130	REPAIR/PLUG	
	1FD16	RESTROOM	164	REPAIR/PLUG	
	1FD17	EQUIP ROOM	166	NO CHANGE	
	1FD18	EQUIP ROOM	166	NO CHANGE	
	1LV1	RESTROOM	137	NO CHANGE	
	1LV2	RESTROOM	130	NO CHANGE	
	1LV3	RESTROOM	130	NO CHANGE	
	1LV4	RESTROOM	164	NO CHANGE	
	1SD1	ELECT LAB	168	NOT CONNECTED	
	1SD2	SHOP	170	LABEL	
	1SD3	SHOP	170	LABEL	
	1SD11	EQUIP/JANITOR	164	LABEL	
	1SD23	RESTROOM	164	NO CHANGE	
	1SD24	LABORATORY	112	LABEL	
	1SH1	RESTROOM	130	NO CHANGE	
	1SH2	RESTROOM	164	NO CHANGE	
	1TL1	RESTROOM	137	NO CHANGE	
	1TL2	RESTROOM	130	NO CHANGE	
	1TL3	RESTROOM	164	NO CHANGE	
	1UR1	RESTROOM	130	NO CHANGE	
	1UR2	RESTROOM	164	NO CHANGE	
46-31-OPN-2 DAYLIGHT	1FD2	ELECT LAB	172	PLUGGED	NO
	1FD3	SHOP	170	PLUGGED	
	1FD4	SHOP	170	PLUGGED	
	RD1	ROOF DRAIN	EXT	NO CHANGE	
	RD2	ROOF DRAIN	EXT	NO CHANGE	
46-31-OPN-3 SANITARY (PREVIOUSLY 03A043 TO DAYLIGHT)	1CD2	LABORATORY	120	REMOVE/PLUG	NO
	1CD5	LABORATORY	102C	REMOVE/PLUG	
	1EEW1	HALLWAY	107	NO CHANGE	
	1FD1	ELECT LAB	168	VERIFY/PLUG	
	1FD7	LABORATORY	140	VERIFY/PLUG	
	1FD8	LABORATORY	128	VERIFY/PLUG	
	1FD9	EQUIP ROOM	136	NO CHANGE	
	1FD10	STORAGE	126	VERIFY/PLUG	
	1FD11	LABORATORY	120	PLUG	

TABLE 2: TA 46-31 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-31-OPN-26	N/A	GAS VENT	151B	NO CHANGE	NO
46-31-OPN-27	N/A	GAS VENT	115	NO CHANGE	NO
46-31-OPN-28	N/A	GAS VENT	113A	NO CHANGE	NO
46-31-OPN-29	N/A	GAS VENT	111A	NO CHANGE	NO
46-31-OPN-30	N/A	GAS VENT	111	NO CHANGE	NO
46-31-OPN-31	N/A	GAS VENT	TANK	NO CHANGE	NO
46-31-OPN-32	N/A	GAS CONNECTION	102C	NO CHANGE	NO
46-31-OPN-33	N/A	GAS CONNECTION	102C	NO CHANGE	NO
46-31-OPN-34	N/A	GAS CONNECTION	103	NO CHANGE	NO
46-31-OPN-35	N/A	GAS CONNECTION	103	NO CHANGE	NO
46-31-OPN-36	N/A	GAS PIPE STUB	101	NO CHANGE	NO
46-31-OPN-37	N/A	GAS VENT	101	NO CHANGE	NO
46-31-OPN-38	N/A	N2 TK GAS VENT	EXT	NO CHANGE	NO
46-31-OPN-39	N/A	GAS VENT	130	NO CHANGE	NO
46-31-OPN-40	N/A	GAS VENT	130	NO CHANGE	NO
46-31-OPN-41	N/A	GAS PRV VENT	130	NO CHANGE	NO
46-31-OPN-42	N/A	VENT PIPE	166	NO CHANGE	NO
46-31-OPN-43	N/A	VENT PIPE	117	NO CHANGE	NO
46-31-OPN-44	N/A	STEAM SYS VENT	102A	NO CHANGE	NO
46-31-OPN-45	N/A	PLB SYS VENT	101	NO CHANGE	NO
46-31-OPN-46	N/A	A/C CONDENSATE	105AMZ	NOI	NO
46-31-OPN-47	N/A	A/C CONDENSATE	105AMZ	NOI	NO
46-31-OPN-48	N/A	A/C CONDENSATE	152	NOI	NO
46-31-OPN-49	N/A	COMP AIR TK PRV	EXT	NO CHANGE	NO
46-31-OPN-50	N/A	BFP DRAIN	151B	NOI	NO
46-31-OPN-51	N/A	ELEC CONDUIT STUB	168	NO CHANGE	NO
46-31-OPN-52	N/A	POTABLE WTR DR	102A	NOI	NO
46-31-OPN-53	RD3	ROOF DRAIN	EXT	NO CHANGE	NO
	RD4	ROOF DRAIN	EXT	NO CHANGE	NO
46-31-OPN-54	RD5	ROOF DRAIN	EXT	NO CHANGE	NO
46-31-OPN-55	RD7	ROOF DRAIN	EXT	NO CHANGE	NO
46-31-OPN-56	RD8	ROOF DRAIN	EXT	NO CHANGE	NO

TABLE 2: TA 46-31 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-31-OPN-3 (CON'T)	1FS1	LABORATORY	151	LABEL	NO
	1FS2	LABORATORY	151	LABEL	
	1FS3	LABORATORY	151	LABEL	
	1FS4	LABORATORY	151A	VERIFY/PLUG	
	1FS5	LABORATORY	151A	LABEL	
	1FS6	LABORATORY	135	LABEL	
	1FS7	EQUIP ROOM	136	NO CHANGE	
	1FS8	LABORATORY	127	VERIFY/PLUG	
	1FS9	LABORATORY	127	VERIFY/PLUG	
	1FS10	LABORATORY	127	VERIFY/PLUG	
	1FS11	HALLWAY	120C	VERIFY/PLUG	
	1FS12	LABORATORY	113	VERIFY/PLUG	
	1FS13	LABORATORY	111	VERIFY/PLUG	
	1FS14	LABORATORY	111	VERIFY/PLUG	
	1FS15	LABORATORY	106	VERIFY/PLUG	
	1FS16	LABORATORY	102A	LABEL	
	1SD7	LABORATORY	135	LABEL	
	1SD8	LABORATORY	140	VERIFY/LABEL	
	1SD9	LABORATORY	128	DISCONNECTED	
	1SD10	LABORATORY	128	REMOVED	
	1SD12	STORAGE	126	VERIFY/LABEL	
	1SD13	LABORATORY	122	VERIFY/LABEL	
	1SD14	LABORATORY	120	LABEL	
	1SD15	LABORATORY	118	LABEL	
	1SD16	BREAK ROOM	102	REMOVED	
	1SD19	BREAK ROOM	102	LABEL	
	1SD20	LABORATORY	102C	LABEL	
	1WF1	LABORATORY	102C	REMOVED	
	1WF2	HALLWAY	107	NO CHANGE	
	1WF3	SHOP	162	REMOVED	

TABLE 2: TA 46-31 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-31-OPN-4 SANITARY	1CD3	LABORATORY	108	REMOVE/CONTAIN	NO
	1CD4	LABORATORY	108	REMOVE/CONTAIN	
	1ED1	EQUIP ROOM	101	NO CHANGE	
	1FD12	LABORATORY	103	PLUG	
	1FD13	LABORATORY	103	PLUG	
	1FD14	EQUIP ROOM	101	NO CHANGE	
	1SD17	LABORATORY	108	LABEL	
	1SD18	LABORATORY	105	LABEL	
	1SD21	LABORATORY	103	LABEL	
	1SD22	LABORATORY	103	LABEL	
46-31-OPN-5 SEEPAGE PIT	1SD4	LASER LABORATORY	151	REMOVED	NO
	1SD5	LASER LABORATORY	151	REMOVED	
	1SD6	LASER LABORATORY	151	DISCONNECTED	
46-31-OPN-6 SEEPAGE PIT	1FS17	LASER LABORATORY	151B	VERIFY/PLUG	NO
46-31-OPN-7	1FD5	LASER LABORATORY	151B	PLUGGED	NO
46-31-OPN-8	1FD6	LASER LABORATORY	151B	PLUGGED	NO
46-31-OPN-9	ROOF	GUTTER DRAIN	EXT	NO CHANGE	NO
46-31-OPN-10	RD6	ROOF DRAIN	EXT	NO CHANGE	NO
46-31-OPN-11	N/A	FIRE SYS DRAIN	117	NOI	NO
46-31-OPN-12	N/A	FIRE SYS DRAIN	102C	NOI	NO
46-31-OPN-13	N/A	FIRE SYS DRAIN	101	NOI	NO
46-31-OPN-14	N/A	FIRE SYS DRAIN	101	NOI	NO
46-31-OPN-15	N/A	FIRE SYS DRAIN	101	NOI	NO
46-31-OPN-16	N/A	FIRE SYS DRAIN	103	NOI	NO
46-31-OPN-17	N/A	FIRE SYS DRAIN	166	NOI	NO
46-31-OPN-18	N/A	FIRE SYS DRAIN	166	NOI	NO
46-31-OPN-19	N/A	STEAM SYS VENT	N/A	NO CHANGE	NO
46-31-OPN-20	N/A	STEAM SYS VENT	170	NO CHANGE	NO
46-31-OPN-21	N/A	STEAM SYS VENT	170	NO CHANGE	NO
46-31-OPN-22	N/A	COOLING WTR SUPPLY	N/A	NO CHANGE	NO
46-31-OPN-23	N/A	COOLING WTR RETURN	N/A	NO CHANGE	NO
46-31-OPN-24	N/A	COOLING WTR SUPPLY	112A	NO CHANGE	NO
46-31-OPN-25	N/A	COOLING WTR RETURN	112A	NO CHANGE	NO

TABLE 3: TA 46-128 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-128-OPN-1 SANITARY	1LV1	RESTROOM	102	NO CHANGE	NO
	1LV2	RESTROOM	101	NO CHANGE	
	1TL1	RESTROOM	102	NO CHANGE	
	1TL2	RESTROOM	101	NO CHANGE	
	1UR1	RESTROOM	102	NO CHANGE	
	1WF1	CORRIDOR	100	NO CHANGE	
46-128-OPN-2	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-128-OPN-3	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-128-OPN-4	1WH1	RESTROOM	101	NOI	NO
46-128-OPN-5	N/A	A/C CONDENSATE	104	NOI	NO
46-128-OPN-6	N/A	A/C CONDENSATE	103	NOI	NO

TABLE 4: TA 46-154 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-154-OPN-1 SANITARY	1FD1	MECHANICAL ROOM	104	NO CHANGE	NO
	1FD2	CONFERENCE ROOM	103A	PLUGGED	
	1FD3	OFFICE	103	PLUG	
	1LV1	RESTROOM	105	NO CHANGE	
	1LV2	RESTROOM	105	NO CHANGE	
	1LV3	RESTROOM	106	NO CHANGE	
	1SD1	JANITOR CLOSET	108	LABEL	
	1SD2	LASER LAB	110	LABEL	
	1SD3	LASER LAB	111	LABEL	
	1SD4	LASER LAB	112	LABEL	
	1SD5	LASER LAB	114	LABEL	
	1SD6	LASER LAB	114	LABEL	
	1TL1	RESTROOM	105	NO CHANGE	
	1TL2	RESTROOM	105	NO CHANGE	
	1TL3	RESTROOM	106	NO CHANGE	
	1UR1	RESTROOM	105	NO CHANGE	
	1UR2	RESTROOM	105	NO CHANGE	
	1WF1	CORRIDOR	100	NO CHANGE	
	1WH1	MECHANICAL ROOM	104	NO CHANGE	

TABLE 4: TA 46-154 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	ROOM NUMBER	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
46-154-OPN-2	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-3	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-4	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-5	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-6	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-7	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-8	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-9	N/A	GUTTER DRAIN	EXT	NO CHANGE	NO
46-154-OPN-10	N/A	GUTTER DR STUB	EXT	NO CHANGE	NO
46-154-OPN-11	N/A	COOLING WTR STUB	114	NO CHANGE	NO
46-154-OPN-12	N/A	COOLING WTR STUB	114	NO CHANGE	NO
46-154-OPN-13	N/A	FIRE DRAIN	104	NOI	NO
46-154-OPN-14	N/A	FIRE DRAIN	104	NOI	NO
46-154-OPN-15	N/A	FIRE DRAIN	114	NOI	NO
46-154-OPN-16	N/A	GAS CONNECTION	112A	NO CHANGE	NO
46-154-OPN-17	N/A	GAS CONNECTION	112A	NO CHANGE	NO
46-154-OPN-18	N/A	GAS CONNECTION	112A	NO CHANGE	NO
46-154-OPN-19	N/A	GAS CONNECTION	110	NO CHANGE	NO
46-154-OPN-20	N/A	GAS CONNECTION	110	NO CHANGE	NO
46-154-OPN-21	N/A	GAS CONNECTION	110	NO CHANGE	NO
46-154-OPN-22	N/A	GAS CONNECTION	110	NO CHANGE	NO
46-154-OPN-23	N/A	GAS CONNECTION	109	NO CHANGE	NO
46-154-OPN-24	N/A	GAS CONNECTION	109	NO CHANGE	NO
46-154-OPN-25	N/A	GAS CONNECTION	109	NO CHANGE	NO
46-154-OPN-26	N/A	GAS CONNECTION	109	NO CHANGE	NO
46-154-OPN-27	N/A	GAS CONNECTION	109	NO CHANGE	NO
46-154-OPN-28	N/A	NITROGEN CONN	110A	NO CHANGE	NO
46-154-OPN-29	N/A	NITROGEN CONN	110A	NO CHANGE	NO
46-154-OPN-30	N/A	PLASTIC TUBE STUB	112B	REMOVE	NO
46-154-OPN-31	N/A	PIPE STUB	112B	NO CHANGE	NO
46-154-OPN-32	N/A	VENT STUB	N/A	NO CHANGE	NO
46-154-OPN-33	N/A	COOLING WTR DRAIN	104	NOI	NO
46-154-OPN-34	N/A	COOLING WTR CONN	104	NO CHANGE	NO
46-154-OPN-35	N/A	COOLING WTR CONN	104	NO CHANGE	NO

TABLE 12

NON DRAIN RECOMMENDATIONS

TECHNICAL AREA	BUILDING NUMBER	ROOM OR LOCATION	RECOMMENDATION
46	31	03A043	DELETE PERMIT
46	31	SEEPAGE PIT	SAMPLE FOR CONTAMINANTS AND DECOMMISSION

