

**WASTEWATER STREAM
CHARACTERIZATION FOR
TA 16-89, 90, 91, 92, 93,
280, 281, 282, 283, 284, 285,
286, 287, 288, 400, 1364,
1408, TA-28 & TA-37**

**at
Los Alamos National Laboratory**

ENVIRONMENTAL STUDY

CHARACTERIZATION REPORT # 9



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ENVIRONMENTAL MANAGEMENT DIVISION

Los Alamos National Laboratory
Los Alamos*, New Mexico 87545

Los Alamos

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ENVIRONMENTAL STUDY

prepared for:
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EXECUTIVE SUMMARY

Buildings 89, 90, 91, 92, 93, 280, 281, 282, 283, 284, 285, 286, 287, 288, 400, 1364 and 1408 in TA-16 and all buildings in TA-28 and TA-37 were visited to document all drain piping and to make permitting recommendations. The outfall pipes exiting the buildings were as follows:

- 1) from 16-89, 90, 91, 92, 93, 282, 284, 287, 288, 1364 and 1408: no discharges,
- 2) from 16-280: one discharge permitted as 05A061, one discharge to the sanitary treatment plant, one unpermitted non-contact cooling water discharge, two vapor vents and two fire water drains,
- 3) from 16-281: one roof drain, three vapor vents, one valve pit drain and one equipment room drain,
- 4) from 16-283: one roof drain, three vapor vents, one valve pit drain and one equipment room drain
- 5) from 16-285: one roof drain, two vapor vents, one valve pit drain and one equipment room drain,
- 6) from 16-286: one discharge to the sanitary sewer,
- 7) from 16-400, one discharge permitted as 05A063, one roof drain and one valve pit drain,
- 8) from TA-28 and TA-37, each magazine has seep holes and two storage buildings and a guard house have no drains.

A revised EPA Form 2C is attached for the outfall permitted as 05A063 and an EPA 2D is attached for one outfall. Flows shown on the forms are estimated from site observations and discussions with users. Analytical data are defined from information obtained from previously sampled outfalls.

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 for discharge of pollutants exists.

A waste stream database has been prepared listing wastewater type and flow rate for each outfall.

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1.0 INTRODUCTION

On June 13, 1991, Patrick Binkley of Santa Fe Engineering (SFE) toured buildings 89, 90, 91, 92, 93, 280, 281, 282, 283, 284, 285, 286, 287, 288, 400, 1364 and 1408 in TA-16 and all buildings in TA-28 and TA-37 with Loren Abercrombie of Engineering and Information Resources (WX-12). Figures 1, 8 and 9 are plot plans of the buildings visited. The purpose of this study is to identify building drain piping and to characterize the wastewater flows and sources at the time of the visit. This report will not reflect any subsequent changes in piping or operation. The Waste Stream Characterization Policy of April 14, 1992 was followed for this study. The following tasks were performed for this purpose:

1. Building drains and all piping exiting the buildings 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 applications 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 using the WX-12 drawings during a site visit to verify the SFE schematics and to insure that all pipes exiting the building were documented. The following process was used to define drain piping and characterize the wastewater streams:

1. Laboratory engineering drawings were used to prepare both WX-12 drawings and the SFE drain piping schematic. 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-91-1329 issued by EPA to the University of California were used for reference;
2. WX-12 verified drain piping by dye checking and
3. A site visit was performed to verify both WX-12 drawings and the SFE drain schematic 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 buildings have each been assigned an Outlet Piping Number. 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 is the floor the drain is on. The second part has letters that indicate the drain type (abbreviations used are summarized in Table 1). The final part is a unique number for each drain. For example, the floor drain numbering on the first floor would start with 1FD1. The roof drains do not have the number identifying the floor such as RD1 for Roof Drain 1.

The function of each pipe is listed in Appendix 1 in Tables 2 through 7. Appendix 2 contains the waste stream characterization database output, listing wastewater sources, flow rates and periodicity information for each outfall drain. Completed EPA forms are in Appendix 3 for the appropriate outfalls. Appendix 4 contains a set of WX-12 drawings and a table of drains dye studied by WX-12. Flow schematics of the drains from each building are attached in Appendix 5 as Figure 2 through 7.

3.0 RECOMMENDATIONS FOR BUILDINGS 89, 90, 91, 92, 93, 1364 AND 1408

These are all abandoned buildings. Buildings 1364 and 1408 are transportainers that do not have any drains. The other four buildings have sumps to remove high explosives (HE) from waste water. The sumps have been filled in and have no discharge points. The sumps should be covered with a concrete slab and the troughs draining into them plugged. The only discharge from these buildings is rain water running off the roof. No EPA forms were prepared.

4.0 RECOMMENDATIONS FOR BUILDING 280

Table 2 is a list of the drains to the building outfalls and Figure 2 is a schematic of the piping. The table lists the drains that connect to each outfall pipe and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

4.1 Outfall 16-280-OPN-1

This outfall to daylight receives flow from two rain drains and from an area in which HE testing is being performed. The outfall is permitted as 05A061. Water is used in the testing and is drained to the outfall through an HE sump once a week. The volume drained each week is approximately 1000 gallons. The HE sump should be plugged and the permit for the outfall deleted. No EPA forms were prepared.

4.2 Outfall 16-280-OPN-2

The flow to this outfall is from sanitary facilities and floor drains and goes to the TA-16 sanitary treatment plant which discharges as 03S. Six of the floor drains are covered with metal plates and will not receive flow. The plates are not

permanently installed. No changes are recommended and no EPA forms were prepared.

4.3 Outfall 16-280-OPN-3

This outfall to daylight is from floor drains in the basement equipment room and is not permitted. The types of flows to this outfall is a drain from a vacuum pump, a chiller drain, a steam pressure relief valve, steam condensate, an air compressor knockout pot and once through cooling water. The cooling water is the most regular flow and is less than 1 gpm. Secondary containment is recommended around the batteries near BFD5 to eliminate the chance of a release of acid through the outfall. Containerizing the liquid from the air compressor is recommended. Permitting is recommended for this outfall in the 04A (once through cooling water) category. An EPA Form 2D is attached for this outfall.

4.4 Outfalls 16-280-OPN-4 and 16-280-OPN-5

These two outfalls are vents from a chiller. No changes or permitting are recommended.

4.5 Outfall 16-280-OPN-6 and 16-280-OPN-7

These two outfalls are drains from the fire water system. No changes are recommended. This outfall should be included in a Notice of Intent (NOI) to Discharge. No EPA forms were prepared.

5.0 RECOMMENDATIONS FOR BUILDING 281

Table 3 is a list of the drains to the building outfalls and Figure 3 is a schematic of the piping. The table lists the drains that connect to each outfall pipe and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

5.1 Outfall 16-281-OPN-1

This outfall consists of rain water from roof drains RD1 and RD2. The discharge point for this outfall has not been determined. Locating the destination or repiping this outfall to daylight is recommended. No permitting is recommended. No EPA forms were prepared.

5.2 Outfall 16-281-OPN-2

This outfall is from a valve pit. The location of the discharge point is not known. The rain water that collects in this pit probably leaches into the surrounding soil. Locating the destination or plugging the drain are recommended. No permitting is recommended. No EPA forms were prepared.

5.3 Outfall 16-281-OPN-3

This outfall is from floor drains in the equipment rooms and receives no regular flow. The potential sources of flow are steam condensate and condensate from an air compressor knock out pot. The condensate flow should be included in an NOI. The liquid from the air compressor should be containerized. No EPA forms were prepared.

5.4 Outfall 16-281-OPN-4

This outfall to atmosphere is from a steam condensate collection pot and does not receive any regular flow. This outfall should be included in an NOI. No EPA forms were prepared.

5.5 Outfalls 16-281-OPN-5 and 16-281-OPN-6

These outfalls are discharges to atmosphere from steam pressure relief valves (PRV). These outfalls should be included in an NOI. No EPA forms were prepared.

6.0 RECOMMENDATIONS FOR BUILDINGS 282, 284, 287 AND 288

These buildings are all passageways connecting buildings. There are no water or discharges in these buildings. No changes or permitting are recommended. No EPA forms were prepared.

7.0 RECOMMENDATIONS FOR BUILDING 283

Table 4 is a list of the drains to the building outfalls and Figure 4 is a schematic of the piping. The table lists the drains that connect to each outfall pipe and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

7.1 Outfall 16-283-OPN-1

This outfall consists of rain water from roof drains RD1 and RD2. The discharge point for this outfall has not been determined. Locating the destination or repiping this outfall to daylight is recommended. No permitting is recommended. No EPA forms were prepared.

7.2 Outfall 16-283-OPN-2

This outfall is from a valve pit. The location of the discharge point is not known. The rain water that collects in this pit probably leaches into the surrounding soil. Locating the destination or plugging the drain are recommended. No permitting is recommended. No EPA forms were prepared.

7.3 Outfall 16-283-OPN-3

This outfall is from floor drains in the equipment rooms and receives no regular flow. The potential sources of flow are steam condensate and condensate from an air compressor knock out pot. The condensate flow should be included in an NOI. The

liquid from the air compressor should be containerized. No EPA forms were prepared.

7.4 Outfall 16-283-OPN-4

This outfall to atmosphere is from a steam condensate collection pot and does not receive any regular flow. This outfall should be included in an NOI. No EPA forms were prepared.

7.5 Outfalls 16-283-OPN-5 and 16-283-OPN-6

These outfalls are discharges to atmosphere from PRVs. These outfalls should be included in an NOI. No EPA forms were prepared.

8.0 RECOMMENDATIONS FOR BUILDING 285

Table 5 is a list of the drains to the building outfalls and Figure 5 is a schematic of the piping. The table lists the drains that connect to each outfall pipe and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

8.1 Outfall 16-285-OPN-1

This outfall consists of rain water from roof drains RD1 and RD2. The discharge point for this outfall has not been determined. Locating the destination or repiping this outfall to daylight is recommended. No permitting is recommended. No EPA forms were prepared.

8.2 Outfall 16-285-OPN-2

This outfall is from a valve pit. The location of the discharge point is not known. The rain water that collects in this pit probably leaches into the surrounding soil. Locating the

destination or plugging the drain are recommended. No permitting is recommended. No EPA forms were prepared.

8.3 Outfall 16-285-OPN-3

This outfall is from floor drains in the equipment rooms and receives no regular flow. The potential sources of flow are steam condensate and condensate from an air compressor knock out pot. The condensate flow should be included in an NOI. The liquid from the air compressor should be containerized. No EPA forms were prepared.

8.4 Outfall 16-285-OPN-4

This outfall to atmosphere is from a steam condensate collection pot and does not receive any regular flow. This outfall should be included in an NOI. No EPA forms were prepared.

8.5 Outfall 16-285-OPN-5

This outfall is a discharge to atmosphere from a PRV. This outfall should be included in an NOI. No EPA forms were prepared.

9.0 RECOMMENDATIONS FOR BUILDING 286

Table 6 is a list of drains to the one building outfall (16-286-OPN-1) and Figure 6 is a schematic of the piping. This outfall flows to the TA-16 sanitary treatment plant. All of the drains are from sanitary facilities. No changes or permitting are recommended. No EPA forms were prepared.

10.0 RECOMMENDATIONS FOR BUILDING 400

Table 7 is a list of the drains to the building outfalls and Figure 7 is a schematic of the piping. The table lists the

drains that connect to each outfall pipe and includes recommendations for changes to the drain piping. The discussion below gives the reasoning for the recommendations.

10.1 Outfall 16-400-OPN-1

This outfall receives flow from the area in which HE contaminated equipment including trucks are washed. The flow goes through an HE sump to remove suspended solids prior to discharge. This outfall is permitted as 05A063. No changes are recommended and an EPA Form 2C is attached.

10.2 Outfall 16-400-OPN-2

This outfall discharges rain water from the two roof drains (RD1 and RD2). No changes or permitting are recommended. No EPA forms were prepared.

10.3 Outfall 16-400-OPN-3

This outfall is from a valve pit. The location of the discharge point is not known. The rain water that collects in this pit probably leaches into the surrounding soil. Locating the destination or plugging the drain are recommended. No permitting or changes are recommended. No EPA Forms were prepared.

11.0 RECOMMENDATIONS FOR BUILDINGS IN TA-28 AND TA-37

Most of the buildings in TA-28 and TA-37 are magazines for storage of HE and ammunition. Each magazine has a weep hole that drains seepage away from the building. The flow will be rain water and will not be contaminated. No permitting or changes are recommended for these magazines.

Building 37-1 is an old guard house. Buildings 37-2 and 37-27 were storage buildings. No water is piped to these three

buildings. There are no discharges from these buildings. No changes or permitting are recommended. No EPA forms were prepared.

12.0 CONCLUSION

This document provides the information to start characterize buildings 89, 90, 91, 92, 93, 280, 281, 282, 283, 284, 285, 286, 287, 288, 400, 1364 and 1408 in TA-16 and all buildings in TA-28 and TA-37. Permit application forms have been completed for the following outfalls:

Forms 2C:

1. 16-400-OPN-1 (05A063)

Forms 2D:

1. 16-280-OPN-3

The remaining outfalls do not require permitting, as itemized below:

Vapor vents:

- | | | |
|------------------|-----------------|-----------------|
| 1. 16-280-OPN-4 | 2. 16-280-OPN-5 | 3. 16-281-OPN-4 |
| 4. 16-281-OPN-5 | 5. 16-281-OPN-6 | 6. 16-283-OPN-4 |
| 7. 16-283-OPN-5 | 8. 16-283-OPN-6 | 9. 16-285-OPN-4 |
| 10. 16-285-OPN-5 | | |

Fire water system drains:

- | | |
|-----------------|-----------------|
| 1. 16-280-OPN-6 | 2. 16-280-OPN-7 |
|-----------------|-----------------|

Discharges of storm water:

- | | | |
|-----------------|-----------------|-----------------|
| 1. 16-280-OPN-1 | 2. 16-281-OPN-1 | 3. 16-283-OPN-1 |
| 4. 16-285-OPN-1 | 5. 16-285-OPN-4 | 6. 16-400-OPN-2 |

Discharges to sanitary sewer:

- | | |
|-----------------|-----------------|
| 1. 16-280-OPN-2 | 2. 16-286-OPN-1 |
|-----------------|-----------------|

Miscellaneous discharges:

- | | | |
|-----------------|-----------------|-----------------|
| 1. 16-281-OPN-3 | 2. 16-283-OPN-3 | 3. 16-285-OPN-3 |
|-----------------|-----------------|-----------------|

Discharges in valve pits:

- | | | |
|-----------------|-----------------|-----------------|
| 1. 16-281-OPN-2 | 2. 16-283-OPN-2 | 3. 16-285-OPN-2 |
| 4. 16-400-OPN-3 | | |

The following outfalls have storm water combined with non-storm water discharges, as defined in Forms 2D, Appendix 3:

1. 16-280-OPN-1

Recommended permitting and corrective actions are outlined in Tables 2 through 7. Outfall permitting should be performed immediately, and corrective action should be performed as soon as practicable to minimize the chance of unpermitted discharge of pollutants.

TABLE 1
SUMMARY OF ABBREVIATIONS

ABBREVIATION	MEANING
DR	Drain
FD	Floor Drain
LV	Lavatory
RD	Roof Drain
S	Sink
SPD	Sump Drain
STD	Steam Pit Drain
T	Toilet
UR	Urinal
WF	Water Fountain

TABLE 2: TA 16-280 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
16-280-OPN-1 05A061	RD1	Roof	No Change	No
	RD2	Roof	No Change	
	1SPD1	Testing	Plug	
16-280-OPN-2 San Sewer	1FD1	Office	Plugged	No
	1FD2	Office	Plugged	
	1FD3	Office	Plugged	
	1FD4	Office	Plugged	
	1FD5	Office	Plugged	
	1FD6	Office	Plugged	
	1FD7	Rest Room	No Change	
	1LV1	Rest Room	No Change	
	1S1	Rest Room	No Change	
	1S2	Rest Room	No Change	
	1T1	Rest Room	No Change	
	1UR1	Rest Room	No Change	
	1WF1	Hallway	No Change	
16-280-OPN-3	BFD1	Equipment Room	No Change	Yes
	BFD2	Equipment Room	No Change	
	BFD3	Equipment Room	No Change	
	BFD4	Equipment Room	No Change	
	BFD5	Equipment Room	No Change	
	BFD6	Equipment Room	No Change	
	BFD7	Equipment Room	No Change	
	BFD8	Equipment Room	No Change	
	BFD9	Equipment Room	Secondary Containment	
16-280-OPN-4		Chiller Vent	No Change	No
16-280-OPN-5		Chiller Vent	No Change	No
16-280-OPN-6		Fire Water Drain	No Change	No
16-280-OPN-7		Fire Water Drain	No Change	No

RECOMMENDATIONS REVIEWED WITH PERSONNEL FROM WX-12, EM-8 & ENG-6

TABLE 3: TA 16-281 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
16-281-OPN-1	RD1	Roof	Locate or Repipe	No
	RD2	Roof	Locate or Repipe	
16-281-OPN-2	1STD1	Valve Pit	Locate or Plug	No
16-281-OPN-3	1FD1	Equipment Room	Containerize and NOI	No
16-281-OPN-4		Condensate Vent	No Change	No
16-281-OPN-5		Steam Relief Valve	No Change	No
16-281-OPN-6		Steam Relief Valve	No Change	No

TABLE 4: TA 16-283 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
16-283-OPN-1	RD1	Roof	Locate or Repipe	No
	RD2	Roof	Locate or Repipe	
16-283-OPN-2	1STD1	Valve Pit	Locate or Plug	No
16-283-OPN-3	1FD1	Equipment Room	Containerize and NOI	No
16-283-OPN-4		Condensate Vent	No Change	No
16-283-OPN-5		Steam Relief Valve	No Change	No
16-283-OPN-6		Steam Relief Valve	No Change	No

TABLE 5: TA 16-285 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
16-285-OPN-1	RD1	Roof	Locate or Repipe	No
	RD2	Roof	Locate or Repipe	
16-285-OPN-2	1STD1	Valve Pit	Locate or Plug	No
16-285-OPN-3	1FD1	Equipment Room	Containerize and NOI	No
16-285-OPN-4		Condensate Vent	No Change	No
16-285-OPN-5		Steam Relief Valve	No Change	No

RECOMMENDATIONS REVIEWED WITH PERSONNEL FROM WX-12, EM-8 & ENG-6

TABLE 6: TA 16-286 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
16-286-OPN-1 San Sewer	1DR1	Break Room	No Change	No
	1FD1	Rest Room	No Change	
	1LV1	Rest Room	No Change	
	1S1	Break Room	No Change	
	1T1	Rest Room	No Change	
	1WF1	Break Room	No Change	

TABLE 7: TA 16-400 DRAIN SUMMARY

OUTFALL NUMBER	ID NUMBER	ROOM ACTIVITY	STATUS OR RECOMMENDATIONS	EPA FORM PREPARED
16-400-OPN-1	1SPD1	HE Wash Down	No Change	Yes
16-400-OPN-2	RD1	Roof	No Change	No
	RD2	Roof	No Change	
16-400-OPN-3	1STD1	Valve Pit	Locate or Repipe	No

RECOMMENDATIONS REVIEWED WITH PERSONNEL FROM WX-12, EM-8 & ENG-6

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TA	BLDG	OUTLET PIPING NUMBER	EPA OUTFALL #	DRAIN #	ROOM DESCRIPTION	FLOW RATE	PERIODICITY	SEASONAL	ROOM #	SOURCE TYPES
16	89	16-89			PROCESS BUILDING			no		NO DRAINS
16	90	16-90			PROCESS BUILDING			no		NO DRAINS
16	91	16-91			PROCESS BUILDING			no		NO DRAINS
16	92	16-92			PROCESS BUILDING			no		NO DRAINS
16	93	16-93			PROCESS BUILDING			no		NO DRAINS
16	280	16-280-OPN-1	05A061	1SPD1	HE TESTING	50000 GPY	1000 GAL, ONCE PER WEEK	no	TEST ROOM	HE TEST WATER
16	280	16-280-OPN-1	05A061	RD1	ROOF		MOSTLY IN SUMMER	no	ROOF	RAIN
16	280	16-280-OPN-1	05A061	RD2	ROOF		MOSTLY IN SUMMER	no	ROOF	RAIN
16	280	16-280-OPN-2	03S	1FD1	OFFICE		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1FD2	OFFICE		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1FD3	OFFICE		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1FD4	OFFICE		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1FD5	OFFICE		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1FD6	OFFICE		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1FD7	REST ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-2	03S	1LV1	SINK		4 DAYS PER WEEK	no		HAND WASHING
16	280	16-280-OPN-2	03S	1S1	SINK		4 DAYS PER WEEK	no		SANITARY WASTE
16	280	16-280-OPN-2	03S	1S2	SINK		4 DAYS PER WEEK	no		SANITARY WASTE
16	280	16-280-OPN-2	03S	1T1	TOILET		4 DAYS PER WEEK	no		SANITARY WASTE
16	280	16-280-OPN-2	03S	1UR1	URINAL		4 DAYS PER WEEK	no		SANITARY WASTE
16	280	16-280-OPN-2	03S	1WF1	WATER FOUNTAIN		4 DAYS PER WEEK	no		DRINKING WATER
16	280	16-280-OPN-3		BFD1	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD2	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD3	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD4	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD5	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD6	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD7	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD8	EQUIPMENT ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	280	16-280-OPN-3		BFD9	EQUIPMENT ROOM		4 DAYS PER WEEK	no		BATTER ACID POTENTIAL
16	280	16-280-OPN-4			EQUIPMENT ROOM			no		CHILLER VENT
16	280	16-280-OPN-5			EQUIPMENT ROOM			no		CHILLER VENT
16	280	16-280-OPN-6			EQUIPMENT ROOM		2 OR 3 TIMES PER YEAR	no		FIRE WATER
16	280	16-280-OPN-7			EQUIPMENT ROOM		2 OR 3 TIMES PER YEAR	no		FIRE WATER
16	281	16-281-OPN-1		RD2	ROOF		MOSTLY SUMMER	no	ROOF	RAIN
16	281	16-281-OPN-2		1PD1	VALVE PIT			no		STEAM CONDENSATE
16	281	16-281-OPN-3		1FD1	EQUIPMENT ROOM		4 DAYS PER WEEK	no	EQUIP RM	FLOOR WASHINGS
16	281	16-281-OPN-4		RD1	ROOF		MOSTLY SUMMER	no	ROOF	RAIN