TABLE 13:
SUMMARY OF
ABBREVIATIONS

ABBREVIATION	MEANING
AC	Air Conditioning
AD	Area Drain
BFP	Back Flow Preventer
EC	Evaporative Cooler
FD	Floor Drain
FS	Floor Sink
IM	Ice Maker
LV	Lavatory
MH	Manhole
PRV	Pressure Relief Valve
RLW	Radioactive Liquid Waste
RD	Roof Drain
SD	Sink Drain
SH	Shower
SP	Sump Pump
SS	Sanitary Sewer
TL	Toilet
UR	Urinal
WF	Water Fountain
WH	Water Heater

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	30	46-30-OPN-01	13S/SWSC	1ED1	101	OPEN BAY AREA			NO FLOW	No	NONE
46	30	46-30-OPN-01	13S/SWSC	1FD2	104	RESTROOM			FLOW IS NIL	No	FLOOR WASHINGS
46	30	46-30-OPN-01	13S/SWSC	1SD1	104	RESTROOM			5 DAYS/WEEK	No	HAND WASHING
46	30	46-30-OPN-01	13S/SWSC	1SD2	101	OPEN BAY AREA			5 DAYS/WEEK	No	SERVICE SINK
46	30	46-30-OPN-01	13S/SWSC	1TL1	104	RESTROOM			5 DAYS/WEEK	No	TOILET
46	30	46-30-OPN-01	13S/SWSC	1UR1	104	RESTROOM			5 DAYS/WEEK	No	URINAL
46	30	46-30-OPN-01	13S/SWSC	1WF1	101	OPEN BAY AREA			5 DAYS/WEEK	No	WATER FOUNTAIN
46	30	46-30-OPN-02	04A013	1FD01	102	MECHANICAL ROOM	150	GPD	5 DAYS/WEEK	No	AIR COMPRESSOR COOLING
46	30	46-30-OPN-02	04A013	1FD01	102	MECHANICAL ROOM			FLOW IS NIL	No	BACKFLOW PREVENTER DRAIN (4)
46	30	46-30-OPN-02	04A013	1FD01	102	MECHANICAL ROOM			FLOW IS NIL	No	WATER HEATER PRV
46	30	46-30-OPN-02	04A013	1FD01	102	MECHANICAL BAY			FLOW IS NIL	No	AIR COMPRESSOR DRAIN (2)
46	30	46-30-OPN-02	04A013	1FS1	101	OPEN BAY AREA			NO FLOW	No	FULL OF DEBRIS
46	30	46-30-OPN-02	04A013	1FS2	101	OPEN BAY AREA			NO FLOW	No	FULL OF DEBRIS
46	30	46-30-OPN-02	04A013	1FS3	101	OPEN BAY AREA			NO FLOW	No	FULL OF DEBRIS
46	30	46-30-OPN-02	04A013	1FS4	101	OPEN BAY AREA			NO FLOW	No	FULL OF DEBRIS
46	30	46-30-OPN-02	04A013	1TD1	105	BAY AREA TRENCH			NO FLOW	No	NOT USED
46	30	46-30-OPN-02	04A013	RD1	N/A	ROOF			MAINLY SUMMER	Yes	STORM WATER
46	30	46-30-OPN-02	04A013	RD2	N/A	ROOF			MAINLY SUMMER	Yes	STORM WATER
46	30	46-30-OPN-02	04A013	RD3	N/A	ROOF			MAINLY SUMMER	Yes	STORM WATER
46	30	46-30-OPN-02	04A013	RD4	N/A	ROOF			MAINLY SUMMER	Yes	STORM WATER
46	30	46-30-OPN-03	ATMOSPHERE	N/A	106	EXTERIOR NORTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-04	ATMOSPHERE	N/A	106A	EXTERIOR NORTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-05	ATMOSPHERE	N/A	105	EXTERIOR NORTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-06	ATMOSPHERE	N/A	105	EXTERIOR NORTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-07	ATMOSPHERE	N/A	107	EXTERIOR SOUTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-08	ATMOSPHERE	N/A	105	EXTERIOR SOUTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-09	ATMOSPHERE	N/A	101	EXTERIOR SOUTH WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-10	ATMOSPHERE	N/A	106	EXTERIOR WEST WALL			NO FLOW	No	GAS VENT
46	30	46-30-OPN-11	DAYLIGHT	N/A	105	EXTERIOR SOUTH WALL			NO FLOW	No	GAS BOTTLE CONNECTION
46	30	46-30-OPN-12	N/A	N/A	105	EXTERIOR EAST WALL			NO DISCHARGE	No	COOLING WATER CONNECTION
46	30	46-30-OPN-13	N/A	N/A	105	EXTERIOR EAST WALL			NO DISCHARGE	No	COOLING WATER CONNECTION
46	30	46-30-OPN-14	N/A	N/A	EXT	EXTERIOR EAST WALL			NO FLOW	No	PIPE STUB
46	30	46-30-OPN-15	N/A	N/A	105	EXTERIOR NORTH WALL			NO FLOW	No	ELECTRICAL COND STUB

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	30	46-30-OPN-16	N/A	N/A	105	EXTERIOR NORTH WALL			NO FLOW	No	ELECTRICAL COND STUB
46	30	46-30-OPN-17	N/A	N/A	105	EXTERIOR NORTH WALL			NO FLOW	No	ELECTRICAL COND STUB
46	31	46-31-OPN-01	13S/SWSC	1AT1	170	NITRIC ACID TANK			AS NECESSARY	No	NITRIC ACID TANK
46	31	46-31-OPN-01	13S/SWSC	1FD15	130	RESTROOM			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-01	13S/SWSC	1FD16	164	RESTROOM			NO FLOW	No	PLUGGED WITH DEBRIS
46	31	46-31-OPN-01	13S/SWSC	1FD17	166	EQUIP ROOM			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-01	13S/SWSC	1FD18	166	EQUIP ROOM			FLOW IS NIL	No	BOILER VENT
46	31	46-31-OPN-01	13S/SWSC	1FD18	166	EQUIP ROOM			FLOW IS NIL	No	WATER HEATER PRV
46	31	46-31-OPN-01	13S/SWSC	1FD18	166	EQUIP ROOM			FLOW IS NIL	No	BOILER PRV
46	31	46-31-OPN-01	13S/SWSC	1FD18	166	EQUIP ROOM			FLOW IS NIL	No	BACKFLOW PREVENTER DRAIN (4)
46	31	46-31-OPN-01	13S/SWSC	1FD18	166	EQUIP ROOM			FLOW IS NIL	No	BOILER DRAINS (2)
46	31	46-31-OPN-01	13S/SWSC	1FD18	166	EQUIP ROOM			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-01	13S/SWSC	1LV1	137	RESTROOM			5 DAYS PER WEEK	No	LAVATORY
46	31	46-31-OPN-01	13S/SWSC	1LV2	130	RESTROOM			5 DAYS PER WEEK	No	LAVATORY
46	31	46-31-OPN-01	13S/SWSC	1LV3	130	RESTROOM			5 DAYS PER WEEK	No	LAVATORY
46	31	46-31-OPN-01	13S/SWSC	1LV4	164	RESTROOM			5 DAYS PER WEEK	No	LAVATORY
46	31	46-31-OPN-01	13S/SWSC	1SD01	168	ELECT LAB			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-01	13S/SWSC	1SD02	170	SHOP			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-01	13S/SWSC	1SD03	170	SHOP			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-01	13S/SWSC	1SD11	164	EQUIP/JANITOR CLOSET			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-01	13S/SWSC	1SD23	164	RESTROOM			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-01	13S/SWSC	1SD24	164	RESTROOM			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-01	13S/SWSC	1SH1	130	RESTROOM			5 DAYS PER WEEK	No	SHOWER
46	31	46-31-OPN-01	13S/SWSC	1SH2	164	RESTROOM			5 DAYS PER WEEK	No	SHOWER
46	31	46-31-OPN-01	13S/SWSC	1TL1	137	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	31	46-31-OPN-01	13S/SWSC	1TL2	130	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	31	46-31-OPN-01	13S/SWSC	1TL3	164	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	31	46-31-OPN-01	13S/SWSC	1UR1	130	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	31	46-31-OPN-01	13S/SWSC	1UR2	164	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	31	46-31-OPN-02	DAYLIGHT	1CD1	172	ELECTRICAL LAB			5 DAYS PER WEEK	No	LAB CUP DRAIN
46	31	46-31-OPN-02	DAYLIGHT	1FD2	172	ELECTRICAL LAB			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-02	DAYLIGHT	1FD3	170	SHOP			NO FLOW	No	PLUGGED WITH DEBRIS
46	31	46-31-OPN-02	DAYLIGHT	1FD4	170	SHOP			NO FLOW	No	PLUGGED WITH DEBRIS

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	31	46-31-OPN-02	DAYLIGHT	RD1	N/A	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	31	46-31-OPN-02	DAYLIGHT	RD2	N/A	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	31	46-31-OPN-03	13S/SWSC	1CD02	120	LABORATORY			5 DAYS PER WEEK	No	LAB CUP DRAIN
46	31	46-31-OPN-03	13S/SWSC	1CD05	102C	LABORATORY			5 DAYS PER WEEK	No	LAB CUP DRAIN
46	31	46-31-OPN-03	13S/SWSC	1EEW1	107	HALLWAY			FLOW IS NIL	No	EMERGENCY EYE WASH
46	31	46-31-OPN-03	13S/SWSC	1FD01	168	ELECTRICAL LAB			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FD07	140	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FD08	128	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FD09	136	EQUIP ROOM			5 DAYS PER WEEK	No	WATER HEATER DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FD09	136	EQUIP ROOM			5 DAYS PER WEEK	No	BOILER PRV
46	31	46-31-OPN-03	13S/SWSC	1FD09	136	EQUIP ROOM			5 DAYS PER WEEK	No	BOILER DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FD09	136	EQUIP ROOM			5 DAYS PER WEEK	No	WATER HEATER PRV
46	31	46-31-OPN-03	13S/SWSC	1FD10	126	STORAGE			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FD11	120	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS01	151	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS02	151	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS03	151	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS04	151A	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS05	151A	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS06	135	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	MAKE-UP WTR PRV
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	BOILER DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	AIR COMPRESSOR DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	COOLING WATER TK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	COOLING WATER TK OVERFLOW
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	CT METERED BLOWDOWN (1/2")
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	COOLING WTR SYSTEM DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	CHEMICAL TREATMENT DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS07	136	EQUIP ROOM			5 DAYS PER WEEK	No	BACKFLOW PREVENTER DRAIN (4)
46	31	46-31-OPN-03	13S/SWSC	1FS08	127	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS09	127	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS10	127	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS11	120c	HALLWAY			5 DAYS PER WEEK	No	FLOOR WASHINGS

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	31	46-31-OPN-03	13S/SWSC	1FS12	113	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS13	111	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS14	111	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS15	106	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHINGS
46	31	46-31-OPN-03	13S/SWSC	1FS16	102A	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1FS16	102A	LABORATORY			5 DAYS PER WEEK	No	BACKFLOW PREVENTOR DRAIN (2)
46	31	46-31-OPN-03	13S/SWSC	1SD07	135	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD08	140	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD09	128	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD10	128	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD12	126	STORAGE			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD13	122	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD14	120	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD15	118	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD16	102	BREAK ROOM			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD19	102	BREAK ROOM			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1SD20	102C	LABORATORY			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-03	13S/SWSC	1WF1	102C	LABORATORY			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	31	46-31-OPN-03	13S/SWSC	1WF2	107	HALLWAY			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	31	46-31-OPN-03	13S/SWSC	1WF3	162	SHOP			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	31	46-31-OPN-03	N/A	N/A	N/A	PERMITTED OUTFALL			NO FLOW	No	NONE (REPIPED TO S.S.)
46	31	46-31-OPN-04	13S/SWSC	1CD3	108	LABORATORY			5 DAYS PER WEEK	No	LAB CUP DRAIN
46	31	46-31-OPN-04	13S/SWSC	1CD4	108	LABORATORY			5 DAYS PER WEEK	No	LAB CUP DRAIN
46	31	46-31-OPN-04	13S/SWSC	1ED1	101	EQUIP ROOM			5 DAYS PER WEEK	No	SINK DRAIN
46	31	46-31-OPN-04	13S/SWSC	1FD12	103	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHING ONLY
46	31	46-31-OPN-04	13S/SWSC	1FD13	103	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHING ONLY
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	BACKFLOW PREVENTOR DRAIN
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	STEAM SYSTEM BLEED OFF
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	AIR HANDLER CONDENSATE
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	BOILER DRAIN
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	AIR COMPRESSOR DRAIN (3)
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	WATER SYSTEM DRAIN
46	31	46-31-OPN-04	13S/SWSC	1FD14	101	EQUIP ROOM			5 DAYS PER WEEK	No	BOILER PRV

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	31	46-31-OPN-04	13S/SWSC	1SD17	108	LABORATORY			5 DAYS PER WEEK	No	LAB SINK DRAIN
46	31	46-31-OPN-04	13S/SWSC	1SD18	105	LABORATORY			5 DAYS PER WEEK	No	LAB SINK DRAIN
46	31	46-31-OPN-04	13S/SWSC	1SD21	103	LABORATORY			5 DAYS PER WEEK	No	LAB SINK DRAIN
46	31	46-31-OPN-04	13S/SWSC	1SD22	103	LABORATORY			5 DAYS PER WEEK	No	LAB SINK DRAIN
46	31	46-31-OPN-05	SEEPAGE PIT	1SD4	151	LASER LABORATORY			5 DAYS PER WEEK	No	LAB SINK DRAIN
46	31	46-31-OPN-05	SEEPAGE PIT	1SD5	151	LASER LABORATORY			5 DAYS PER WEEK	No	LAB SINK DRAIN
46	31	46-31-OPN-05	SEEPAGE PIT	1SD6	151	LASER LABORATORY			5 DAYS PER WEEK	No	GENERAL CLEANING
46	31	46-31-OPN-06	SEEPAGE PIT	1FS17	151B	LABORATORY			NO FLOW	No	COVERED
46	31	46-31-OPN-07	N/A	1FD5	151B	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHING
46	31	46-31-OPN-08	N/A	1FD6	151B	LABORATORY			5 DAYS PER WEEK	No	FLOOR WASHING
46	31	46-31-OPN-09	DAYLIGHT		EXT	GUTTER DRAIN			MOSTLY SUMMER	No	STORM WATER
46	31	46-31-OPN-10	DAYLIGHT	RD6	EXT	ROOF			MOSTLY SUMMER	No	STORM WATER
46	31	46-31-OPN-11	DAYLIGHT	N/A	117	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-12	DAYLIGHT	N/A	102C	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-13	DAYLIGHT	N/A	101	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-14	DAYLIGHT	N/A	101	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-15	DAYLIGHT	N/A	101	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-16	DAYLIGHT	N/A	103	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-17	DAYLIGHT	N/A	166	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-18	DAYLIGHT	N/A	166	FIRE SYSTEM			FLOW IS NIL	No	FIRE SYSTEM DRAIN
46	31	46-31-OPN-19	ATMOSPHERE	N/A	N/A	STEAM VENT			FLOW IS NIL	No	STEAM VENT
46	31	46-31-OPN-20	ATMOSPHERE	N/A	170	STEAM VENT			FLOW IS NIL	No	STEAM VENT
46	31	46-31-OPN-21	ATMOSPHERE	N/A	170	STEAM VENT			FLOW IS NIL	No	STEAM VENT
46	31	46-31-OPN-22	N/A	N/A	N/A	COOLING WATER SUPPLY			NO DISCHARGE	No	COOLING WATER SUPPLY
46	31	46-31-OPN-23	N/A	N/A	N/A	COOLING WATER RETURN			NO DISCHARGE	No	COOLING WATER RETURN
46	31	46-31-OPN-24	N/A	N/A	112A	COOLING WATER SUPPLY			NO DISCHARGE	No	COOLING WATER SUPPLY
46	31	46-31-OPN-25	N/A	N/A	112A	COOLING WATER RETURN			NO DISCHARGE	No	COOLING WATER RETURN
46	31	46-31-OPN-26	ATMOSPHERE	N/A	151B	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-27	ATMOSPHERE	N/A	115	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-28	ATMOSPHERE	N/A	113A	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-29	ATMOSPHERE	N/A	111A	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-30	ATMOSPHERE	N/A	111	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-31	ATMOSPHERE	N/A	N/A	GAS VENT			NO FLOW	No	GAS VENT

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	31	46-31-OPN-32	ATMOSPHERE	N/A	102C	GAS CONNECT			NO FLOW	No	GAS CONNECT
46	31	46-31-OPN-33	ATMOSPHERE	N/A	102C	GAS CONNECT			NO FLOW	No	GAS CONNECT
46	31	46-31-OPN-34	ATMOSPHERE	N/A	103	GAS CONNECT			NO FLOW	No	GAS CONNECT
46	31	46-31-OPN-35	ATMOSPHERE	N/A	103	GAS CONNECT			NO FLOW	No	GAS CONNECT
46	31	46-31-OPN-36	N/A	N/A	101	PIPE STUB			NO FLOW	No	NONE
46	31	46-31-OPN-37	ATMOSPHERE	N/A	101	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-38	ATMOSPHERE	N/A	N/A	N2 VENT			NO FLOW	No	N2 VENT
46	31	46-31-OPN-39	ATMOSPHERE	N/A	130	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-40	ATMOSPHERE	N/A	130	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-41	ATMOSPHERE	N/A	130	GAS VENT			NO FLOW	No	GAS VENT
46	31	46-31-OPN-42	ATMOSPHERE	N/A	166	VENT			NO FLOW	No	VENT
46	31	46-31-OPN-43	ATMOSPHERE	N/A	117	VENT			NO FLOW	No	VENT
46	31	46-31-OPN-44	ATMOSPHERE	N/A	102A	STEAM VENT			FLOW IS NIL	No	STEAM VENT
46	31	46-31-OPN-45	ATMOSPHERE	N/A	101	PLUMBING VENT			NO FLOW	No	PLUMBING VENT
46	31	46-31-OPN-46	DAYLIGHT	N/A	105AMZ	A/C COND			FLOW IS NIL	No	A/C CONDENSATE
46	31	46-31-OPN-47	DAYLIGHT	N/A	105AMZ	A/C COND			FLOW IS NIL	No	A/C CONDENSATE
46	31	46-31-OPN-48	DAYLIGHT	N/A	152	A/C COND			FLOW IS NIL	No	A/C CONDENSATE
46	31	46-31-OPN-49	ATMOSPHERE	N/A	N/A	COMPRESSED AIR			FLOW IS NIL	No	COMPRESSED AIR
46	31	46-31-OPN-50	DAYLIGHT	N/A	151B	BACK FLOW PREVENTER			FLOW IS NIL	No	BACKFLOW PREVENTER
46	31	46-31-OPN-51	N/A	N/A	168	CONDUIT STUB			NO FLOW	No	NONE
46	31	46-31-OPN-52	DAYLIGHT	N/A	102A	POTABLE WATER			FLOW IS NIL	No	POTABLE WATER
46	31	46-31-OPN-53	DAYLIGHT	RD3	ROOF	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	31	46-31-OPN-53	DAYLIGHT	RD4	ROOF	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	31	46-31-OPN-54	DAYLIGHT	RD5	ROOF	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	31	46-31-OPN-55	DAYLIGHT	RD6	ROOF	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	31	46-31-OPN-56	DAYLIGHT	RD7	ROOF	ROOF			MOSTLY SUMMER	Yes	STORM WATER
46	36	46-36	ND	N/A	N/A	STORAGE			NO FLOW	No	NONE
46	74	46-74	ND	N/A	N/A	STORAGE			NO FLOW	No	NONE
46	128	46-128-OPN-1	13S/SWSC	1LV1	102	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	128	46-128-OPN-1	13S/SWSC	1LV2	101	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	128	46-128-OPN-1	13S/SWSC	1TL1	102	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	128	46-128-OPN-1	13S/SWSC	1TL2	101	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	128	46-128-OPN-1	13S/SWSC	1UR1	102	RESTROOM			5 DAYS PER WEEK	No	URINAL

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	128	46-128-OPN-1	13S/SWSC	1WF1	100	CORRIDOR			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	128	46-128-OPN-2	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	128	46-128-OPN-3	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	128	46-128-OPN-4	DAYLIGHT	1WH1	101	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	128	46-128-OPN-5	DAYLIGHT	N/A	104	CLOSET			FLOW IS NIL	No	A/C CONDENSATE
46	128	46-128-OPN-6	DAYLIGHT	N/A	103	CLOSET			FLOW IS NIL	No	A/C CONDENSATE
46	154	46-154-OPN-01	13S/SWSC	1FD1	104	MECHANICAL ROOM			FLOW IS NIL	No	AIR COMPRESSOR DRAIN (2)
46	154	46-154-OPN-01	13S/SWSC	1FD1	104	MECHANICAL ROOM			FLOW IS NIL	No	BACKFLOW PREVENTOR DRAIN (4)
46	154	46-154-OPN-01	13S/SWSC	1FD1	104	MECHANICAL ROOM			FLOW IS NIL	No	WATER HEATER PRV
46	154	46-154-OPN-01	13S/SWSC	1FD2	103A	CONFERENCE ROOM			NO FLOW	No	FLOOR DRAIN UNDER CARPET
46	154	46-154-OPN-01	13S/SWSC	1FD3	103	OFFICE			FLOW IS NIL	No	FLOOR WASHINGS
46	154	46-154-OPN-01	13S/SWSC	1LV1	105	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	154	46-154-OPN-01	13S/SWSC	1LV2	105	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	154	46-154-OPN-01	13S/SWSC	1LV3	106	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	154	46-154-OPN-01	13S/SWSC	1SD1	108	JANITOR CLOSET			5 DAYS PER WEEK	No	SERVICE SINK
46	154	46-154-OPN-01	13S/SWSC	1SD2	110	LASER LAB			5 DAYS PER WEEK	No	SERVICE SINK
46	154	46-154-OPN-01	13S/SWSC	1SD3	111	LASER LAB			5 DAYS PER WEEK	No	SERVICE SINK
46	154	46-154-OPN-01	13S/SWSC	1SD4	112	LASER LAB			5 DAYS PER WEEK	No	SERVICE SINK
46	154	46-154-OPN-01	13S/SWSC	1SD5	114	LASER LAB			5 DAYS PER WEEK	No	SERVICE SINK
46	154	46-154-OPN-01	13S/SWSC	1SD6	114	LASER LAB			5 DAYS PER WEEK	No	SERVICE SINK
46	154	46-154-OPN-01	13S/SWSC	1TL1	105	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	154	46-154-OPN-01	13S/SWSC	1TL2	105	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	154	46-154-OPN-01	13S/SWSC	1TL3	106	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	154	46-154-OPN-01	13S/SWSC	1UR1	105	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	154	46-154-OPN-01	13S/SWSC	1UR2	105	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	154	46-154-OPN-01	13S/SWSC	1WF1	100	CORRIDOR			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	154	46-154-OPN-01	13S/SWSC	1WH1	104	MECHANICAL ROOM			FLOW IS NIL	No	WATER HEATER PRV
46	154	46-154-OPN-02	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-03	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-04	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-05	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-06	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-07	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	154	46-154-OPN-08	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-09	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-10	DAYLIGHT	N/A	ROOF	GUTTER DRAIN			MAINLY SUMMER	Yes	STORM WATER
46	154	46-154-OPN-11	N/A	N/A	114	EXTERIOR SOUTH WALL			NO FLOW	No	GUTTER DRAIN STUB
46	154	46-154-OPN-12	N/A	N/A	114	EXTERIOR SOUTH WALL			NO FLOW	No	COOLING WATER STUB
46	154	46-154-OPN-13	N/A	N/A	104	EXTERIOR NORTH WALL			NO FLOW	No	COOLING WATER STUB
46	154	46-154-OPN-14	DAYLIGHT	N/A	104	EXTERIOR NORTH WALL			FLOW IS NIL	No	FIRE DRAIN
46	154	46-154-OPN-15	DAYLIGHT	N/A	114	EXTERIOR WEST WALL			FLOW IS NIL	No	FIRE DRAIN
46	154	46-154-OPN-16	DAYLIGHT	N/A	112A	EXTERIOR SOUTH WALL			FLOW IS NIL	No	FIRE DRAIN
46	154	46-154-OPN-17	ATMOSPHERE	N/A	112A	EXTERIOR SOUTH WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-18	ATMOSPHERE	N/A	112A	EXTERIOR SOUTH WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-19	ATMOSPHERE	N/A	110	EXTERIOR SOUTH WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-20	ATMOSPHERE	N/A	110	EXTERIOR SOUTH WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-21	ATMOSPHERE	N/A	110	EXTERIOR SOUTH WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-22	ATMOSPHERE	N/A	110	EXTERIOR SOUTH WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-23	ATMOSPHERE	N/A	109	EXTERIOR EAST WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-24	ATMOSPHERE	N/A	109	EXTERIOR EAST WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-25	ATMOSPHERE	N/A	109	EXTERIOR EAST WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-26	ATMOSPHERE	N/A	109	EXTERIOR EAST WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-27	ATMOSPHERE	N/A	109	EXTERIOR EAST WALL			NO FLOW	No	GAS CONNECTION
46	154	46-154-OPN-28	ATMOSPHERE	N/A	110A	EXTERIOR SOUTH WALL			NO FLOW	No	NITROGEN CONNECTION
46	154	46-154-OPN-29	ATMOSPHERE	N/A	110A	EXTERIOR SOUTH WALL			NO FLOW	No	NITROGEN CONNECTION
46	154	46-154-OPN-30	N/A	N/A	112B	EXTERIOR SOUTH WALL			NO FLOW	No	PLASTIC TUBE
46	154	46-154-OPN-31	N/A	N/A	112B	EXTERIOR SOUTH WALL			NO FLOW	No	PIPE STUB
46	154	46-154-OPN-32	N/A	N/A	N/A	EXTERIOR WEST WALL			NO FLOW	No	VENT STUB
46	154	46-154-OPN-33	DAYLIGHT	N/A	104	EXTERIOR NORTH WALL			NO FLOW	No	COOLING WATER CONNECTION
46	154	46-154-OPN-34	N/A	N/A	104	EXTERIOR NORTH WALL			NO FLOW	No	COOLING WATER CONNECTION
46	154	46-154-OPN-35	N/A	N/A	104	EXTERIOR NORTH WALL			NO FLOW	No	COOLING WATER CONNECTION
46	165	46-165-OPN-1	13S/SWSC	1LV1	109	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	165	46-165-OPN-1	13S/SWSC	1LV2	107	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	165	46-165-OPN-1	13S/SWSC	1SD1	100B	JANITOR CLOSET			5 DAYS PER WEEK	No	SERVICE SINK
46	165	46-165-OPN-1	13S/SWSC	1SD2	100A	KITCHEN			5 DAYS PER WEEK	No	DISH WASHING
46	165	46-165-OPN-1	13S/SWSC	1SH1	107	RESTROOM			5 DAYS PER WEEK	No	SHOWER

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TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	165	46-165-OPN-1	13S/SWSC	1TL1	109	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	165	46-165-OPN-1	13S/SWSC	1TL2	107	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	165	46-165-OPN-1	13S/SWSC	1UR1	107	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	165	46-165-OPN-1	13S/SWSC	1WF1	100A	CORRIDOR			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	165	46-165-OPN-2	DAYLIGHT	1WH1	109	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	165	46-165-OPN-3	DAYLIGHT	N/A		ON BUILDING ROOF			FLOW IS NIL	No	EVAPORATIVE COOLER DRAIN
46	182	46-182-OPN-1	13S/SWSC	1LV1	101	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	182	46-182-OPN-1	13S/SWSC	1LV2	103	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	182	46-182-OPN-1	13S/SWSC	1TL1	101	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	182	46-182-OPN-1	13S/SWSC	1TL2	103	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	182	46-182-OPN-1	13S/SWSC	1UR1	101	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	182	46-182-OPN-1	13S/SWSC	1WF1	100	CORRIDOR			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	182	46-182-OPN-2	DAYLIGHT	1WH1	101	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	182	46-182-OPN-2	DAYLIGHT	1WH2	103	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	182	46-182-OPN-3	DAYLIGHT	N/A		ON BUILDING ROOF			FLOW IS NIL	No	EVAPORATIVE COOLER DRAIN
46	182	46-182-OPN-4	N/A	N/A	N/A	EXTERIOR WEST WALL			NO FLOW	No	CONDUIT STUB
46	183	46-183-OPN-1	DAYLIGHT	N/A		EXTERIOR NORTH SIDE			FLOW IS NIL	No	AIR CONDITIONER CONDENSATE
46	184	46-184-OPN-1	DAYLIGHT	N/A		EXTERIOR SOUTH SIDE			FLOW IS NIL	No	AIR CONDITIONER CONDENSATE
46	187	46-187-OPN-1	13S/SWSC	1LV1	101	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	187	46-187-OPN-1	13S/SWSC	1LV2	103	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	187	46-187-OPN-1	13S/SWSC	1TL1	101	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	187	46-187-OPN-1	13S/SWSC	1TL2	103	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	187	46-187-OPN-1	13S/SWSC	1UR1	101	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	187	46-187-OPN-1	13S/SWSC	1WF1	100	CORRIDOR			5 DAYS PER WEEK	No	WATER FOUNTAIN
46	187	46-187-OPN-2	DAYLIGHT	1WH1	101	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	187	46-187-OPN-2	DAYLIGHT	1WH2	103	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	187	46-187-OPN-3	N/A	N/A	N/A	EXTERIOR NORTH WALL			NO FLOW	No	CONDUIT STUB
46	188	46-188-OPN-1	13S/SWSC	1LV1	101	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	188	46-188-OPN-1	13S/SWSC	1LV2	103	RESTROOM			5 DAYS PER WEEK	No	HAND WASHING
46	188	46-188-OPN-1	13S/SWSC	1TL1	101	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	188	46-188-OPN-1	13S/SWSC	1TL2	103	RESTROOM			5 DAYS PER WEEK	No	TOILET
46	188	46-188-OPN-1	13S/SWSC	1UR1	101	RESTROOM			5 DAYS PER WEEK	No	URINAL
46	188	46-188-OPN-1	13S/SWSC	1WF1	100	CORRIDOR			5 DAYS PER WEEK	No	WATER FOUNTAIN