REPORT 9

TA	BLDG	OUTLET PIPING NUMBER	EPA OUTFALL #	DRAIN #	ROOM DESCRIPTION	FLOW RATE	PERIODICITY	SEASONAL	ROOM #	SOURCE TYPES
16	281	16-281-OPN-5			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	281	16-281-OPN-6			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	281	16-281-OPN-7			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	282	16-282			PASSAGEWAY			no		NO DRAINS
16	283	16-283-OPN-1		RD2	ROOF		MOSTLY SUMMER	no	ROOF	RAIN
16	283	16-283-OPN-2		1PD1	VALVE PIT			no		STEAM CONDENSATE
16	283	16-283-OPN-3		1FD1	EQUIPMENT ROOM		4 DAYS PER WEEK	no	EQUIP RM	FLOOR WASHINGS
16	283	16-283-OPN-4		RD1	ROOF		MOSTLY SUMMER	no	ROOF	RAIN
16	283	16-283-OPN-5			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	283	16-283-OPN-6			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	283	16-283-OPN-7			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	284	16-284			PASSAGEWAY			no		NO DRAINS
16	285	16-285-OPN-1		RD2	ROOF		MOSTLY SUMMER	no	ROOF	RAIN
16	285	16-285-OPN-2		1PD1	VALVE PIT			no		STEAM CONDENSATE
16	285	16-285-OPN-3		1FD1	EQUIPMENT ROOM		4 DAYS PER WEEK	no	EQUIP RM	FLOOR WASHINGS
16	285	16-285-OPN-4		RD1	ROOF		MOSTLY SUMMER	no	ROOF	RAIN
16	285	16-285-OPN-5			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	285	16-285-OPN-6			EQUIPMENT ROOM			no		STEAM CONDENSATE
16	286	16-286-OPN-1	03S	1DR1	BREAK ROOM			no		NO SOURCES
16	286	16-286-OPN-1	03S	1FD1	REST ROOM		4 DAYS PER WEEK	no		FLOOR WASHINGS
16	286	16-286-OPN-1	03S	1LV1	LAVATORY		4 DAYS PER WEEK	no		HAND WASHING
16	286	16-286-OPN-1	03S	1S1	SINK		4 DAYS PER WEEK	no		SANITARY WASTE
16	286	16-286-OPN-1	03S	1T1	TOILET		4 DAYS PER WEEK	no		SANITARY WASTE
16	286	16-286-OPN-1	03S	1WF1	WATER FOUNTAIN		4 DAYS PER WEEK	no		DRINKING WATER
16	287	16-287			PASSAGEWAY			no		NO DRAINS
16	288	16-288			PASSAGEWAY			no		NO DRAINS
16	400	16-400-OPN-1	05A063	1SPD1	TRUCK WASHING BUILDING	1000 GPY	1 HR/DAY, 5 DAYS/WK	no		TRUCK WASHINGS
16	400	16-400-OPN-2		RD1	ROOF		MOSTLY IN SUMMER	no	ROOF	RAIN
16	400	16-400-OPN-2		RD2	ROOF		MOSTLY IN SUMMER	no	ROOF	RAIN
16	400	16-400-OPN-3		1STD1	VALVE PIT			no		STEAM CONDENSATE
16	1,364	16-1364			TRANSPORTAINER			no		NO DRAINS
16	1,408	16-1408			TRANSPORTAINER			no		NO DRAINS
28	1	TA 28-1			MAGAZINE			no		NO DRAINS
28	2	TA 28-2			MAGAZINE			no		NO DRAINS
28	3	TA 28-3			MAGAZINE			no		NO DRAINS
28	4	TA 28-4			MAGAZINE			no		NO DRAINS
28	5	TA 28-5			MAGAZINE			no		NO DRAINS
37	1	TA 37-1			OFFICE BUILDING			no		NO DRAINS

REPORT 9

TA	BLDG	OUTLET PIPING NUMBER	EPA OUTFALL #	DRAIN #	ROOM DESCRIPTION	FLOW RATE	PERIODICITY	SEASONAL	ROOM #	SOURCE TYPES
37	2	TA 37-2			MAGAZINE			no		NO DRAINS
37	3	TA 37-3			MAGAZINE			no		NO DRAINS
37	4	TA 37-4			MAGAZINE			no		NO DRAINS
37	5	TA 37-5			MAGAZINE			no		NO DRAINS
37	6	TA 37-6			MAGAZINE			no		NO DRAINS
37	7	TA 37-7			MAGAZINE			no		NO DRAINS
37	8	TA 37-8			MAGAZINE			no		NO DRAINS
37	9	TA 37-9			MAGAZINE			no		NO DRAINS
37	10	TA 37-10			MAGAZINE			no		NO DRAINS
37	11	TA 37-11			MAGAZINE			no		NO DRAINS
37	12	TA 37-12			MAGAZINE			no		NO DRAINS
37	13	TA 37-13			MAGAZINE			no		NO DRAINS
37	14	TA 37-14			MAGAZINE			no		NO DRAINS
37	15	TA 37-15			MAGAZINE			no		NO DRAINS
37	16	TA 37-16			MAGAZINE			no		NO DRAINS
37	17	TA 37-17			MAGAZINE			no		NO DRAINS
37	18	TA 37-18			MAGAZINE			no		NO DRAINS
37	19	TA 37-19			MAGAZINE			no		NO DRAINS
37	20	TA 37-20			MAGAZINE			no		NO DRAINS
37	21	TA 37-21			MAGAZINE			no		NO DRAINS
37	22	TA 37-22			MAGAZINE			no		NO DRAINS
37	23	TA 37-23			MAGAZINE			no		NO DRAINS
37	24	TA 37-24			MAGAZINE			no		NO DRAINS
37	25	TA 37-25			MAGAZINE			no		NO DRAINS
37	26	TA 37-26			MAGAZINE			no		NO DRAINS
37	27	TA 37-27			STORAGE BUILDING			no		NO DRAINS

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		4. FLOW				C. DURATION (in days)
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	B. FLOW RATE (in mgd)		D. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
06A063	HE DISCHARGE	.25	12	2.7 X 10-5	8.0 X 10-5	1000 GPY	80 GPD	1 H/D

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 (go 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			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	
NA			

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 waste-water 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		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
NA					

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

CONTINUED FROM PAGE 2

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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
NA			

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)

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 receiving water in relation to your discharge within the last 3 years?

YES (Identify the tests, and describe their purposes below.)

NO (Go to Section VIII)

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 & number)	D. POLLUTANTS ANALYZED

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 in print) JERRY L. BELLOWS, DOE AREA MANAGER	B. PHONE NO. (Include area code) 505-667-5105
ALLEN J. TIEDMAN, ASSOC. DIRECTOR FOR OPERATIONS	505-667-9390
C. SIGNATURE	D. DATE SIGNED

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

OUTFALL NO.
05A063

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.

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						d. NO. OF ANALYSES	3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	3.4	12.9						mg/l	g/y			
b. Chemical Oxygen Demand (COD)	32.5	123.0						mg/l	g/y			
c. Total Organic Carbon (TOC)	8.8	33.3						mg/l	g/y			
d. Total Suspended Solids (TSS)	< 1	< 3.8						mg/l	g/y			
e. Ammonia (as N)	.43	1.6						mg/l	g/y			
f. Flow	VALUE 1000		VALUE		VALUE			gal/yr		VALUE		
g. Temperature (winter)	VALUE 18.2		VALUE		VALUE			°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 7.16	MAXIMUM 9.0	MINIMUM	MAXIMUM	X			STANDARD UNITS		X		

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'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	< .5	< 1.9						mg/l	g/y			
b. Chlorine, Total Residual	X		.2	757.0						mg/l	mg/y			
c. Color	X		18							units				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		.32	1.2						mg/l	g/y			
f. Nitrate-Nitrite (as N)	X		.985	3.7						mg/l	g/y			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. RECEIVED PRESENT	b. RECEIVED ASSENT	b. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	b. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		27.4	103.7						mg/l	g/y			
h. Oil and Grease	X		24	90.8						mg/l	g/y			
i. Phosphorus (as P), Total (7723-14-0)	X		.07	264.9						mg/l	mg/y			
j. Radioactivity														
(1) Alpha, Total	X		5	18.9						pCi/l	nCi/y			
(2) Beta, Total	X		3.8	14.4						pCi/l	nCi/y			
(3) Radium, Total	X													
(4) Radium, 226, Total	X		.04	151.4						pCi/l	pCi/y			
k. Sulfate (as SO ₄) (14808-79-8)	X		6.02	22.8						mg/l	g/y			
l. Sulfide (as S)		X	< .05	< 189.2						mg/l	mg/y			
m. Sulfite (as SO ₃) (14265-45-3)		X												
n. Surfactants	X		.36	1.4						mg/l	g/y			
o. Aluminum, Total (7429-90-5)		X	< .04	< 151.4						mg/l	mg/y			
p. Barium, Total (7440-39-3)	X		.76	2.9						mg/l	g/y			
q. Boron, Total (7440-42-8)	X		.03	113.6						mg/l	mg/y			
r. Cobalt, Total (7440-48-4)		X	< .1	< 378.5						mg/l	mg/y			
s. Iron, Total (7439-89-6)	X		.28	1.1						mg/l	g/y			
t. Magnesium, Total (7439-95-4)	X		3	11.4						mg/l	g/y			
u. Molybdenum, Total (7439-98-7)	X		.042	159.0						mg/l	mg/y			
v. Manganese, Total (7439-96-5)	X		.007	26.5						mg/l	mg/y			
w. Tin, Total (7440-31-5)		X	< .050	< 189.2						mg/l	mg/y			
x. Titanium, Total (7440-32-6)		X	< .004	< 15.1						mg/l	mg/y			

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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	b. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	< .050	< 18.9						mg/l	mg/y			
2M. Arsenic, Total (7440-38-2)			X	< .002	< 757.0						mg/l	ug/y			
3M. Beryllium, Total, 7440-41-7)			X	< .001	< 378.5						mg/l	ug/y			
4M. Cadmium, Total (7440-43-9)			X	< .010	< 3.8						mg/l	mg/y			
5M. Chromium, Total (7440-47-3)		X		.071	26.9						mg/l	mg/y			
6M. Copper, Total (7440-50-8)		X		.032	12.1						mg/l	mg/y			
7M. Lead, Total (7439-92-1)			X	< .050	< 18.9						mg/l	mg/y			
8M. Mercury, Total (7439-97-6)		X		.0002	75.7						mg/l	ug/y			
9M. Nickel, Total (7440-02-0)		X		.11	41.6						mg/l	mg/y			
10M. Selenium, Total (7782-49-2)			X	< .001	< 378.5						mg/l	ug/y			
11M. Silver, Total (7440-22-4)			X	< .010	< 3.8						mg/l	mg/y			
12M. Thallium, Total (7440-28-0)			X	< .4	< 151.4						mg/l	mg/y			
13M. Zinc, Total (7440-66-6)		X		.097	36.7						mg/l	mg/y			
14M. Cyanide, Total (57-12-5)		X		.12	45.4						mg/l	mg/y			
15M. Phenols, Total			X	< .01	< 3.8						mg/l	mg/y			
DIOXIN															
2,3,7,8 Tetra chlorodibenzo P Dioxin (1764 01-6)			X	DESCRIBE RESULTS											

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 ASSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	b. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X	< .005	< 18.9						mg/l	mg/y			
4V. Bis (Chloromethyl) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X	< .005	< 18.9						mg/l	mg/y			
6V. Carbon Tetrachloride (56-23-5)			X	< .005	< 18.9						mg/l	mg/y			
7V. Chlorobenzene (108-90-7)			X	< .005	< 18.9						mg/l	mg/y			
8V. Chlorodibromomethane (124-48-1)			X	< .005	< 18.9						mg/l	mg/y			
9V. Chloroethane (75-00-3)			X	< .010	< 37.9						mg/l	mg/y			
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X	< .005	< 18.9						mg/l	mg/y			
12V. Dichlorobromomethane (75-27-4)			X	< .005	< 18.9						mg/l	mg/y			
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X	< .005	< 18.9						mg/l	mg/y			
15V. 1,2-Dichloroethane (107-06-2)			X	< .005	< 18.9						mg/l	mg/y			
16V. 1,1-Dichloroethylene (75-35-4)			X	< .005	< 18.9						mg/l	mg/y			
17V. 1,2-Dichloropropane (78-87-5)			X	< .005	< 18.9						mg/l	mg/y			
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X	< .005	< 18.9						mg/l	mg/y			
20V. Methyl Bromide (74-83-9)			X	< .010	< 37.9						mg/l	mg/y			
21V. Methyl Chloride (74-87-3)			X	< .010	< 37.9						mg/l	mg/y			

EPA I.D. NUMBER (copy from Item 1 of Form 1) **NM0890010515** OUTFALL NUMBER **05A063**