REPORT # 67

TA	BLDG	OUTLET PIPING NO	EPA OUTFALL #	DRAIN #	ROOM #	ROOM DESCRIPTION	FLOW RATE		PERIODICITY	SEASONAL	SOURCE TYPES
46	188	46-188-OPN-2	DAYLIGHT	1WH1	101	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	188	46-188-OPN-2	DAYLIGHT	1WH2	103	RESTROOM			FLOW IS NIL	No	WATER HEATER PRV
46	188	46-188-OPN-3	N/A	N/A	N/A	EXTERIOR NORTH WALL			NO FLOW	No	CONDUIT STUB
46	189	46-189	ND	N/A	N/A	OFFICE			NO FLOW	No	NONE
46	240	46-240	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	241	46-241-OPN-1	13S/SWSC	1LV1	N/A	RESTROOM			NO FLOW	No	HAND WASHING
46	241	46-241-OPN-1	13S/SWSC	1TL1	N/A	RESTROOM			NO FLOW	No	TOILET
46	241	46-241-OPN-2	N/A	1WH1	N/A	CLOSET			NO FLOW	No	WATER HEATER PRV
46	242	46-242	ND	N/A	N/A	OFFICE			NO FLOW	No	NONE
46	255	46-255	ND	N/A	N/A	STORAGE			NO FLOW	No	NONE
46	263	46-263	ND	N/A	N/A	STORAGE			NO FLOW	No	NONE
46	274	46-274	ND	N/A	N/A	STORAGE			NO FLOW	No	NONE
46	276	46-276	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	277	46-277	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	278	46-278	N/A	N/A	N/A	TRANSPORTAINER			NO FLOW	No	REMOVED FROM SITE
46	279	46-279	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	282	46-282	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	283	46-283	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	285	46-285	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	293	46-293	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	294	46-294	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	303	46-303	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	306	46-306	ND	N/A	N/A	STORAGE			NO FLOW	No	NONE
46	311	46-311	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	321	46-321	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	322	46-322	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	323	46-323	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	324	46-324	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	325	46-325	ND	N/A	N/A	OFFICE			NO FLOW	No	NONE
46	358	46-358	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	359	46-359	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	393	46-393	ND	N/A	N/A	TRANSPORTAINER			NO FLOW	No	NONE
46	397	46-397	ND	N/A	N/A	OFFICE			NO FLOW	No	NONE

Please print or type in the unshaded areas only.

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FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
04A013	35	51	15.8	106	19	19.6	Tributary to Canada del Buey, an ephemeral tributary to the Rio Grande

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
04A013	46-30-OPN-2 Non-contact cooling water	150 GPD	None		
	Floor sinks (4)	No flow	None		
	Trench drain	No flow	None		
	Roof drains (4)	Storm water	None		

OFFICIAL USE ONLY *(effluent guidelines sub-categories)*

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ YES *(complete the following table)* ☐ NO *(go to Section III)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(s) CONTRIBUTING FLOW *(list)*	3. FREQUENCY a. DAYS PER WEEK *(specify average)*	3. FREQUENCY b. MONTHS PER YEAR *(specify average)*	4. FLOW a. FLOW RATE *(in mgd)* 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE *(in mgd)* 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME *(specify with units)* 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME *(specify with units)* 2. MAXIMUM DAILY	4. FLOW c. DURATION *(in days)*
04A013	Air Compressor non-contact cooling water	5	12	.000150	.000150	150	150	260

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES *(complete Item III-B)* ☒ NO *(to to Section IV)*

B. Are the limitations in the applicable effluent guideline expressed in terms of production *(or other measure of operation)*?

☐ YES *(complete Item III-C)* ☐ NO *(go to Section IV)*

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	2. AFFECTED OUTFALLS *(list outfall numbers)*

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES *(complete the following table)* ☐ NO *(go to Item IV-B)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED
EPA Docket No. VI-92-1306		All	Complete Waste Stream Characterization surveys and implement corrective actions.	7/31/93	FY96

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharges)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONTINUE ON PAGE 3

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V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding — Complete one set of tables for each outfall — Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
see attached 04A datasheet			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES *(list all such pollutants below)* ☒ NO *(go to Item VI-B)*

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES *(identify the test(s) and describe their purposes below)* ☒ NO *(go to Section VIII)*

See attached datasheet and line drawing

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☐ YES *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☒ NO *(go to Section IX)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code & no.)*	D. POLLUTANTS ANALYZED *(list)*

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE *(type or print)*	B. PHONE NO. *(area code & no.)*
JERRY L. BELLOWS, AREA MANAGER, DOE	505-667-5105
ALLEN J. TIEDMAN, ASSOC. DIRECTOR FOR OPERATIONS	505-667-9390
C. SIGNATURE	D. DATE SIGNED

Data from worst case composite.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: NM0890010515

Form Approved. OMB No. 2040-0086 Approval expires 7-31-88

OUTFALL NO. 04A013

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS *(specify if blank)* a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(BOD)*	< 2.0	< 1.1						mg/l	g/d			
b. Chemical Oxygen Demand *(COD)*	< 10.0	< 5.7						mg/l	g/d			
c. Total Organic Carbon *(TOC)*	0.6	0.3						mg/l	g/d			
d. Total Suspended Solids *(TSS)*	18.0	10.2						mg/l	g/d			
e. Ammonia *(as N)*	< 0.1	< 56.775						mg/l	g/d			
f. Flow	VALUE 150		VALUE		VALUE			gal/day		VALUE		
g. Temperature *(winter)*	VALUE 13.9		VALUE		VALUE			°C		VALUE		
h. Temperature *(summer)*	VALUE N/A		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 8.45	MAXIMUM 8.80	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE *(if available)* (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE *(if available)* (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE *(optional)* a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	< 0.5	< 0.3						mg/l	g/d			
b. Chlorine, Total Residual	X		0.05	0.0						mg/l	mg/d			
c. Color	X		7.0							units				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.21	0.1						mg/l	g/d			
f. Nitrate-Nitrite *(as N)*	X		0.304	0.2						mg/l	g/d			

CONTINUE ON REVERSE

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. ACHIEVED PRESENT	2. MARK 'X' b. ACHIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. LONG TERM AVERAGE VALUE (2) MASS	5. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)		X	< 0.5	< 0.3						mg/l	g/d			
h. Oil and Grease		X	< 1.05	< 0.6						mg/l	g/d			
i. Phosphorus (as P), Total (7723-14-0)	X		0.05	28.4						mg/l	mg/d			
j. Radioactivity														
(1) Alpha, Total	X		0.1	56.8						pCi/l	pCi/d			
(2) Beta, Total	X		6.6	3.7						pCi/l	nCi/d			
(3) Radium, Total	X													
(4) Radium 226, Total	X		0.06	34.1						pCi/l	pCi/d			
k. Sulfate (as SO_4) (14808-79-8)	X		3.16	1.8						mg/l	g/d			
l. Sulfide (as S)		X		0.0						mg/l	mg/d			
m. Sulfite (as SO_3) (14265-45-3)		X	< 0.05	< 28.4						mg/l	mg/d			
n. Surfactants		X	< 0.1	< 56.8						mg/l	mg/d			
o. Aluminum, Total (7429-90-5)		X	< 0.04	< 22.7						mg/l	mg/d			
p. Barium, Total (7440-39-3)	X		0.03	17.0						mg/l	mg/d			
q. Boron, Total (7440-42-8)	X		0.02	11.4						mg/l	mg/d			
r. Cobalt, Total (7440-48-4)		X	< 0.1	< 56.8						mg/l	mg/d			
s. Iron, Total (7439-89-6)	X		0.41	0.2						mg/l	g/d			
t. Magnesium, Total (7439-95-4)	X		2.5	1.4						mg/l	g/d			
u. Molybdenum, Total (7439-98-7)		X	< 0.02	< 11.4						mg/l	mg/d			
v. Manganese, Total (7439-96-5)	X		0.01	5.7						mg/l	mg/d			
w. Tin, Total (7440-31-5)		X	< 0.050	< 28.4						mg/l	mg/d			
x. Titanium, Total (7440-32-6)		X	< 0.004	< 2.3						mg/l	mg/d			

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
NM0890010515	04A013

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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	< 0.050	< 28.4						mg/l	mg/d			
2M. Arsenic, Total (7440-38-2)		X		0.002	1.1						mg/l	mg/d			
3M. Beryllium, Total, 7440-41-7)			X	< 0.001	< 0.6						mg/l	mg/d			
4M. Cadmium, Total (7440-43-9)			X	< 0.010	< 5.7						mg/l	mg/d			
5M. Chromium, Total (7440-47-3)		X		0.040	22.7						mg/l	mg/d			
6M. Copper, Total (7440-50-8)		X		0.031	17.6						mg/l	mg/d			
7M. Lead, Total (7439-92-1)			X	< 0.050	< 28.4						mg/l	mg/d			
8M. Mercury, Total (7439-97-6)			X	< 0.0002	< 0.1						mg/l	mg/d			
9M. Nickel, Total (7440-02-0)		X		0.06	34.1						mg/l	mg/d			
10M. Selenium, Total (7782-49-2)			X	< 0.001	< 0.6						mg/l	mg/d			
11M. Silver, Total (7440-22-4)			X	< 0.010	< 5.7						mg/l	mg/d			
12M. Thallium, Total (7440-28-0)			X	< 0.4	< 0.2						mg/l	g/d			
13M. Zinc, Total (7440-66-6)		X		0.043	24.4						mg/l	mg/d			
14M. Cyanide, Total (57-12-5)			X	0.01	5.7						mg/l	mg/d			
15M. Phenols, Total			X	< 0.01	< 5.7						mg/l	mg/d			
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)			X	< 0.005	< 2.8						mg/l	mg/d			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	< 0.005	< 2.8						mg/l	mg/d			
24V. Tetrachloroethylene (127-18-4)			X	< 0.005	< 2.8						mg/l	mg/d			
25V. Toluene (108-88-3)			X	< 0.005	< 2.8						mg/l	mg/d			
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	< 0.005	< 2.8						mg/l	mg/d			
27V. 1,1,1-Trichloroethane (71-55-6)			X	< 0.005	< 2.8						mg/l	mg/d			
28V. 1,1,2-Trichloroethane (79-00-5)			X	< 0.005	< 2.8						mg/l	mg/d			
29V. Trichloroethylene (79-01-6)			X	< 0.005	< 2.8						mg/l	mg/d			
30V. Trichlorofluoromethane (75-69-4)			X	< 0.005	< 2.8						mg/l	mg/d			
31V. Vinyl Chloride (75-01-4)			X	< 0.010	< 5.7						mg/l	mg/d			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	< 0.010	< 5.7						mg/l	mg/d			
2A. 2,4-Dichlorophenol (120-83-2)			X	< 0.010	< 5.7						mg/l	mg/d			
3A. 2,4-Dimethylphenol (105-67-9)			X	< 0.010	< 5.7						mg/l	mg/d			
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	< 0.010	< 5.7						mg/l	mg/d			
5A. 2,4-Dinitrophenol (51-28-5)			X	< 0.010	< 5.7						mg/l	mg/d			
6A. 2-Nitrophenol (88-75-5)			X	< 0.010	< 5.7						mg/l	mg/d			
7A. 4-Nitrophenol (100-02-7)			X	< 0.010	< 5.7						mg/l	mg/d			
8A. P-Chloro-M-Cresol (59-50-7)			X	< 0.010	< 5.7						mg/l	mg/d			
9A. Pentachlorophenol (87-86-5)			X	< 0.010	< 5.7						mg/l	mg/d			
10A. Phenol (108-95-2)			X	< 0.010	< 5.7						mg/l	mg/d			
11A. 2,4,6-Trichlorophenol (88-06-2)			X	< 0.010	< 5.7						mg/l	mg/d			

CONTINUE ON REVERSE

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	< 0.010	< 5.7						mg/l	mg/d			
2B. Acenaphtylene (208-96-8)			X	< 0.010	< 5.7						mg/l	mg/d			
3B. Anthracene (120-12-7)			X	< 0.010	< 5.7						mg/l	mg/d			
4B. Benzidine (92-87-5)			X	< 0.010	< 5.7						mg/l	mg/d			
5B. Benzo *(a)* Anthracene (56-55-3)			X	< 0.010	< 5.7						mg/l	mg/d			
6B. Benzo *(a)* Pyrene (50-32-8)			X	< 0.010	< 5.7						mg/l	mg/d			
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	< 0.010	< 5.7						mg/l	mg/d			
8B. Benzo *(ghi)* Perylene (191-24-2)			X	< 0.010	< 5.7						mg/l	mg/d			
9B. Benzo *(k)* Fluoranthene (207-08-9)			X	< 0.010	< 5.7						mg/l	mg/d			
10B. Bis *(2-Chloro-ethoxy)* Methane (111-91-1)			X	< 0.010	< 5.7						mg/l	mg/d			
11B. Bis *(2-Chloro-ethyl)* Ether (111-44-4)			X	< 0.010	< 5.7						mg/l	mg/d			
12B. Bis *(2-Chloroiso-propyl)* Ether (102-60-1)			X	< 0.010	< 5.7						mg/l	mg/d			
13B. Bis *(2-Ethyl-hexyl)* Phthalate (117-81-7)			X	< 0.010	< 5.7						mg/l	mg/d			
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)			X	< 0.010	< 5.7						mg/l	mg/d			
15B. Butyl Benzyl Phthalate (85-68-7)			X	< 0.010	< 5.7						mg/l	mg/d			
16B. 2-Chloro-naphthalene (91-58-7)			X	< 0.010	< 5.7						mg/l	mg/d			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	< 0.010	< 5.7						mg/l	mg/d			
18B. Chrysene (218-01-9)			X	< 0.010	< 5.7						mg/l	mg/d			
19B. Dibenzo *(a,h)* Anthracene (53-70-3)			X	< 0.010	< 5.7						mg/l	mg/d			
20B. 1,2-Dichloro-benzene (95-50-1)			X	< 0.010	< 5.7						mg/l	mg/d			
21B. 1,3-Dichloro-benzene (541-73-1)			X	< 0.010	< 5.7						mg/l	mg/d			