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

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	B. TEST ING. RE- QUIR- ED	D. BE- LIEVED PRE- SENT	C. BE- LIEVED AB- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	8. LONG TERM AVERAGE VALUE		b. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)			X	< .005	< 18.9						mg/l	mg/y			
23V. 1,1,2,2-Tetra- chloroethane (79-34-8)			X	< .005	< 18.9						mg/l	mg/y			
24V. Tetrachloro- ethylene (127-18-4)			X	< .005	< 18.9						mg/l	mg/y			
25V. Toluene (108-88-3)			X	< .005	< 18.9						mg/l	mg/y			
26V. 1,2-Trans- Dichloroethylene (156-60-8)			X	< .005	< 18.9						mg/l	mg/y			
27V. 1,1,1-Tri- chloroethane (71-55-6)		X		.006	22.7						mg/l	mg/y			
28V. 1,1,2-Tri- chloroethane (79-00-5)			X	< .005	< 18.9						mg/l	mg/y			
29V. Trichloro- ethylene (79-01-8)			X	< .005	< 18.9						mg/l	mg/y			
30V. Trichloro- fluoromethane (75-69-4)		X		.0084	31.8						mg/l	mg/y			
31V. Vinyl Chloride (75-01-4)			X	< .010	< 37.9						mg/l	mg/y			
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-67-8)			X	< .010	< 37.9						mg/l	mg/y			
2A. 2,4-Dichloro- phenol (120-83-2)			X	< .010	< 37.9						mg/l	mg/y			
3A. 2,4-Dimethyl- phenol (105-67-8)			X	< .010	< 37.9						mg/l	mg/y			
4A. 4,6-Dinitro-O- Cresol (834-52-1)			X	< .010	< 37.9						mg/l	mg/y			
5A. 2,4-Dinitro- phenol (51-28-5)			X	< .010	< 37.9						mg/l	mg/y			
6A. 2-Nitrophenol (88-75-5)			X	< .010	< 37.9						mg/l	mg/y			
7A. 4-Nitrophenol (100-02-7)			X	< .010	< 37.9						mg/l	mg/y			
8A. P-Chloro-M- Cresol (59-50-7)			X	< .010	< 37.9						mg/l	mg/y			
9A. Pentachloro- phenol (87-86-5)			X	< .010	< 37.9						mg/l	mg/y			
10A. Phenol (108-95-2)			X	< .010	< 37.9						mg/l	mg/y			
11A. 2,4,6-Tri- chlorophenol (88-06-2)			X	< .010	< 37.9						mg/l	mg/y			

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	b. MAXIMUM DAILY VALUE		d. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	< .010	< 37.9						mg/l	g/d			
2B. Acenaphthylene (208-96-8)			X	< .010	< 37.9						mg/l	g/d			
3B. Anthracene (120-12-7)			X	< .010	< 37.9						mg/l	g/d			
4B. Benzidine (92-87-5)			X	< .010	< 37.9						mg/l	g/d			
5B. Benzo (a) Anthracene (56-95-9)			X	< .010	< 37.9						mg/l	g/d			
6B. Benzo (a) Pyrene (50-32-8)			X	< .010	< 37.9						mg/l	g/d			
7B. 3,4-Benzofluoranthene (205-99-2)			X	< .010	< 37.9						mg/l	g/d			
8B. Benzo (ghi) Perylene (191-24-2)			X	< .010	< 37.9						mg/l	g/d			
9B. Benzo (k) Fluoranthene (207-08-9)			X	< .010	< 37.9						mg/l	g/d			
10B. Bis (2-Chloroethoxy) Methane (111-91-1)			X	< .010	< 37.9						mg/l	g/d			
11B. Bis (2-Chloroethyl) Ether (111-44-4)			X	< .010	< 37.9						mg/l	g/d			
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)			X	< .010	< 37.9						mg/l	g/d			
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)			X	< .010	< 37.9						mg/l	g/d			
14B. 4-Bromophenyl Phenyl Ether (101-85-3)			X	< .010	< 37.9						mg/l	g/d			
15B. Butyl Benzyl Phthalate (85-68-7)			X	< .010	< 37.9						mg/l	g/d			
16B. 2-Chloronaphthalene (91-58-7)			X	< .010	< 37.9						mg/l	g/d			
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)			X	< .010	< 37.9						mg/l	g/d			
18B. Chrysene (218-01-9)			X	< .010	< 37.9						mg/l	g/d			
19B. Dibenzo (a,h) Anthracene (53-70-3)			X	< .010	< 37.9						mg/l	g/d			
20B. 1,2-Dichlorobenzene (95-50-1)			X	< .010	< 37.9						mg/l	g/d			
21B. 1,3-Dichlorobenzene (541-73-1)			X	< .010	< 37.9						mg/l	g/d			

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST REQ. QUIR. LB	b. OF. PRE. SENT	c. OF. DIS. SENT	b. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANAL. YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANAL. YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)			X	< .010	< 37.9						mg/l	mg/y			
23B. 3,3'-Dichlorobenzidine (91-94-1)			X	< .010	< 37.9						mg/l	mg/y			
24B. Diethyl Phthalate (84-86-2)			X	< .010	< 37.9						mg/l	mg/y			
25B. Dimethyl Phthalate (131-11-3)			X	< .010	< 37.9						mg/l	mg/y			
26B. Di-N-Butyl Phthalate (84-74-2)			X	< .010	< 37.9						mg/l	mg/y			
27B. 2,4-Dinitrotoluene (121-14-2)			X	< .010	< 37.9						mg/l	mg/y			
28B. 2,6-Dinitrotoluene (806-20-2)			X	< .010	< 37.9						mg/l	mg/y			
29B. Di-N-Octyl Phthalate (117-84-0)			X	< .010	< 37.9						mg/l	mg/y			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X	< .010	< 37.9						mg/l	mg/y			
31B. Fluoranthene (206-44-0)			X	< .010	< 37.9						mg/l	mg/y			
32B. Fluorene (86-73-7)			X	< .010	< 37.9						mg/l	mg/y			
33B. Hexachlorobenzene (118-74-1)			X	< .010	< 37.9						mg/l	mg/y			
34B. Hexachlorobutadiene (87-68-3)			X	< .010	< 37.9						mg/l	mg/y			
35B. Hexachlorocyclopentadiene (77-47-4)			X	< .010	< 37.9						mg/l	mg/y			
36B. Hexachloroethane (67-72-1)			X	< .010	< 37.9						mg/l	mg/y			
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X	< .010	< 37.9						mg/l	mg/y			
38B. Isophorone (78-59-1)			X	< .010	< 37.9						mg/l	mg/y			
39B. Naphthalene (91-20-3)			X	< .010	< 37.9						mg/l	mg/y			
40B. Nitrobenzene (98-95-3)			X	< .010	< 37.9						mg/l	mg/y			
41B. N-Nitrosodimethylamine (62-76-9)			X	< .010	< 37.9						mg/l	mg/y			
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	< .010	< 37.9						mg/l	mg/y			

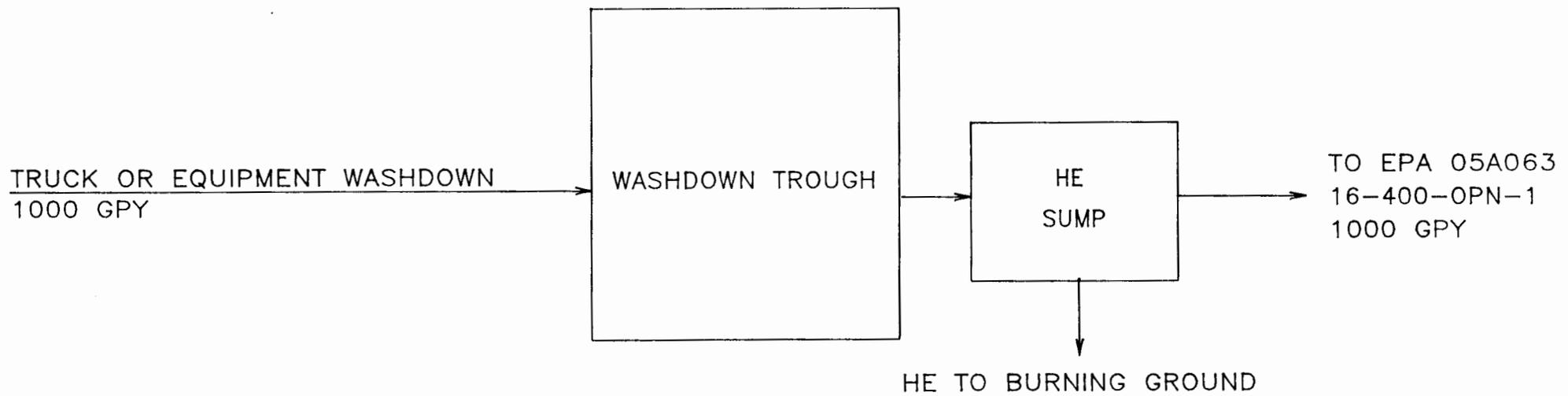
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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	B. TESTING REQUIRED	D. BELIEVED PRESENT	C. BELIEVED ABSENT	8. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	8. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitrosodiphenylamine (86-30-6)			X	< .010	< 37.9						mg/l	mg/y			
44B. Phenanthrene (85-01-8)			X	< .010	< 37.9						mg/l	mg/y			
45B. Pyrene (129-00-0)			X	< .010	< 37.9						mg/l	mg/y			
46B. 1,2,4-Trichlorobenzene (120-82-1)			X	< .010	< 37.9						mg/l	mg/y			
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)			X	< .06	< 227.1						ug/l	ug/y			
2P. α-BHC (319-84-6)			X	< 1.0	< 3.8						ug/l	mg/y			
3P. β-BHC (319-85-7)			X	< .4	< 1.5						ug/l	mg/y			
4P. γ-BHC (58-89-9)			X	< .12	< 454.2						ug/l	ug/y			
5P. δ-BHC (319-86-8)			X	< .24	< 908.4						ug/l	ug/y			
6P. Chlordane (57-74-9)			X	< .25	< 946.2						ug/l	ug/y			
7P. 4,4'-DDT (50-29-3)			X	< .06	< 227.1						ug/l	ug/y			
8P. 4,4'-DDE (72-86-9)			X	< .08	< 302.8						ug/l	ug/y			
9P. 4,4'-DDD (72-84-8)			X	< .08	< 302.8						ug/l	ug/y			
10P. Dieldrin (60-87-1)			X	< .08	< 302.8						ug/l	ug/y			
11P. β-Endosulfan (115-29-7)			X	< .05	< 189.2						ug/l	ug/y			
12P. β-Endosulfan (115-29-7)			X	< .08	< 302.8						ug/l	ug/y			
13P. Endosulfan Sulfate (1031-07-8)			X	< .09	< 340.7						ug/l	ug/y			
14P. Endrin (72-20-8)			X	< .06	< 227.1						ug/l	ug/y			
15P. Endrin Aldehyde (7421-93-2)			X	< .31	< 1.2						ug/l	mg/y			
16P. Heptachlor (76-44-8)			X	< .15	< 567.8						ug/l	ug/y			

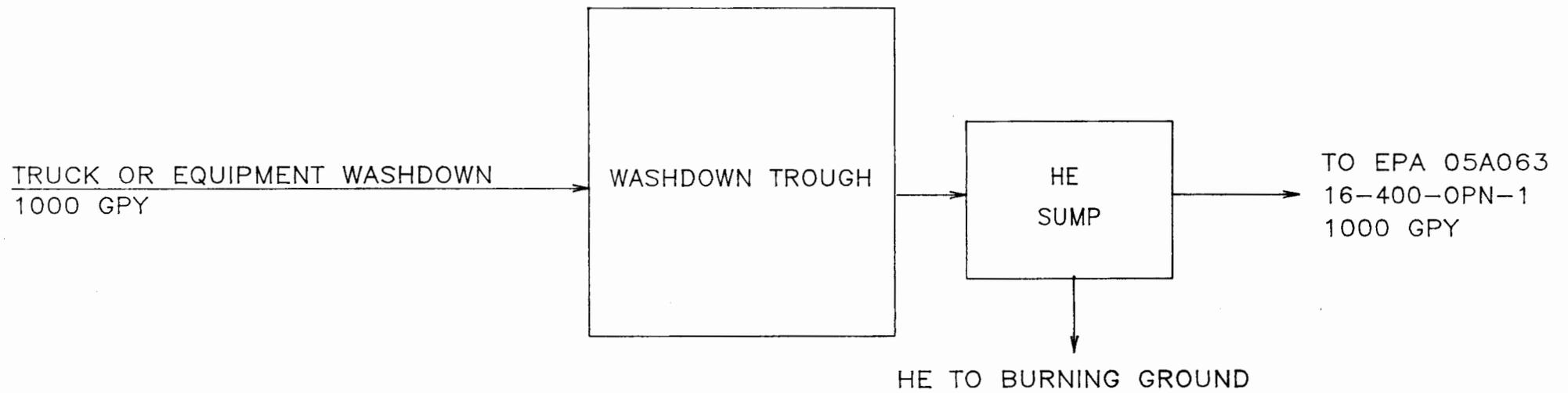
CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT				4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. RECEIVED PRESENT	C. BELIEVED ABSENT	8. MAXIMUM DAILY VALUE		9. MAXIMUM 30 DAY VALUE (if available)		10. LONG TERM AVG. VALUE (if available)		D. NO. OF ANALYSES	E. LONG TERM AVERAGE VALUE		F. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)													
17P. Heptachlor Epoxide (1024-57-3)			X	< .08	< 302.8						ug/l	ug/y	
18P. PCB-1242 (53469-21-9)			X	< 2.0	< 7.6						ug/l	mg/y	
19P. PCB-1254 (11097-69-1)			X	< 2.0	< 7.6						ug/l	mg/y	
20P. PCB-1221 (11104-28-2)			X										
21P. PCB-1232 (11141-16-5)			X										
22P. PCB-1248 (12672-29-6)			X										
23P. PCB-1260 (11096-82-5)			X	< 2.0	< 7.6						ug/l	mg/y	
24P. PCB 1016 (12674-11-2)			X										
25P. Toxaphene (8001-35-2)			X	< 2.5	< 9.5						ug/l	mg/y	

SCHEMATIC OF WATER FLOW OUTFALL 05A063



SCHEMATIC OF WATER FLOW OUTFALL 05A063



B. 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 III-A. 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.

C. Except for storm runoff, leaks, or spills, will any of the discharges described in item III-A be intermittent or seasonal?

Yes (complete the following table) No (go to item IV)

Outfall Number	1. Frequency		2. Flow		
	a. Days Per Week (specify average)	b. Months Per Year (specify average)	a. Maximum Daily Flow Rate (in mgd)	b. Maximum Total Volume (specify with units)	c. Duration (in days)
16-280-OPN-3	5	12	0.00024	2 GPM	0.08

IV. Production

If there is an applicable production-based effluent guideline or NSPS, for each outfall list the estimated level of production (projection of actual production level, not design), expressed in the terms and units used in the applicable effluent guideline or NSPS, for each of the first 3 years of operation. If production is likely to vary, you may also submit alternative estimates (attach a separate sheet).

Year	a. Quantity Per Day	b. Units of Measure	c. Operation, Product, Material, etc (specify)
NONE			

NM0890010515

C. Use the space below to list any of the pollutants listed in Table 2D-3 of the instructions which you know or have reason to believe will be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it will be present.

1. Pollutant	2. Reason for Discharge
NONE	

VI. Engineering Report on Wastewater Treatment

A. If there is any technical evaluation concerning your wastewater treatment, including engineering reports or pilot plant studies, check the appropriate box below.

 Report Available No Report

B. Provide the name and location of any existing plant(s) which, to the best of your knowledge, resembles this production facility with respect to production processes, wastewater constituents, or wastewater treatments.

Name	Location
NONE	

VII. Other Information (Optional)

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations for the proposed facility. Attach additional sheets if necessary.

NA

VIII. 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 and Official Title (type or print)

JERRY L. BELLOWS, DOE AREA MANAGER

ALLEN J. TIEDMAN, ASSOC. DIRECTOR FOR OPERATIONS

B. Phone No.

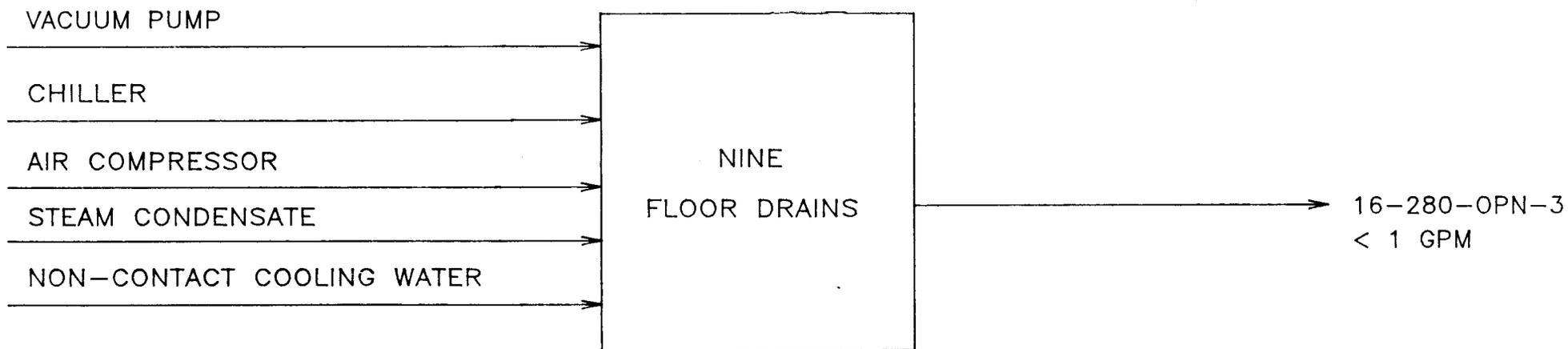
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505-667-9390

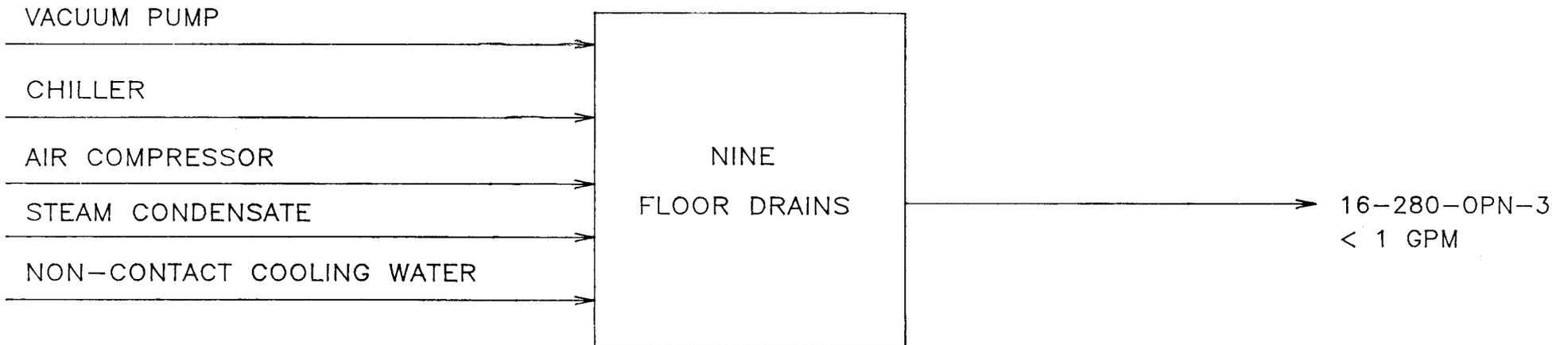
C. Signature

D. Date Signed

SCHEMATIC OF WATER FLOW OUTFALL 16-280-OPN-3



SCHEMATIC OF WATER FLOW OUTFALL 16-280-OPN-3



DYE STUDY REPORT FOR BUILDINGS
 16-362, 16-363, 16-370, 16-372, 16-386, 16-387, 16-388,
 16-389, 16-390, 16-392, 16-394, 16-399, 16-401, 16-402,
 16-406, 16-439, 16-477, 16-478, 16-1365, AND 16-1409
 COMPILED BY ENGINEERING AND INFORMATION RESOURCES (WX-12)

BUILDINGS 89, 90, 91, 92, and 93--These buildings are abandoned and were never dye tested.

BUILDING 280--Field investigated September 28, 1990.

DRAIN No	DRAIN LOCATION	END OF PIPE
1FD1-1FD6	RM 1	16-280-OPN-2 These floor drains are covered. The interconnections were verified in the basement.
1FD7	RM 4	16-280-OPN-2 sanitary sewer
1SD1	RM 1	16-280-OPN-2 sanitary sewer
1SD2	RM 2	16-280-OPN-2 sanitary sewer
SPD1	Sump	16-280-OPN-1 EPA outlet 05A061
BFD2	Basement	16-280-OPN-3
BFD7	Basement	16-280-OPN-3
BFD9	Basement	16-280-OPN-3
RD1	Roof Drain	16-280-OPN-1 EPA outlet 05A061
RD2	Roof Drain	16-280-OPN-1 EPA outlet 05A061

BUILDING 281--Field investigated September 28, 1990.

There is not a water source available to do the dye testing. The end of pipe location could not be located during the investigation.

BUILDING 283--Field investigated September 28, 1990.

There is not a water source available to do the dye testing. The end of pipe location could not be located during the investigation.

BUILDING 285--Field investigated September 28, 1990.

There is not a water source available to do the dye testing. The end of pipe location could not be located during the investigation.

BUILDINGS 282, 284, 287, AND 288

These buildings are passageways and do not have any floor drains.

BUILDING 286--Field investigated September 28, 1990.

This building was not dye tested. The toilet and sink are connected to the sanitary sewer system

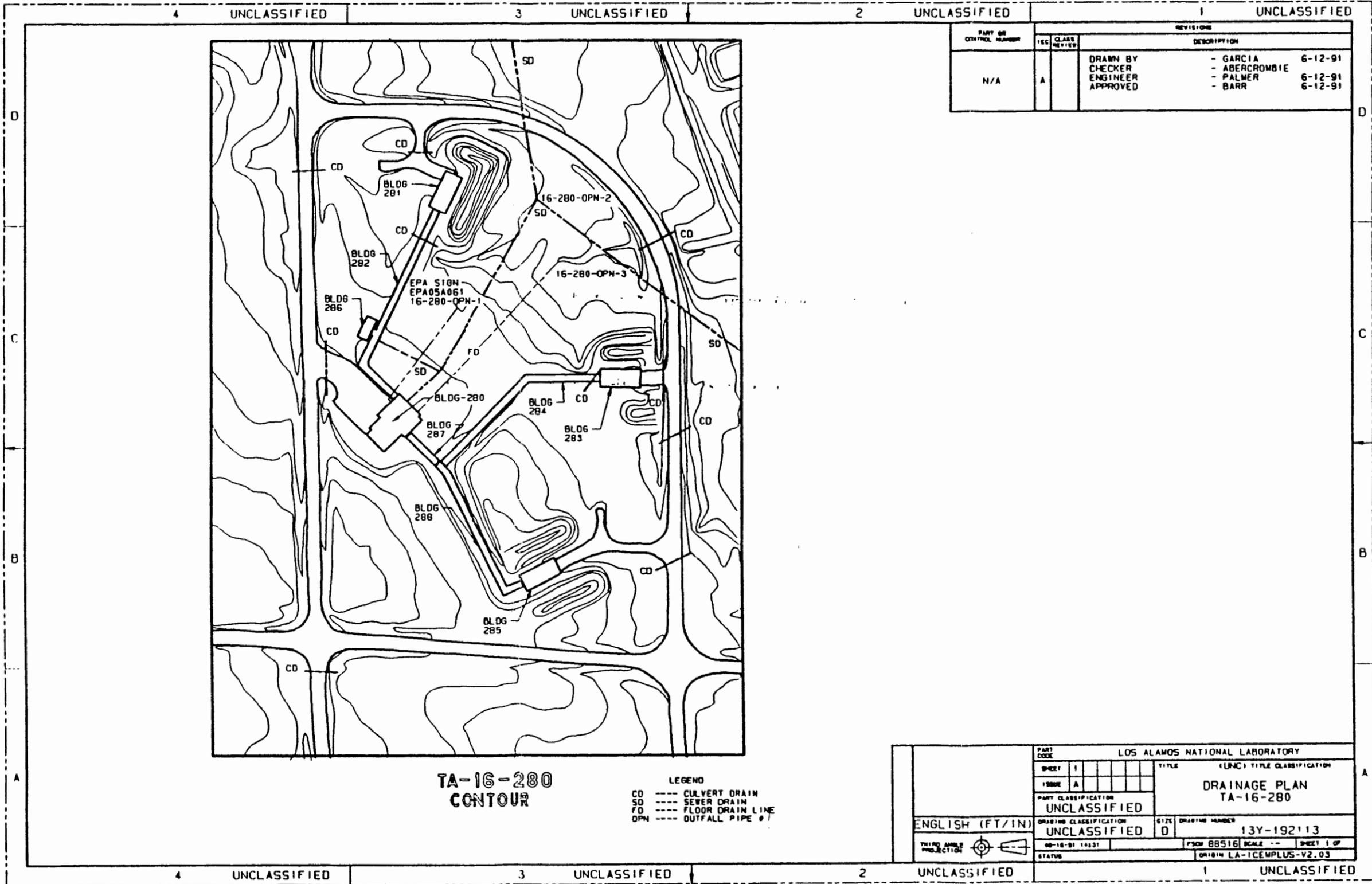
BUILDING 400--Field investigated September 14, 1990.