CONTINUE ON PAGE V-7

[redacted] [redacted] [redacted] [redacted] [redacted] [redacted] EPA I.[redacted]MBER[redacted] from[redacted] of F[redacted] | OUT[redacted] NUM[redacted] [redacted] [redacted] Form Approved. O[redacted]2040-[redacted] Approval expires 7-31-88 [redacted]

NM0890010515 | 04A013

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)			X	< 0.010	< 5.7						mg/l	mg/d			
23B. 3,3'-Dichlorobenzidine (91-94-1)			X	< 0.010	< 5.7						mg/l	mg/d			
24B. Diethyl Phthalate (84-66-2)			X	< 0.010	< 5.7						mg/l	mg/d			
25B. Dimethyl Phthalate (131-11-3)			X	< 0.010	< 5.7						mg/l	mg/d			
26B. Di-N-Butyl Phthalate (84-74-2)			X	< 0.010	< 5.7						mg/l	mg/d			
27B. 2,4-Dinitrotoluene (121-14-2)			X	< 0.010	< 5.7						mg/l	mg/d			
28B. 2,6-Dinitrotoluene (606-20-2)			X	< 0.010	< 5.7						mg/l	mg/d			
29B. Di-N-Octyl Phthalate (117-84-0)			X	< 0.010	< 5.7						mg/l	mg/d			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X	< 0.010	< 5.7						mg/l	mg/d			
31B. Fluoranthene (206-44-0)			X	< 0.010	< 5.7						mg/l	mg/d			
32B. Fluorene (86-73-7)			X	< 0.010	< 5.7						mg/l	mg/d			
33B. Hexachlorobenzene (118-74-1)			X	< 0.010	< 5.7						mg/l	mg/d			
34B. Hexachlorobutadiene (87-68-3)			X	< 0.010	< 5.7						mg/l	mg/d			
35B. Hexachlorocyclopentadiene (77-47-4)			X	< 0.010	< 5.7						mg/l	mg/d			
36B. Hexachloroethane (67-72-1)			X	< 0.010	< 5.7						mg/l	mg/d			
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X	< 0.010	< 5.7						mg/l	mg/d			
38B. Isophorone (78-59-1)			X	< 0.010	< 5.7						mg/l	mg/d			
39B. Naphthalene (91-20-3)			X	< 0.010	< 5.7						mg/l	mg/d			
40B. Nitrobenzene (98-95-3)			X	< 0.010	< 5.7						mg/l	mg/d			
41B. N-Nitrosodimethylamine (62-75-9)			X	< 0.010	< 5.7						mg/l	mg/d			
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	< 0.010	< 5.7						mg/l	mg/d			

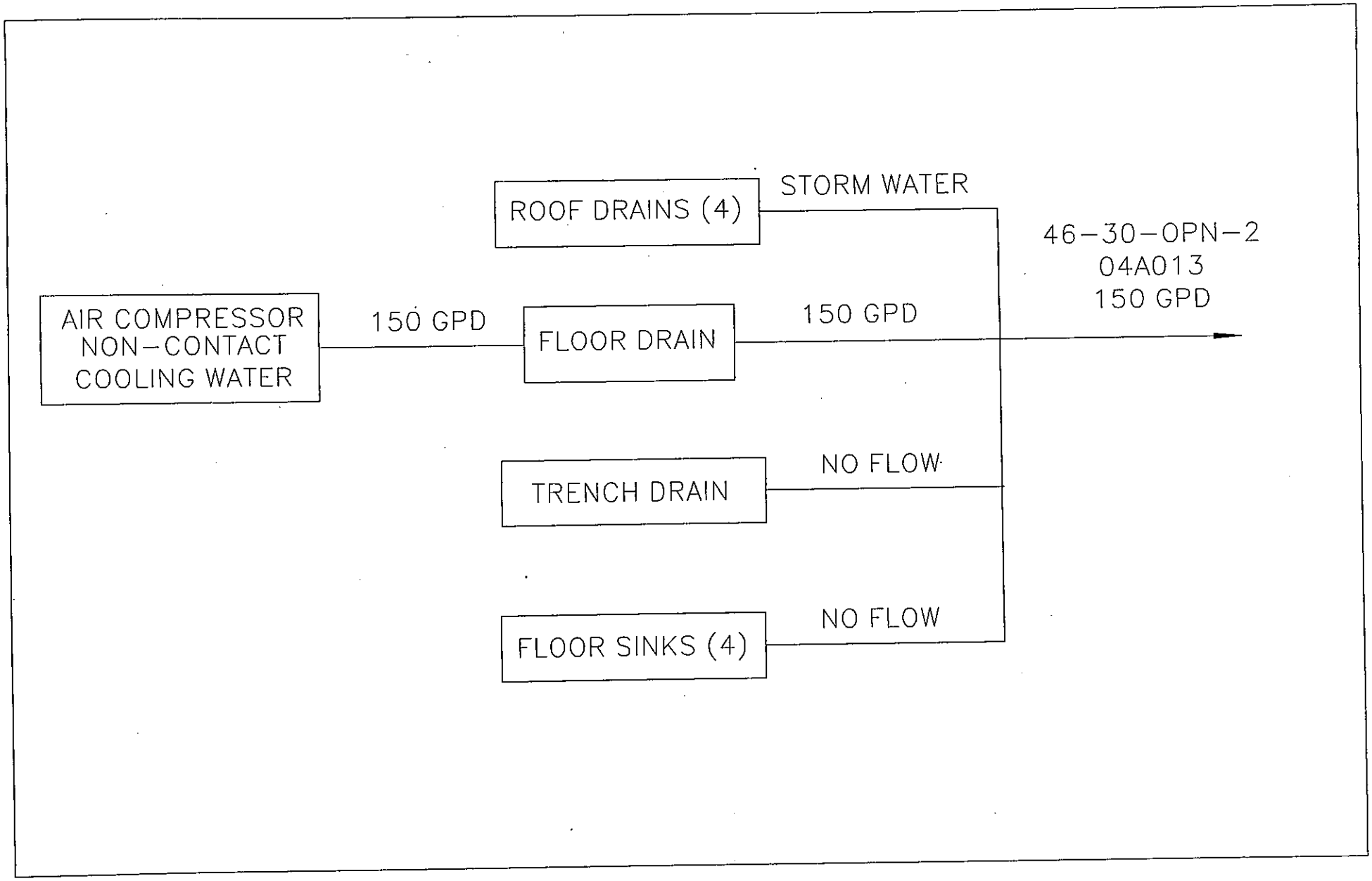
CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)			X	< 0.010	< 5.7						mg/l	mg/d			
44B. Phenanthrene (85-01-8)			X	< 0.010	< 5.7						mg/l	mg/d			
45B. Pyrene (129-00-0)			X	< 0.010	< 5.7						mg/l	mg/d			
46B. 1,2,4-Trichlorobenzene (120-82-1)			X	< 0.010	< 5.7						mg/l	mg/d			
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	< 0.06	< 34.1						ug/l	ug/d			
2P. α-BHC (319-84-6)			X	< 0.02	< 11.4						ug/l	ug/d			
3P. β-BHC (319-85-7)			X	< 0.1	< 56.8						ug/l	ug/d			
4P. γ-BHC (58-89-9)			X	< 0.03	< 17.0						ug/l	ug/d			
5P. δ-BHC (319-86-8)			X	< 0.12	< 68.1						ug/l	ug/d			
6P. Chlordane (57-74-9)			X	< 0.25	< 0.1						ug/l	ug/d			
7P. 4,4'-DDT (50-29-3)			X	< 0.06	< 34.1						ug/l	ug/d			
8P. 4,4'-DDE (72-55-9)			X	< 0.08	< 45.4						ug/l	ug/d			
9P. 4,4'-DDD (72-54-8)			X	< 0.08	< 45.4						ug/l	ug/d			
10P. Dieldrin (60-57-1)			X	< 0.08	< 45.4						ug/l	ug/d			
11P. α-Endosulfan (115-29-7)			X	< 0.05	< 28.4						ug/l	ug/d			
12P. β-Endosulfan (115-29-7)			X	< 0.08	< 45.4						ug/l	ug/d			
13P. Endosulfan Sulfate (1031-07-8)			X	< 0.09	< 51.1						ug/l	ug/d			
14P. Endrin (72-20-8)			X	< 0.06	< 34.1						ug/l	ug/d			
15P. Endrin Aldehyde (7421-93-4)			X	< 0.62	< 0.4						ug/l	ug/d			
16P. Heptachlor (76-44-8)			X	< 0.3	< 0.2						ug/l	mg/d			

CONTINUE ON PAGE V-9

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – PESTICIDES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)			X	< 0.04	< 22.7						ug/l	ug/d			
18P. PCB-1242 (53469-21-9)			X	< 0.68	< 0.4						ug/l	ug/d			
19P. PCB-1254 (11097-69-1)			X	< 0.68	< 0.4						ug/l	ug/d			
20P. PCB-1221 (11104-28-2)			X	N.D.											
21P. PCB-1232 (11141-16-5)			X	N.D.											
22P. PCB-1248 (12672-29-6)			X	N.D.											
23P. PCB-1260 (11096-82-5)			X	< 0.68	< 0.4						ug/l	ug/d			
24P. PCB-1016 (12674-11-2)			X	N.D.											
25P. Toxaphene (8001-35-2)			X	< 2.5	< 1.4						ug/l	mg/d			

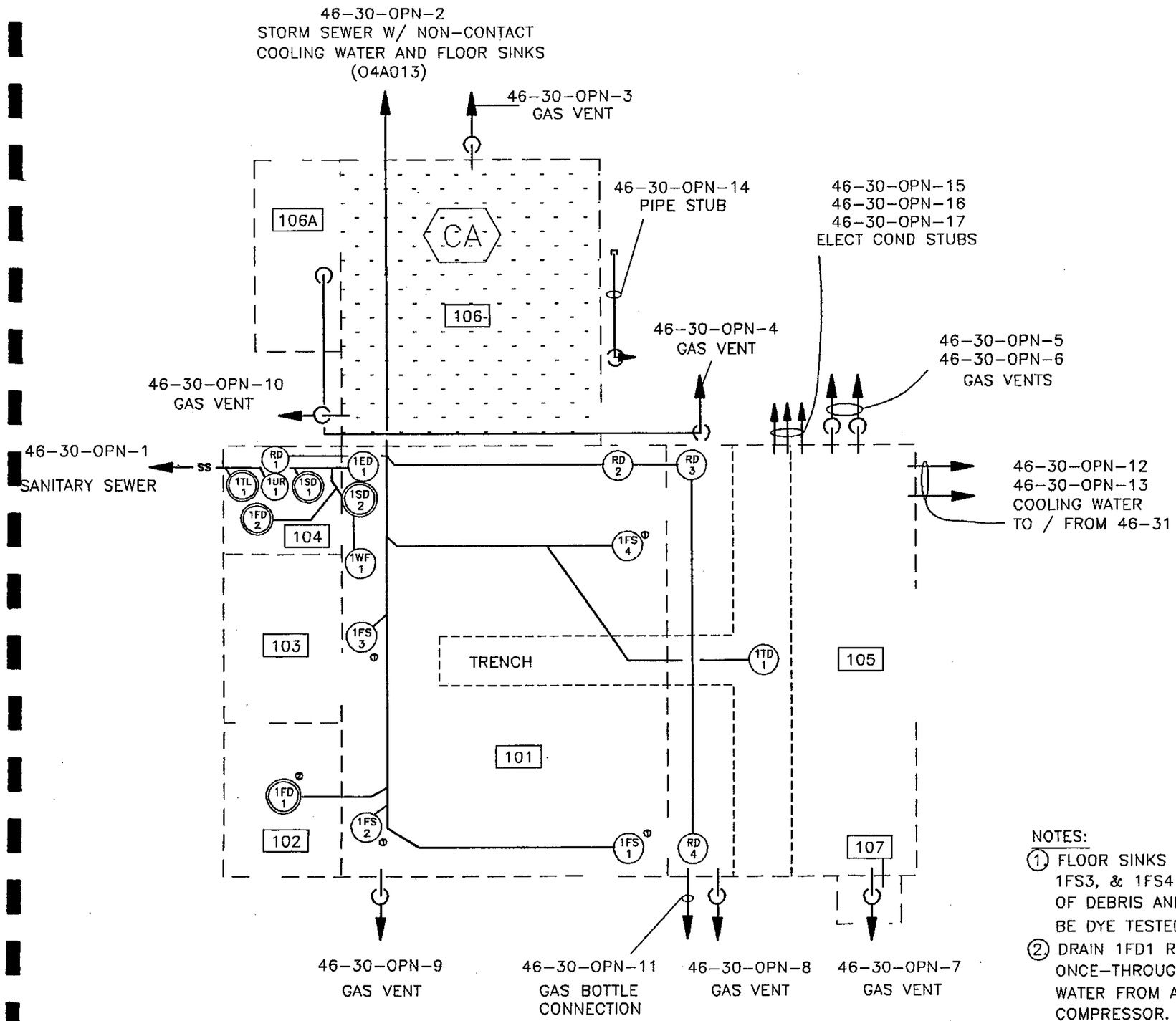

ROOF DRAINS (4)
STORM WATER
46-30-OPN-2
04A013
150 GPD
AIR COMPRESSOR
NON-CONTACT
COOLING WATER
150 GPD
FLOOR DRAIN
150 GPD
TRENCH DRAIN
NO FLOW
FLOOR SINKS (4)
NO FLOW