DRAIN No	DRAIN LOCATION	END OF PIPE
SPD1	Sump	16-400-OPN-1 EPA outfall 05A063
RD1-RD2	Roof Drains	16-400-OPN-2 Located the end of pipe without dye testing.

TA-28 and TA-37--Field investigated on June 13, 1991.

None of the buildings located at these Technical Areas are connected to the water or sanitary utility system. No further investigation was required for these buildings.

4 UNCLASSIFIED	3 UNCLASSIFIED	2 UNCLASSIFIED	1 UNCLASSIFIED																																
13Y 192113 000 1 13Y 192113 000 2 13Y 192113 000 3 13Y 192113 000 4 13Y 192113 000 5 13Y 192113 000 6 13Y 192113 000 7 13Y 192113 000 8		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align:left;">PART OR CONTROL NUMBER</th> <th style="text-align:left;">ISS</th> <th style="text-align:left;">CLASS REVIEW</th> <th style="text-align:left;">DESCRIPTION</th> <th style="text-align:left;">DATE</th> </tr> <tr> <td style="text-align:center;">N/A</td> <td style="text-align:center;">A</td> <td></td> <td> DRAWN BY - GARCIA CHECKER - ABERCROMBIE ENGINEER - PALMER APPROVED - BARR </td> <td> 6-12-91 6-12-91 6-12-91 </td> </tr> </table>		PART OR CONTROL NUMBER	ISS	CLASS REVIEW	DESCRIPTION	DATE	N/A	A		DRAWN BY - GARCIA CHECKER - ABERCROMBIE ENGINEER - PALMER APPROVED - BARR	6-12-91 6-12-91 6-12-91																						
PART OR CONTROL NUMBER	ISS	CLASS REVIEW	DESCRIPTION	DATE																															
N/A	A		DRAWN BY - GARCIA CHECKER - ABERCROMBIE ENGINEER - PALMER APPROVED - BARR	6-12-91 6-12-91 6-12-91																															
TA - 16 - 280 INDEX SHEET																																			
13Y 192113 000 1 ROOF DRAINAGE PLAN 13Y 192113 000 2 FIRST FLOOR PLUMBING AND DRAIN PLAN 13Y 192113 000 3 BASEMENT FLOOR PLUMBING AND DRAIN PLAN 13Y 192113 000 4 ROOF DRAIN PLAN 13Y 192113 000 5 POTENTIAL EFFLUENT 13Y 192113 000 6 ELECTRICAL HAZARD CLASSIFICATION ZONE 13Y 192113 000 7 FIRST FLOOR EVACUATION PLAN 13Y 192113 000 8 BASEMENT EVACUATION PLAN		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="4" style="text-align:center;">LOS ALAMOS NATIONAL LABORATORY</td> </tr> <tr> <td style="text-align:left;">PART CODE</td> <td style="text-align:left;">SHEET 0</td> <td style="text-align:left;">TITLE</td> <td style="text-align:left;">(UNC) TITLE CLASSIFICATION</td> </tr> <tr> <td></td> <td style="text-align:left;">ISSUE A</td> <td></td> <td style="text-align:left;">INDEX SHEET TA-16-280</td> </tr> <tr> <td colspan="2" style="text-align:left;">PART CLASSIFICATION UNCLASSIFIED</td> <td colspan="2"></td> </tr> <tr> <td colspan="2" style="text-align:left;">DRAWING CLASSIFICATION UNCLASSIFIED</td> <td style="text-align:left;">SIZE 0</td> <td style="text-align:left;">DRAWING NUMBER 13Y-192113</td> </tr> <tr> <td colspan="2" style="text-align:left;">ENGLISH (FT/IN)</td> <td colspan="2"></td> </tr> <tr> <td colspan="2" style="text-align:left;">THIRD ANGLE PROJECTION </td> <td style="text-align:left;">99-16-91 14129</td> <td style="text-align:left;">FORM 88516 SCALE 1/1 SHEET 0 OF</td> </tr> <tr> <td colspan="2" style="text-align:left;">STATUS</td> <td colspan="2" style="text-align:left;">ORIGIN LA-1CEMPLUS-V2.03</td> </tr> </table>		LOS ALAMOS NATIONAL LABORATORY				PART CODE	SHEET 0	TITLE	(UNC) TITLE CLASSIFICATION		ISSUE A		INDEX SHEET TA-16-280	PART CLASSIFICATION UNCLASSIFIED				DRAWING CLASSIFICATION UNCLASSIFIED		SIZE 0	DRAWING NUMBER 13Y-192113	ENGLISH (FT/IN)				THIRD ANGLE PROJECTION		99-16-91 14129	FORM 88516 SCALE 1/1 SHEET 0 OF	STATUS		ORIGIN LA-1CEMPLUS-V2.03	
LOS ALAMOS NATIONAL LABORATORY																																			
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STATUS		ORIGIN LA-1CEMPLUS-V2.03																																	
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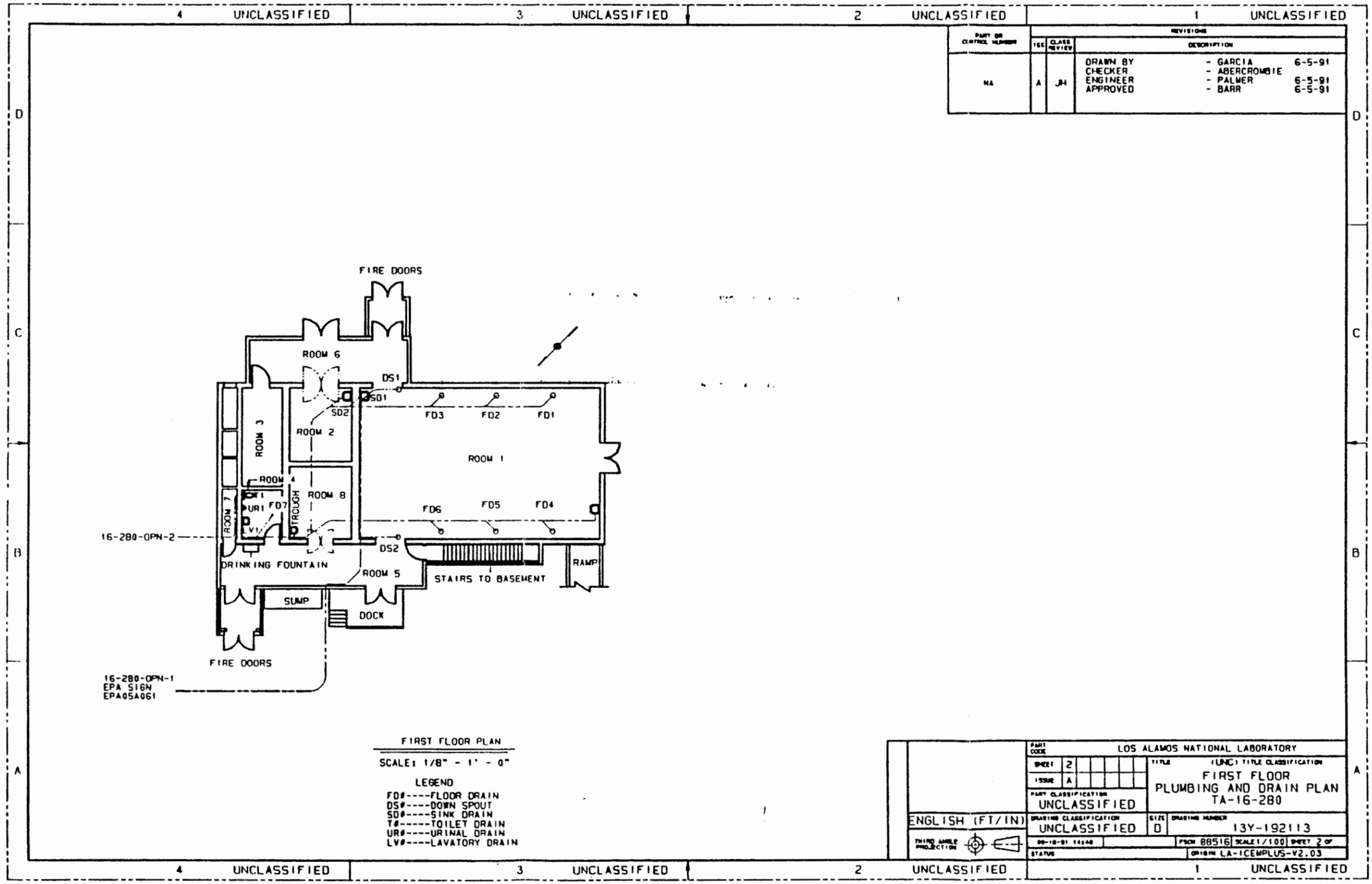


PART OR OTHER NUMBER	REVISIONS		
	ISS	CLASS REVIEW	DESCRIPTION
N/A	A		DRAWN BY - GARCIA 6-12-91 CHECKER - ABERCROMBIE 6-12-91 ENGINEER - PALMER 6-12-91 APPROVED - BARR 6-12-91

TA-16-280
CONTOUR

LEGEND
 CD --- CULVERT DRAIN
 SD --- SEWER DRAIN
 FD --- FLOOR DRAIN LINE
 OPN --- OUTFALL PIPE

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	1	TITLE	(UNC) TITLE CLASSIFICATION
ISSUE	A	DRAINAGE PLAN TA-16-280	
PART CLASSIFICATION		UNCLASSIFIED	
DRAWING CLASSIFICATION		SIZE	DRAWING NUMBER
UNCLASSIFIED		D	13Y-192113
THIRD ANGLE PROJECTION		60-16-91 10231	PSOP 88516 SCALE -- SHEET 1 OF
STATUS		ORIGIN LA-TCEMPLUS-V2.03	



PART OR CONTROL NUMBER	ISS	CLASS REVIEW	REVISIONS	
			DESCRIPTION	DATE
NA	A	JA	DRAWN BY	- GARCIA 6-5-91
			CHECKER	- ABERCROMBIE 6-5-91
			ENGINEER	- PALMER 6-5-91
			APPROVED	- BARR 6-5-91

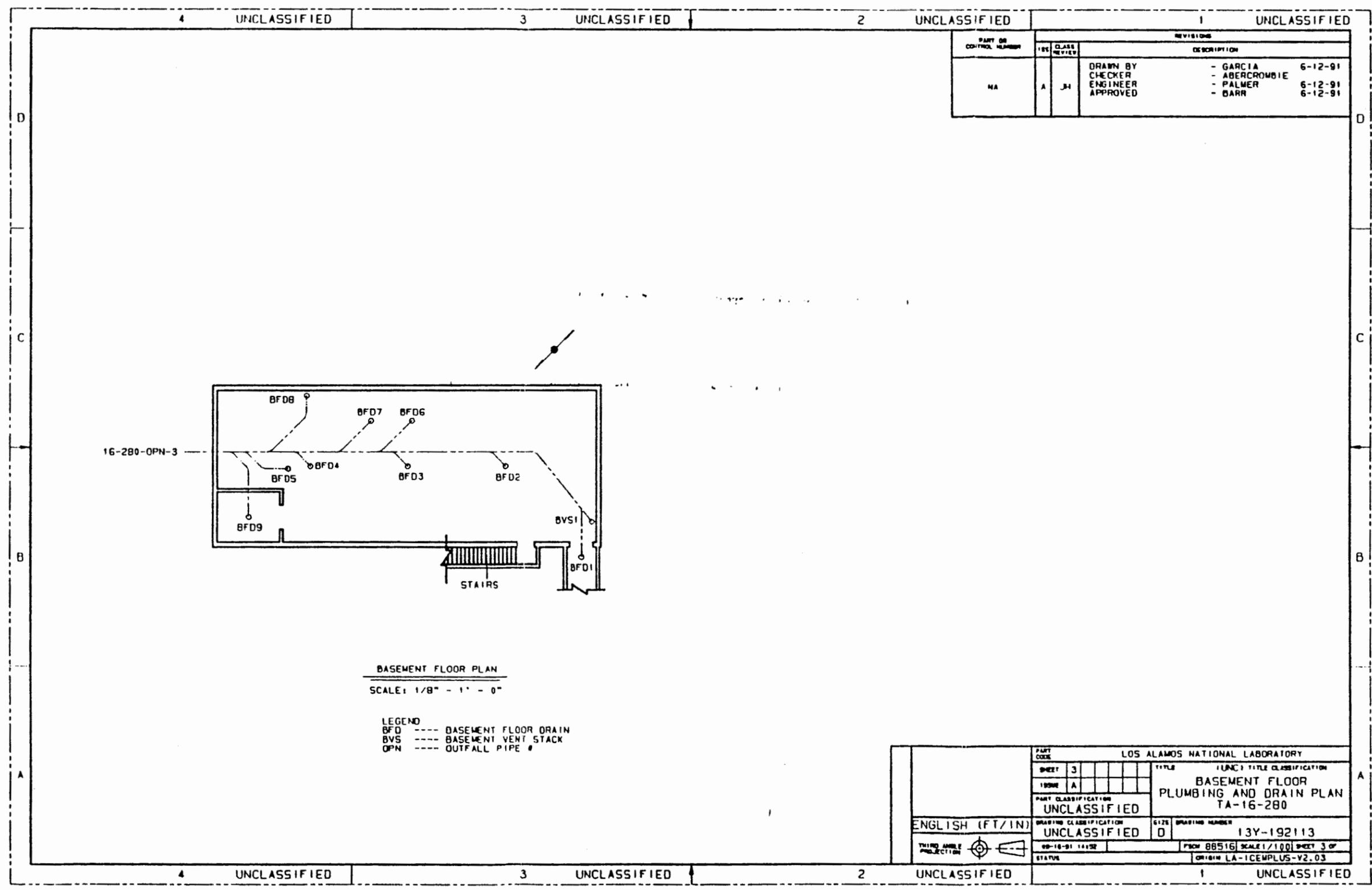
FIRST FLOOR PLAN

SCALE: 1/8" = 1' - 0"

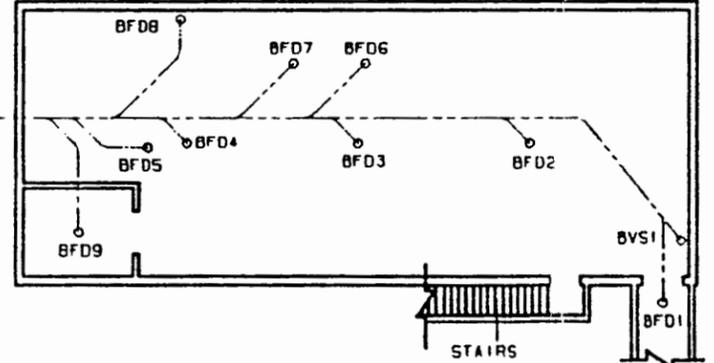
LEGEND

- FD#----FLOOR DRAIN
- DS#----DOWN SPOUT
- SD#----SINK DRAIN
- T#----TOILET DRAIN
- UR#----URINAL DRAIN
- LV#----LAVATORY DRAIN

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	2	TITLE	(UNC) TITLE CLASSIFICATION
ISSUE	A	FIRST FLOOR PLUMBING AND DRAIN PLAN TA-16-280	
PART CLASSIFICATION		UNCLASSIFIED	
DRAWING CLASSIFICATION		UNCLASSIFIED	SIZE
ENGLISH (FT/IN)		D	DRAWING NUMBER
THIRD ANGLE PROJECTION			13Y-192113
DATE		09-18-91 10240	PNCH 88516 SCALE 1/100 SHEET 2 OF
STATUS			ORIGIN LA-1CEPLUS-V2.03



16-280-OPN-3

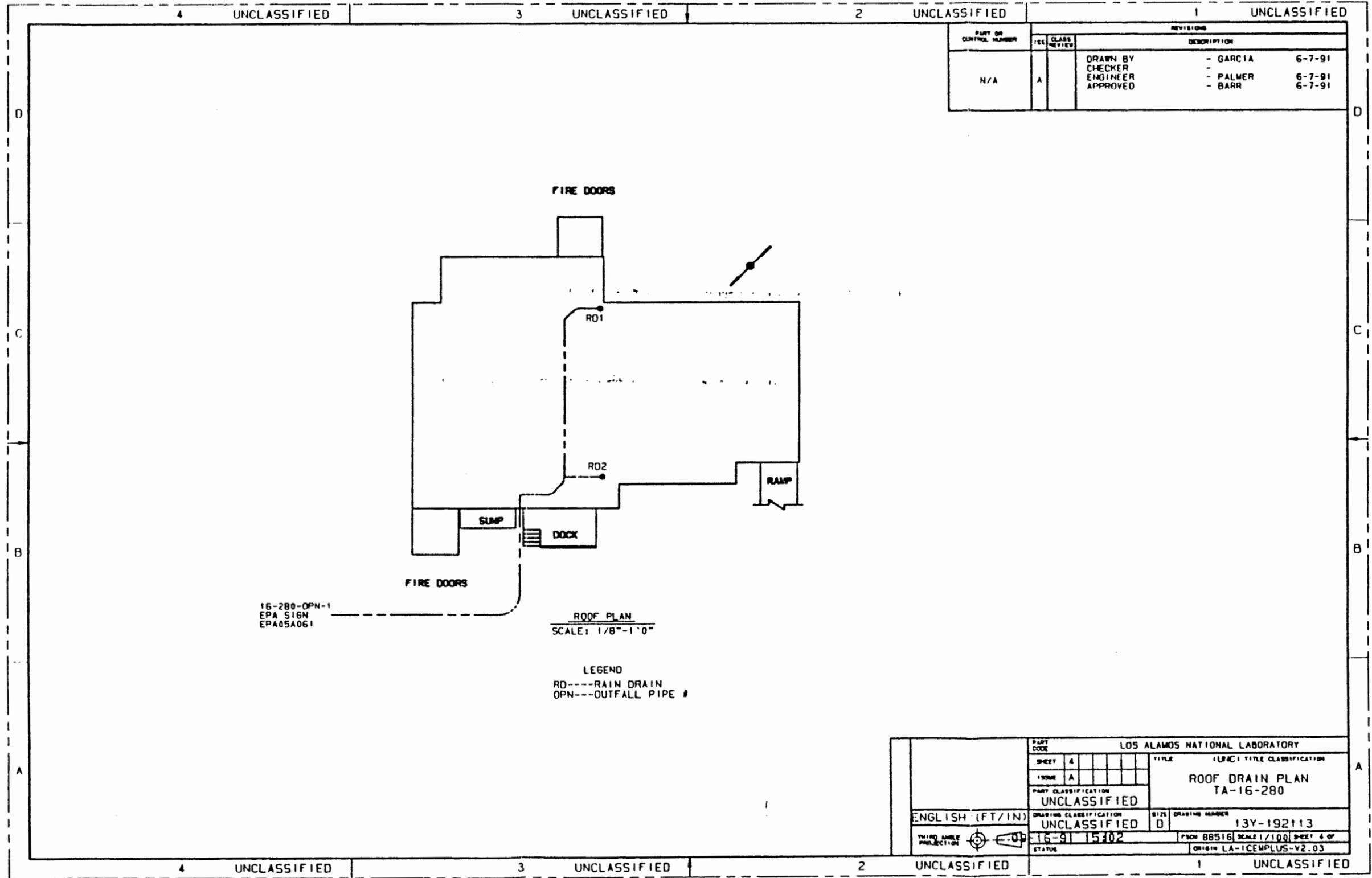


BASEMENT FLOOR PLAN
SCALE: 1/8" = 1' - 0"

LEGEND
 BFD ---- BASEMENT FLOOR DRAIN
 BVS ---- BASEMENT VENT STACK
 OPN ---- OUTFALL PIPE #

PART OR CONTROL NUMBER	REV	CLASS	REVISIONS	
			REVIEWER	DESCRIPTION
NA	A	JH	DRAWN BY	- GARCIA 6-12-91
			CHECKER	- ABERCROMBIE 6-12-91
			ENGINEER	- PALMER 6-12-91
			APPROVED	- BARR 6-12-91

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	3	TITLE	UNCL TITLE CLASSIFICATION
ISSUE	A	BASEMENT FLOOR PLUMBING AND DRAIN PLAN	
PART CLASSIFICATION		TA-16-280	
UNCLASSIFIED		DRAWING CLASSIFICATION	SIZE
UNCLASSIFIED		UNCLASSIFIED	D
ENGLISH (FT/IN)		DRAWING NUMBER	
THIRD ANGLE PROJECTION		13Y-192113	
STATUS		FROM	SCALE
		88-16-91 1A152	1/100
		SHEET 3 OF	
		ORIGIN LA-1CEPLUS-V2.03	



PART OR CONTROL NUMBER	ISS	CLASS REVIEW	REVISIONS		
			DESCRIPTION		
N/A	A		DRAWN BY	- GARCIA	6-7-91
			CHECKER	- PALMER	6-7-91
			ENGINEER APPROVED	- BARR	6-7-91

LOS ALAMOS NATIONAL LABORATORY			
SHEET	4	TITLE	(UNCL) TITLE CLASSIFICATION
ISSUE	A	ROOF DRAIN PLAN TA-16-280	
PART CLASSIFICATION		SIZE	DRAWING NUMBER
UNCLASSIFIED		0	13Y-192113
DRAWING CLASSIFICATION		FROM 88516 SCALE 1/100 SHEET 4 OF	
UNCLASSIFIED		16-91 15302	ORIGIN LA-ICEMPLUS-V2.03
STATUS			

4 UNCLASSIFIED	3 UNCLASSIFIED	2 UNCLASSIFIED	1 UNCLASSIFIED																																																																																																								
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BLDG. OUTFALL NO.	BLDG. ROOM NO.	DRAIN NO.	POTENTIAL EFFLUENT																																																																																																								
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16-280-OPN-3	BASEMENT	BF01	H2O-W																																																																																																								
"	"	BF02	H2O-W																																																																																																								
"	"	BF03	H2O-W, H2O-1, OIL																																																																																																								
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16-280-OPN-1	ROOF	RD2	H2O-R																																																																																																								
4 UNCLASSIFIED	3 UNCLASSIFIED	2 UNCLASSIFIED	1 UNCLASSIFIED																																																																																																								

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	5	TITLE	(UNC) TITLE CLASSIFICATION
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DRAWING CLASSIFICATION		SIZE	DRAWING NUMBER
UNCLASSIFIED		D	13Y-192113
ENGLISH (FT/IN)		FROM 88516 SCALE 1/1 SHEET 5 OF	
THIRD ANGLE PROJECTION		STATUS	
		ORIGIN LA-1CEPLUS-V2.03	

4 UNCLASSIFIED 3 UNCLASSIFIED 2 UNCLASSIFIED 1 UNCLASSIFIED

PART OR CONTROL NUMBER	ISS	CLASS REVIEW	REVISIONS		
			DESCRIPTION	DATE	
N/A	A	J.H.	DRAWN BY CHECKER ENGINEER APPROVED	- VISEL - ABERCROMBIE - PALMER - PALMER	5-22-91

TA-16-281 INDEX SHEET

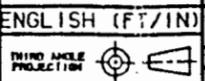
- 13Y-192131 SHT 1----SITE DRAINAGE PLAN
- 13Y-192131 SHT 2----FIRST FLOOR PLUMBING DRAIN PLAN
- 13Y-192131 SHT 3----ROOF PLAN
- 13Y-192131 SHT 4----POTENTIAL EFFLUENT

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	0	TITLE	(U) TITLE CLASSIFICATION
ISSUE	A	INDEX SHEET TA-16-281	
PART CLASSIFICATION		SIZE	DRAWING NUMBER
UNCLASSIFIED		D	13Y-192131
DRAWING CLASSIFICATION		FROM 88516 SCALE 1/1 SHEET 0 OF -	
UNCLASSIFIED		ORIGIN LA-ICEMPLUS-V2.03	
STATUS		98-23-91 12100	