DYE STUDY INFORMATION

BUILDING NUMBER	DRAIN NUMBER	DID DYE REACH EXPECTED DESTINATION?	COMMENTS
46-30	1FD1	YES	OPN-2 (04A013)
	1FD2	YES	OPN-1 (SANITARY)
	1SD1	YES	OPN-1 (SANITARY)
	1SD2	YES	OPN-1 (SANITARY)
	1TL1	YES	OPN-1 (SANITARY)
46-31	1LV2	YES	OPN-1 (SANITARY)
	1SD11	YES	OPN-1 (SANITARY)
	1SD23	YES	OPN-1 (SANITARY)
	1TL1	YES	OPN-1 (SANITARY)
	1TL2	YES	OPN-1 (SANITARY)
	1TL3	YES	OPN-1 (SANITARY)
	1AT1	VISUAL PIPING	OPN-1 (SANITARY)
	1FD17	YES	OPN-1 (SANITARY)
	1SD2	YES	OPN-1 (SANITARY)
	1FS2	YES	OPN-3 (SANITARY)
	1FS6	YES	OPN-3 (SANITARY)
	1FS7	YES	OPN-3 (SANITARY)
	1FS16	YES	OPN-3 (SANITARY)
	1SD7	YES	OPN-3 (SANITARY)
	1SD14	YES	OPN-3 (SANITARY)
	1SD15	YES	OPN-3 (SANITARY)
	1SD16	YES	OPN-3 (SANITARY)
	1SD19	YES	OPN-3 (SANITARY)
	1SD20	YES	OPN-3 (SANITARY)
	1FD14	YES	OPN-4 (SANITARY)
	1SD17	YES	OPN-4 (SANITARY)
	1SD18	YES	OPN-4 (SANITARY)
	1SD22	YES	OPN-4 (SANITARY)
	1SD6	YES	OPN-5 (SEEPAGE PIT)
	1FD5	NO	OPN-7 (PLUGGED)
	1FD6	NO	OPN-8 (PLUGGED)

DYE STUDY INFORMATION

BUILDING NUMBER	DRAIN NUMBER	DID DYE REACH EXPECTED DESTINATION?	COMMENTS
46-128	1TL1	YES	OPN-1 (SANITARY)
	1TL2	YES	OPN-1 (SANITARY)
46-154	1FD1	YES	OPN-1 (SANITARY)
	1SD1	YES	OPN-1 (SANITARY)
	1SD2	YES	OPN-1 (SANITARY)
	1SD4	YES	OPN-1 (SANITARY)
	1SD6	YES	OPN-1 (SANITARY)
	1TL1	YES	OPN-1 (SANITARY)
	1TL3	YES	OPN-1 (SANITARY)
46-165	1SD1	YES	OPN-1 (SANITARY)
	1TL1	YES	OPN-1 (SANITARY)
	1TL2	YES	OPN-1 (SANITARY)
46-182	1TL1	YES	OPN-1 (SANITARY)
	1TL2	YES	OPN-1 (SANITARY)
46-187	1LV1	YES	OPN-1 (SANITARY)
	1TL1	YES	OPN-1 (SANITARY)
	1TL2	YES	OPN-1 (SANITARY)
46-188	1LV1	YES	OPN-1 (SANITARY)
	1TL1	YES	OPN-1 (SANITARY)
	1TL2	YES	OPN-1 (SANITARY)



SYMBOL LEGEND	
ED	EQUIPMENT DRAIN
FD	FLOOR DRAIN
FS	FLOOR SINK
LV	LAVATORY
RD	ROOF DRAIN
SD	SINK DRAIN
TD	TRENCH DRAIN
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN

DYE TESTED DRAIN

CA CONTROLLED AREA

PREPARED FROM DRAWINGS
ENG-C-22730, C-22732, C-27161
R-3168 & SITE VISITS

NOTES:

1. FLOOR SINKS 1FS1, 1FS2, 1FS3, & 1FS4 ARE FULL OF DEBRIS AND COULD NOT BE DYE TESTED.
2. DRAIN 1FD1 RECEIVES ONCE-THROUGH COOLING WATER FROM AN AIR COMPRESSOR.

SANTA FE ENGINEERING, LTD.

TA-46-30 DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	S.C.D.
RELEASED	
DATE	2-23-93

SUBMITTED | RECOMMENDED | APPROVED

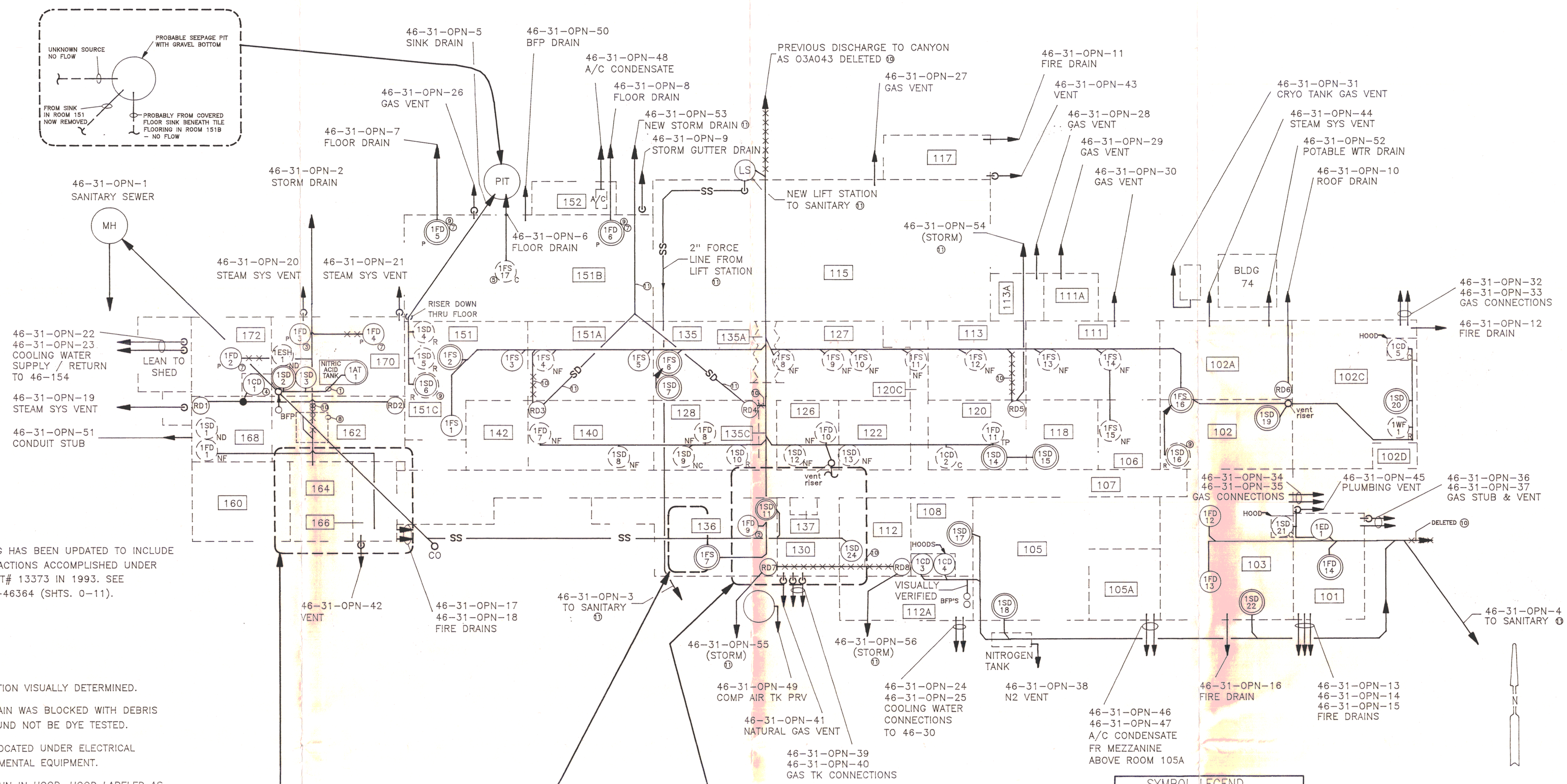
Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

SHEET / OF

CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION | LAB JOB NO. | DRAWING NO. | REV.

REQUESTING GROUP EM-8 | 11056-67 | FIGURE 1



NOTE:

THIS DRAWING HAS BEEN UPDATED TO INCLUDE CORRECTIVE ACTIONS ACCOMPLISHED UNDER LANL PROJECT# 13373 IN 1993. SEE DRAWINGS C-46364 (SHTS. 0-11).

KEYED NOTES:

1. CONNECTION VISUALLY DETERMINED.
2. THIS DRAIN WAS BLOCKED WITH DEBRIS AND COUND NOT BE DYE TESTED.
3. DRAIN LOCATED UNDER ELECTRICAL EXPPERIMENTAL EQUIPMENT.
4. CUP DRAIN IN HOOD. HOOD LABELED AS CONTAINING RADIOACTIVE MATERIAL, HCL, AND NITRIC ACID. NOT DYE TESTED.
5. HIGH PROBABILITY OF FLOOR SINK LOCATION UNDER TILE FLOOR. MOST LIKELY DISCHARGES TO SUMP.
6. CONNECTS TO 46-31-OPN-3.
7. THIS DRAIN HAS BEEN PLUGGED WITH CONCRETE AS PART OF LAB JOB 13373.
8. NEW CONNECTION TO SANITARY SEWER AS PART OF LAB JOB 13373.
9. REMOVED AS PART OF LAB JOB 13373 BUT DYE TESTED PRIOR TO REMOVAL OR PLUGGING.
10. PIPING EQUIPMENT OR DRAIN REMOVED as part OF CORRECTIVE ACTION. LAB JOB 13373.
11. NEW PIPING OR EQUIPMENT INSTALLED AS PART OF LAB JOB 13373.

DYE TESTED DRAIN

HOOD WITH DRAIN

NON-FUNCTIONAL, NOT FOUND, OR REMOVED

SYMBOL LEGEND	
A/C	AIR CONDITIONER
BFP	BACK FLOW PREVENTER
C	DRAIN HAS COVER PLATE NOT ACCESSIBLE
CD	CUP DRAIN
CO	CLEAN OUT
ED	EQUIPMENT DRAIN
EEW	EMERGENCY EYE WASH
ESH	EMERGENCY SHOWER
FD	FLOOR DRAIN
FS	FLOOR SINK
LV	LAVATORY
NC	NOT CONNECTED
ND	NO DRAIN
NF	NOT FOUND (UNDER CARPET)
R	REMOVED
RD	ROOF DRAIN
SD	SINK DRAIN
SH	SHOWER, NON-EMERGENCY
TL	TOILET
TP	TEMPORARY PLUG (REMOVABLE)
UR	URINAL
WF	WATER FOUNTAIN
– SS –	SANITARY SEWER

PREPARED FROM DRAWINGS
ENG – R-3169, C-22741, C-22752
C-25879, C-26332, C-38765
C-43493 AND SITE VISITS

SANTA FE ENGINEERING, LTD.

TA-46-31 DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	S.C.D.
RELEASED	
DATE	1/7/94

SUBMITTED | RECOMMENDED | APPROVED

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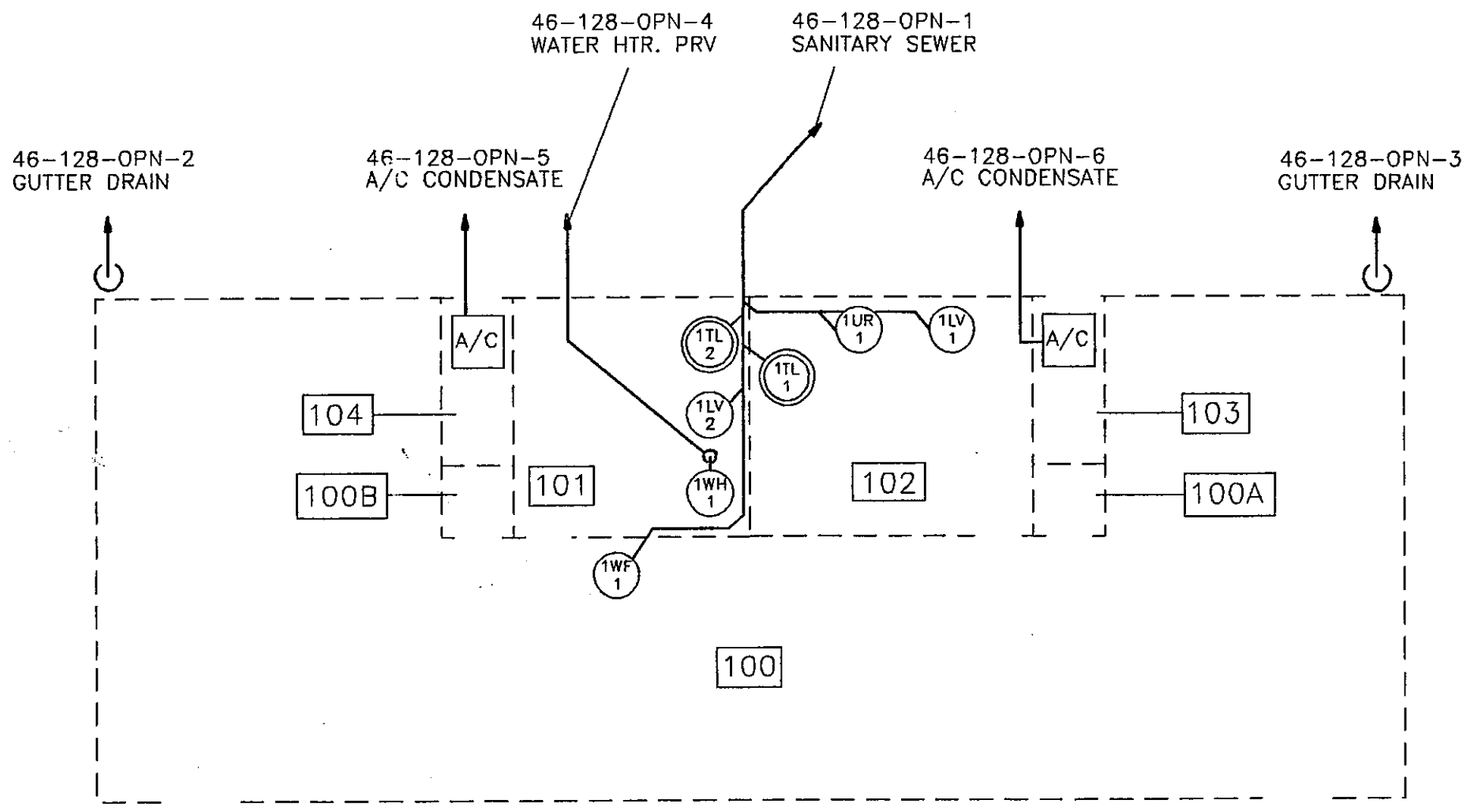
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION | LAB JOB NO. | DRAWING NO. | REV.

REQUESTING GROUP EM-8 | 11056-67 | FIGURE 2



PREPARED FROM DRAWING
ENG-R-4783 & SITE VISIT

SYMBOL LEGEND	
A/C	AIR CONDITIONER
LV	LAVATORY
PRV	PRESSURE RELIEF VALVE
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN
WH	WATER HEATER

DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.

TA-46-128 DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D
CHECKED	P.E.B.
RELEASED	
DATE	2-16-93

SUBMITTED | RECOMMENDED | APPROVED

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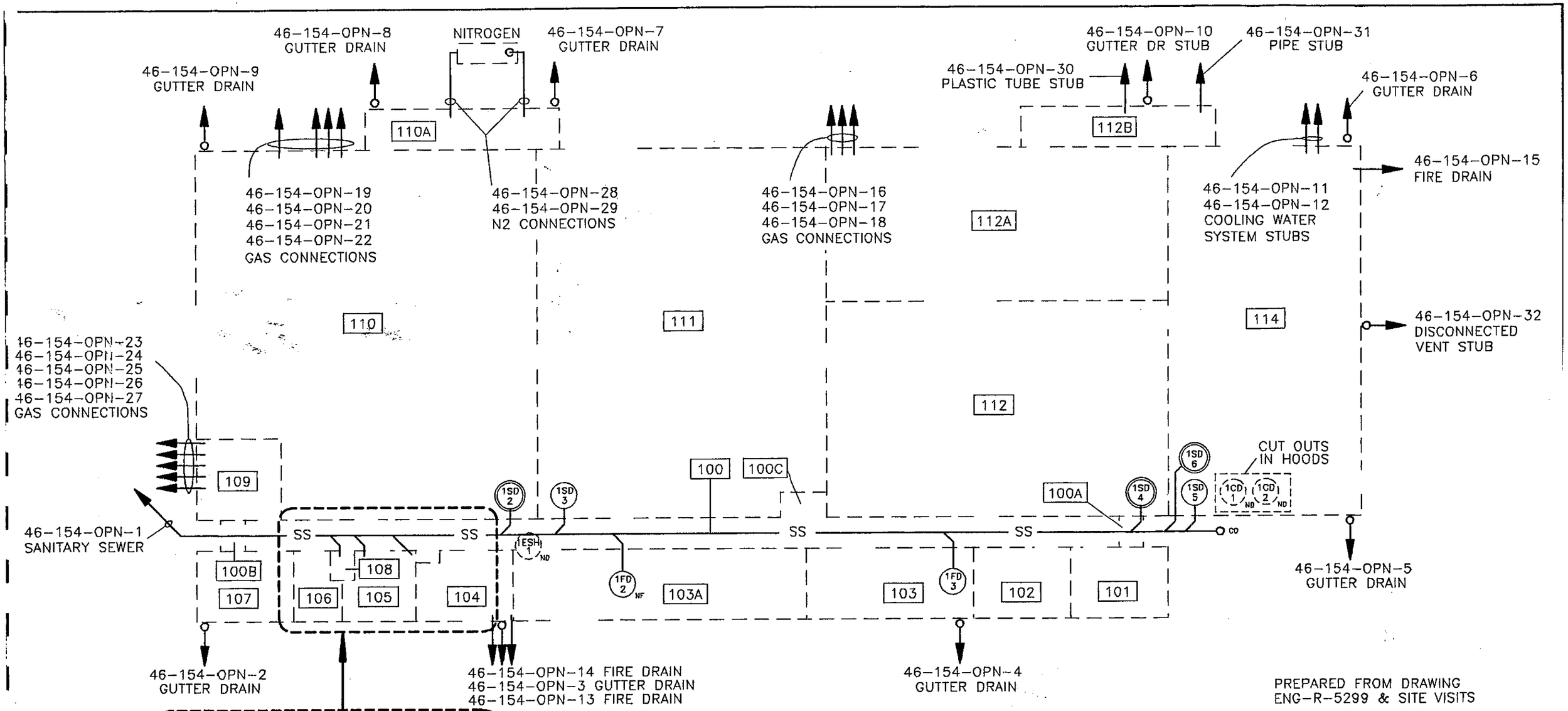
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP FM-8	11056-67	FIGURE 3	



SYMBOL LEGEND	
BFP	BACK FLOW PREVENTER
CD	CUP DRAIN
ESH	EMERGENCY SHOWER
FD	FLOOR DRAIN
LV	LAVATORY
ND	NO DRAIN
NF	NOT FOUND
SD	SINK DRAIN
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN
WH	WATER HEATER

SANTA FE ENGINEERING, LTD.

TA-46-154
DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	S.C.D.
RELEASED	
DATE	2-23-93

SUBMITTED | RECOMMENDED | APPROVED

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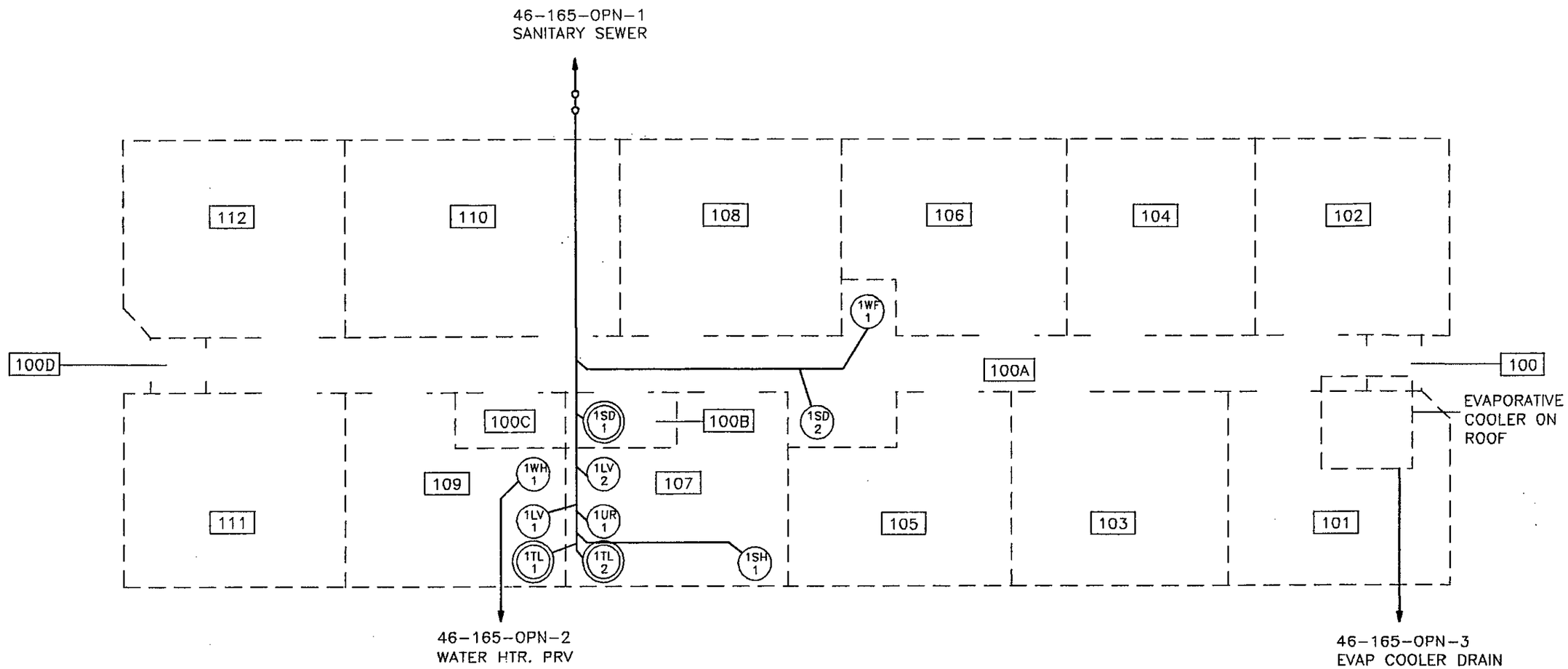
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION | LAB JOB NO. | DRAWING NO. | REV.

REQUESTING GROUP EM-8 | 11056-67 | FIGURE 4



PREPARED FROM DRAWING
ENG-C-43998, R-5306 & SITE VISITS

SYMBOL LEGEND	
LV	LAVATORY
PRV	PRESSURE RELIEF VALVE
SD	SINK DRAIN
SH	SHOWER
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN
WH	WATER HEATER

DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.

TA-46-165
DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	P.E.B.
RELEASED	
DATE	2-16-93

SUBMITTED | RECOMMENDED | APPROVED

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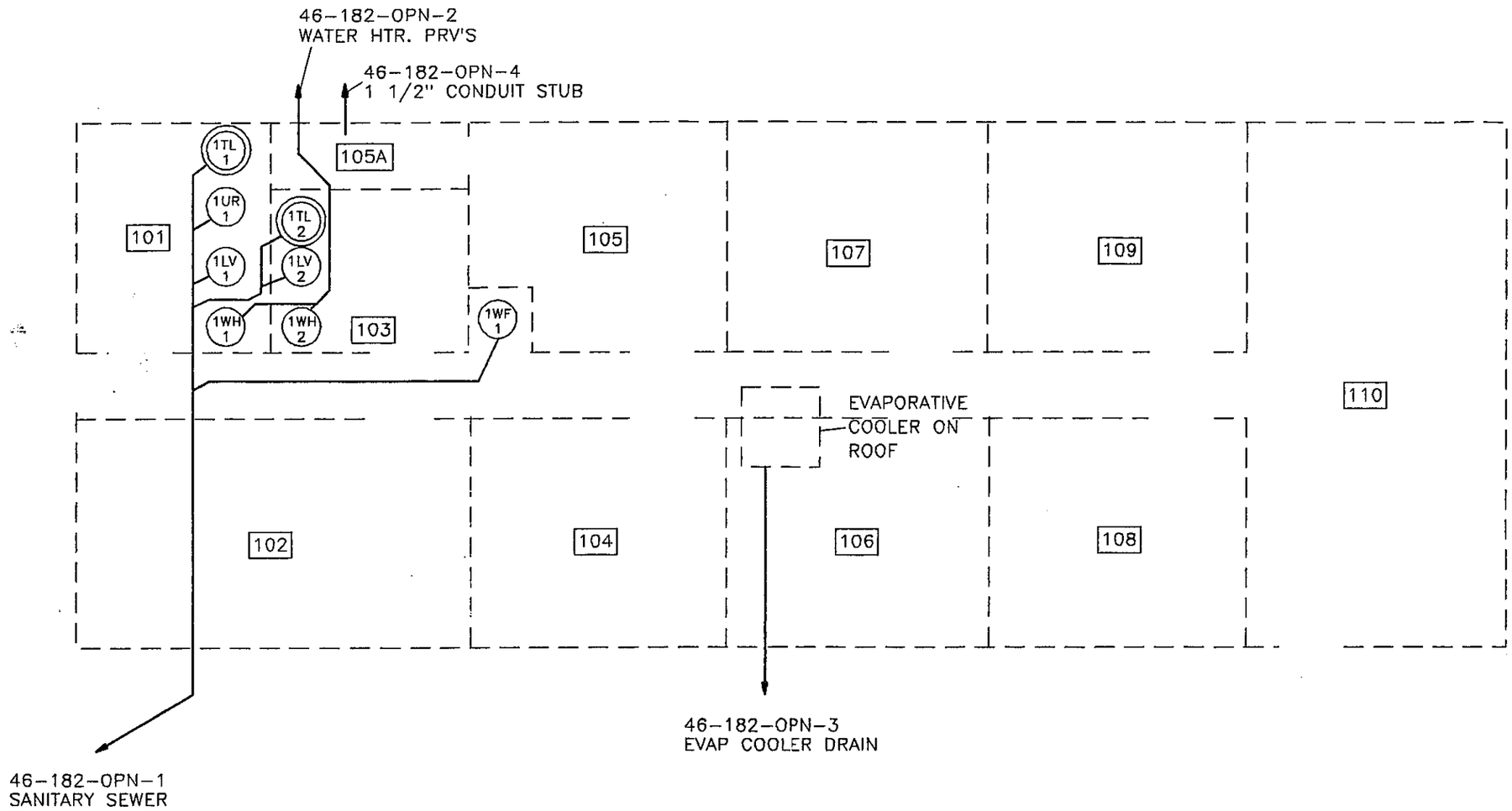
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION | LAB JOB NO. | DRAWING NO. | REV.

REQUESTING GROUP EM-8 | 11056-67 | FIGURE 5



PREPARED FROM DRAWING
ENG-R-5194 & SITE VISIT

SYMBOL LEGEND	
LV	LAVATORY
PRV	PRESSURE RELIEF VALVE
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN
WH	WATER HEATER

DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.

TA-46-182
DRAIN SCHEMATIC

DRAWN	J.C.F
DESIGN	S.C.D
CHECKED	S.C.D
RELEASED	
DATE	2-16-9

SUBMITTED | RECOMMENDED | APPROVED

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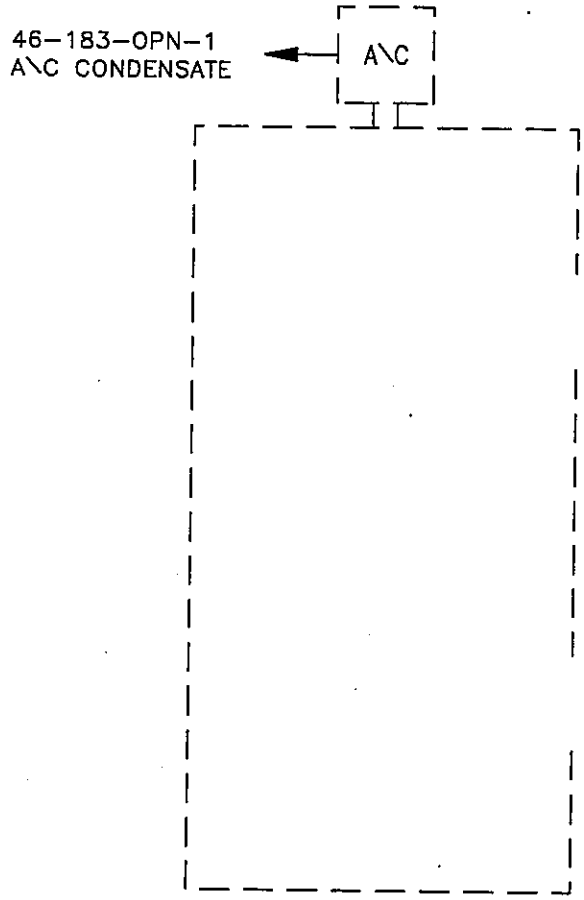
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION | LAB JOB NO. | DRAWING NO. | REV

REQUESTING GROUP EM-8 | 11056-67 | FIGURE 6



PREPARED FROM DRAWING
ENG-R-5162 & SITE VISIT

SYMBOL LEGEND	
A\C	AIR CONDITIONER

SANTA FE ENGINEERING, LTD.

TA-46-183 DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D
CHECKED	P.E.B.
RELEASED	–
DATE	3-9-93

SUBMITTED | RECOMMENDED | APPROVED

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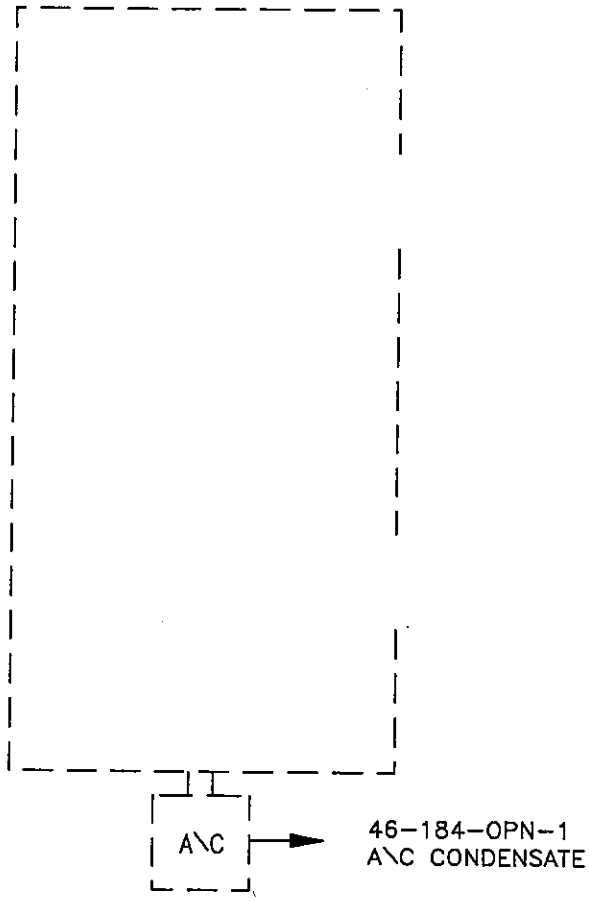
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP EM-8	11056-67	FIGURE 7	



PREPARED FROM DRAWING
ENG-R-5162 & SITE VISIT

SYMBOL LEGEND	
A\C	AIR CONDITIONER

SANTA FE ENGINEERING, LTD.

TA-46-184
DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D
CHECKED	P.E.B.
RELEASED	—
DATE	3-9-93

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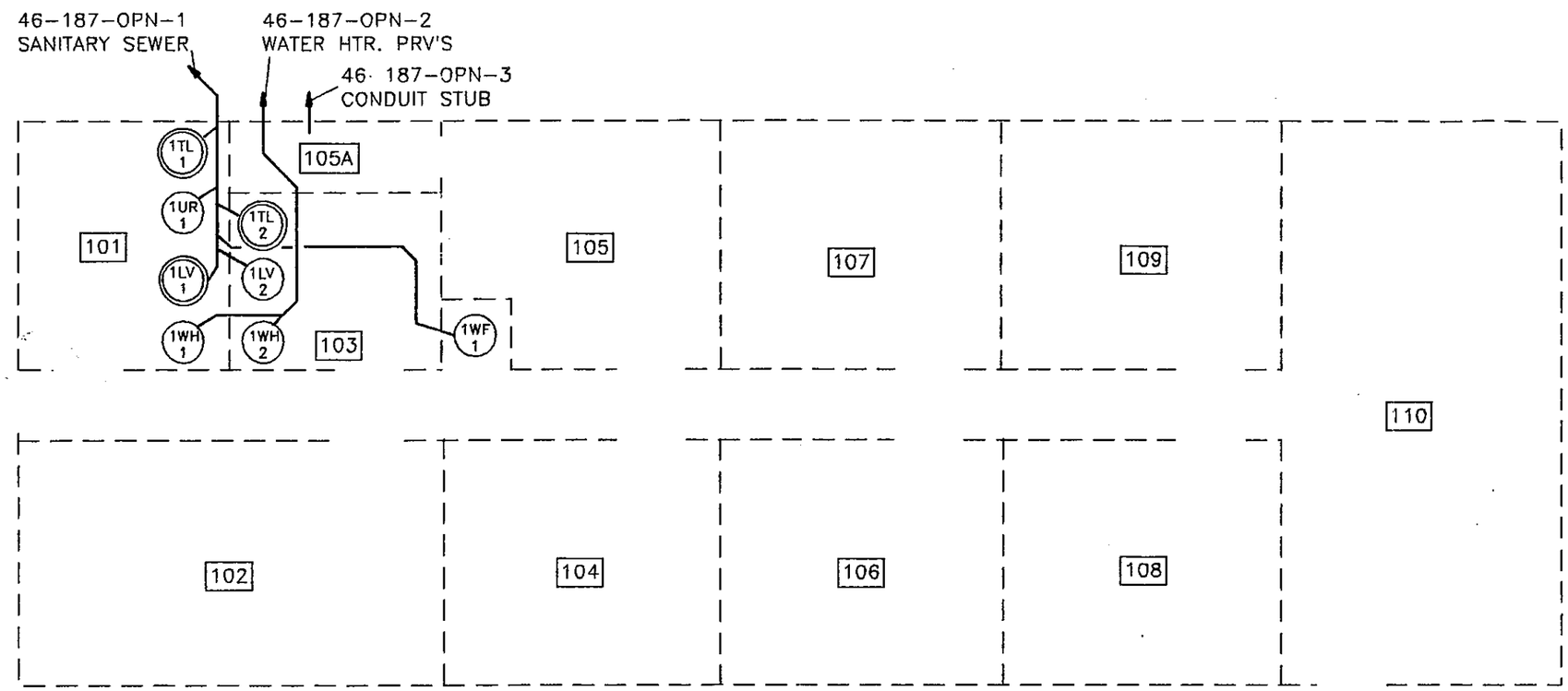
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP EM-8	11056-67	FIGURE 8	



PREPARED FROM DRAWING
ENG-R-5194 & SITE VISIT

SYMBOL LEGEND	
LV	LAVATORY
PRV	PRESSURE RELIEF VALVE
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN
WH	WATER HEATER

DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.

TA-46-187
DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	P.E.B.
RELEASED	
DATE	2-16-93

SUBMITTED | RECOMMENDED | APPROVED

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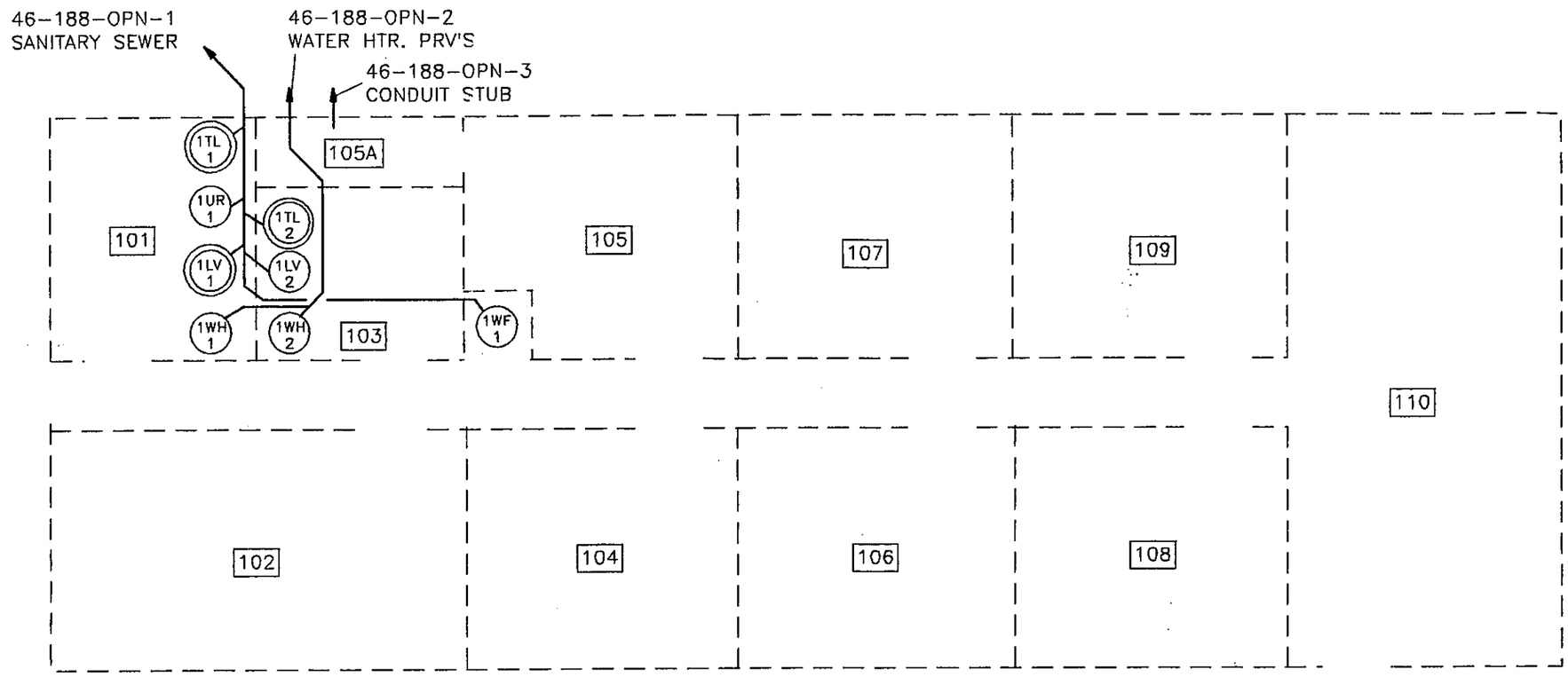
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP EM-8	11056-67	FIGURE 9	



PREPARED FROM DRAWING
ENG-R-5194 & SITE VISIT

SYMBOL LEGEND	
LV	LAVATORY
PRV	PRESSURE RELIEF VALVE
TL	TOILET
UR	URINAL
WF	WATER FOUNTAIN
WH	WATER HEATER

N

DYE TESTED DRAIN

SANTA FE ENGINEERING, LTD.

TA-46-188
DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	P.E.B.
RELEASED	
DATE	2-16-93

SUBMITTED | RECOMMENDED | APPROVED

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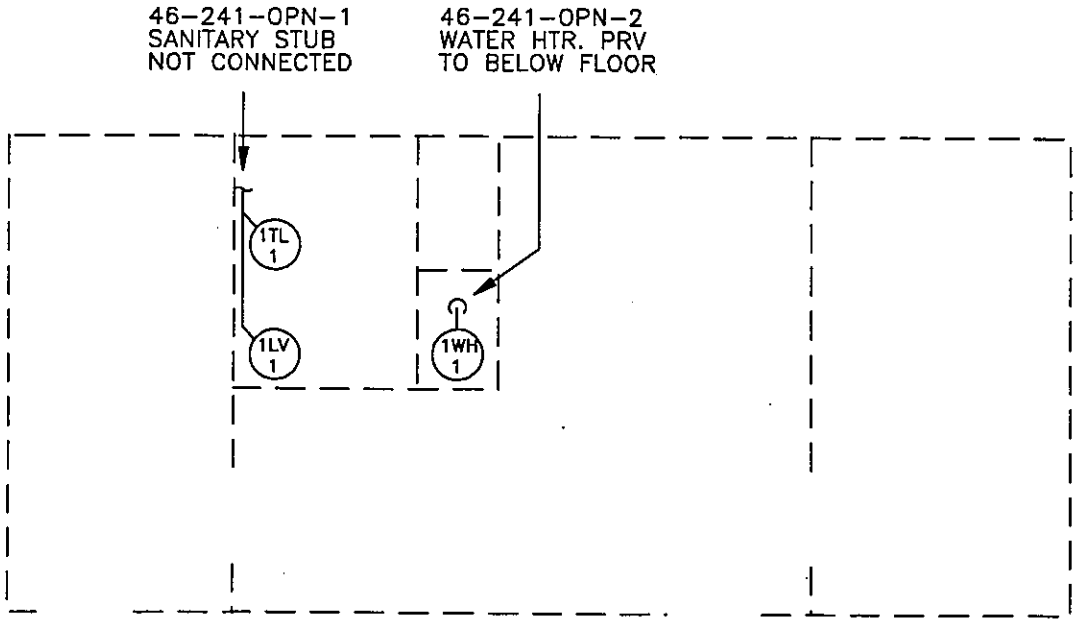
CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP EM-8	11056-67	FIGURE 10	



SYMBOL LEGEND	
LV	LAVATORY
PRV	PRESSURE RELIEF VALVE
TL	TOILET
WH	WATER HEATER

PREPARED FROM SITE VISIT

NOTE:

SANITARY FACILITIES IN THIS BUILDING ARE NOT CONNECTED

SANTA FE ENGINEERING, LTD.

TA-46-241
DRAIN SCHEMATIC

DRAWN	J.C.F.
DESIGN	S.C.D
CHECKED	S.C.D.
RELEASED	
DATE	3-4-93

SUBMITTED | RECOMMENDED | APPROVED

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Los Alamos, New Mexico 87545

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CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP EM-8	11056-67	FIGURE 11	

SYMBOL LEGEND	
– SS –	SANITARY SEWER
– SD –	STORM SEWER/DITCH
○	MANHOLE

SANTA FE ENGINEERING, LTD.

TA-46 SITE PLAN

DRAWN	J.C.F.
DESIGN	S.C.D.
CHECKED	P.E.B.
RELEASED	
DATE	2-24-93

SUBMITTED | RECOMMENDED | APPROVED

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CLASSIFICATION | REVIEWER | DATE

REQUESTING DIVISION | LAB JOB NO. | DRAWING NO. | REV.

REQUESTING GROUP EM-8 | 11056-67 | FIGURE 12