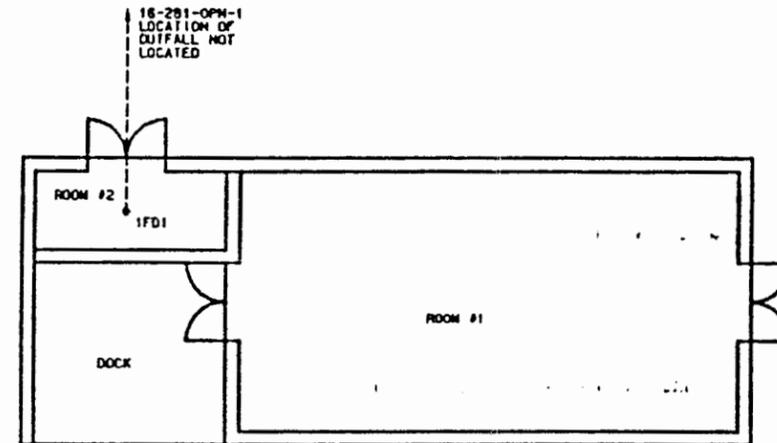
4 UNCLASSIFIED 3 UNCLASSIFIED 2 UNCLASSIFIED 1 UNCLASSIFIED

D
C
B
A

D
C
B
A



PART OR CONTROL NUMBER	REVISIONS		
	ISS	CLASS REVIEW	DESCRIPTION
X	A		DRAWN BY - E. MONTAYA 10/18/90
			CHECKER - ADERCROMBIE 9-21-91
			ENGINEER - D. PALMER
			APPROVED - PALMER



FIRST FLOOR

LEGEND
1FDI----FLOOR DRAIN

PART CODE				LOS ALAMOS NATIONAL LABORATORY			
SHEET 2				TITLE (UNC) TITLE CLASSIFICATION			
ISSUE A				FLOOR DRAIN TA-16-281			
PART CLASSIFICATION UNCLASSIFIED				DRAWING NUMBER 13Y-192131			
DRAWING CLASSIFICATION UNCLASSIFIED				SIZE C		STATUS	
ENGLISH (FT/IN)		09-23-91 11:08		PSCN 08516 SCALE		SHEET 2 OF	
THIRD ANGLE PROJECTION				ORIGIN LA-ICEPLUS-V2.03			

UNCLASSIFIED 4

3

2

1 UNCLASSIFIED

PART OR CONTROL NUMBER	CLASS		REVISIONS
	ISS	REVIEW	DESCRIPTION
N/A	A	LS	DRAWN BY - E. MONTOYA 10/25/90 CHECKER - ABERCROMBIE 9-21-91 ENGINEER - D. PALMER APPROVED - PALMER

D

D

C

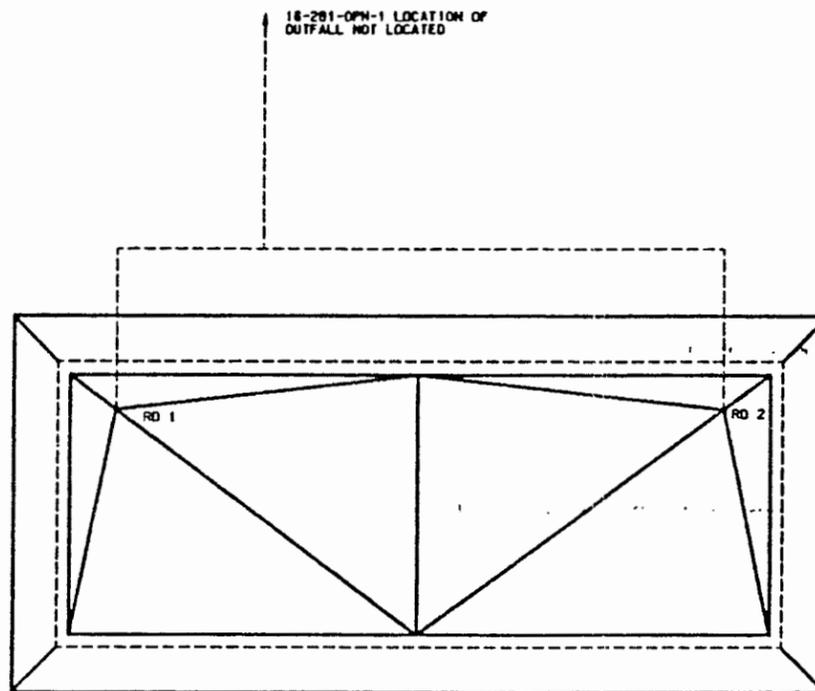
C

B

B

A

A



ROOF

LEGEND

RD----RAIN DRAIN

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	3	TITLE (UNC) TITLE CLASSIFICATION	
ISSUE	A	ROOF DRAIN PLAN TA-16-281	
PART CLASSIFICATION		DRAWING NUMBER	
UNCLASSIFIED		13Y-192131	
DRAWING CLASSIFICATION		SIZE	STATUS
UNCLASSIFIED		C	09-23-91 11:15
THIRD ANGLE PROJECTION		FSCM 80516	SCALE SHEET 3 OF
		ORIGIN LA-ICEMPLUS-V2.03	

UNCLASSIFIED 4

3

2

1 UNCLASSIFIED

4 UNCLASSIFIED 3 UNCLASSIFIED 2 UNCLASSIFIED 1 UNCLASSIFIED

PART OR CONTROL NUMBER	ISS	CLASS REVIEW	REVISIONS	
			DESCRIPTION	
N/A	A	J.H.	DRAWN BY CHECKER ENGINEER APPROVED	- VISEL 5-22-91 - ABERCROMBIE 9-21-91 - PALMER - PALMER

TA - 16 - 283

INDEX SHEET

- 13Y-192132 SHT 1----SITE DRAINAGE PLAN
- 13Y-192132 SHT 2----FIRST FLOOR PLUMBING DRAIN PLAN
- 13Y-192132 SHT 3----ROOF PLAN
- 13Y-192132 SHT 4----POTENTIAL EFFLUENT

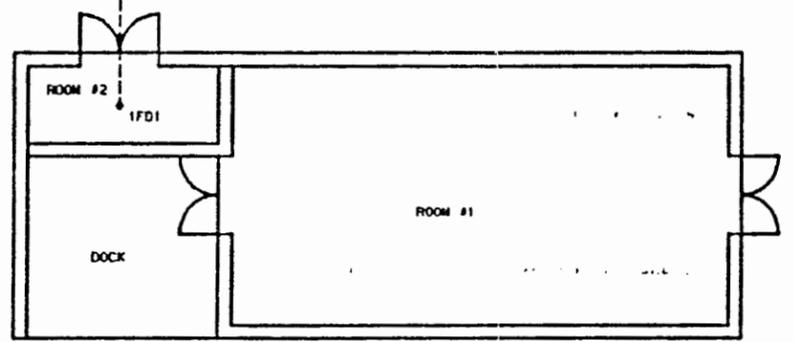
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DRAWING CLASSIFICATION		SIZE	DRAWING NUMBER
UNCLASSIFIED		D	13Y-192132
ENGLISH (FT/IN)		98-23-91 12:04	
THIRD ANGLE PROJECTION 		PSOM 88516	SCALE 1/1 SHEET 0 OF -
STATUS		ORIGIN LA-1CEMPLUS-V2.03	

4 UNCLASSIFIED 3 UNCLASSIFIED 2 UNCLASSIFIED 1 UNCLASSIFIED

UNCLASSIFIED 4 3 2 1 UNCLASSIFIED

PART OR CONTROL NUMBER	REVISIONS		DESCRIPTION
	ISS	CLASS REVIEW	
X	A		DRAWN BY - E. MONTOYA 10/18/90
			CHECKER - ABERCROMBIE 9-21-91
			ENGINEER - D. PALMER
			APPROVED - PALMER

16-283-OPN-1
LOCATION OF
DRAIN NOT
LOCATED



FIRST FLOOR

LEGEND
1FD1----FLOOR DRAIN

A

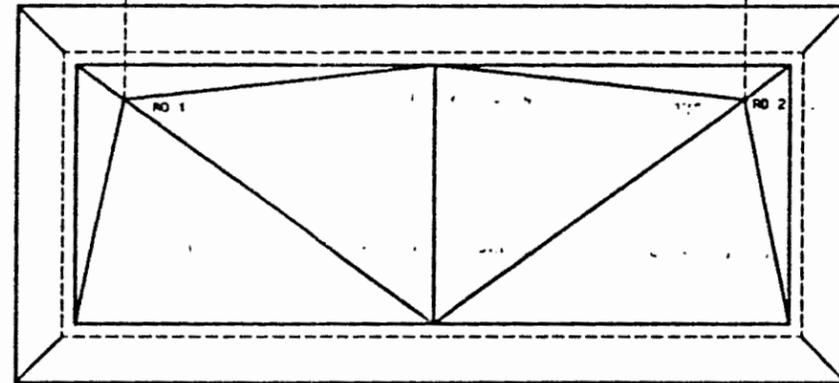
PART CODE		LOS ALAMOS NATIONAL LABORATORY			
SHEET	2	TITLE		(UNC) TITLE CLASSIFICATION	
ISSUE	A	FLOOR DRAIN		TA-16-283	
PART CLASSIFICATION		UNCLASSIFIED			
DRAWING CLASSIFICATION		SIZE	DRAWING NUMBER		
UNCLASSIFIED		C	13Y-192132		
THIRD ANGLE PROJECTION		09-23-91 12111	FSDM B0516	SCALE	SHEET 2 OF
STATUS		ORIGIN LA-1CEPLUS-V2.03			

UNCLASSIFIED 4 3 2 1 UNCLASSIFIED

UNCLASSIFIED 4 3 2 1 UNCLASSIFIED

PART OR CONTROL NUMBER	CLASS REVIEW		REVISIONS	
	ISS	CLASS REVIEW	DESCRIPTION	
N/A	A	LS	DRAWN BY	- E. MONTAYA 10/25/90
			CHECKER	- ABERCROMBIE 9-21-91
			ENGINEER	- D. PALMER
			APPROVED	-

16-283-OPN-1
LOCATION OF
OUTFALL NOT
LOCATED



ROOF

LEGEND

RD#-----ROOF DRAIN

LOS ALAMOS NATIONAL LABORATORY			
PART CODE	ISSUE	SIZE	TITLE
	3	C	(UNC) TITLE CLASSIFICATION
PART CLASSIFICATION		ROOF DRAIN PLAN	
UNCLASSIFIED		TA-16-283	
DRAWING CLASSIFICATION		DRAWING NUMBER	
UNCLASSIFIED		13Y-192132	
ENGLISH (FT/IN)	DATE	SCALE	SHEET 3 OF -
THIRD ANGLE PROJECTION	09-23-91 12:08	FSCM 89516	ORIGIN LA-1CEMPLUS-V2.03

UNCLASSIFIED 4 3 2 1 UNCLASSIFIED

4 UNCLASSIFIED 3 UNCLASSIFIED 2 UNCLASSIFIED 1 UNCLASSIFIED

PART OR CONTROL NUMBER	REVISIONS	
	ISS	DESCRIPTION
N/A	A	J.H. DRAWN BY CHECKER ENGINEER APPROVED - VISEL 5-22-91 - ABERCROMBIE 9-21-91 - PALMER - PALMER

TA-16-285 INDEX SHEET

- 13Y-192133 SHT 1----SITE DRAINAGE PLAN
- 13Y-192133 SHT 2----FIRST FLOOR PLUMBING DRAIN PLAN
- 13Y-192133 SHT 3----ROOF PLAN
- 13Y-192133 SHT 4----POTENTIAL EFFLUENT

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET 0		TITLE (U) TITLE CLASSIFICATION	
ISSUE A		INDEX SHEET TA-16-285	
PART CLASSIFICATION		DRAWING CLASSIFICATION	
UNCLASSIFIED		UNCLASSIFIED	
ENGLISH (FT/IN)		SIZE	DRAWING NUMBER
		D	13Y-192133
THIRD ANGLE PROJECTION		FROM 88516 SCALE 1/1 SHEET 0 OF -	
STATUS		ORIGIN LA-ICEMPLUS-V2.03	

4 UNCLASSIFIED 3 UNCLASSIFIED 2 UNCLASSIFIED 1 UNCLASSIFIED

UNCLASSIFIED 4

3

2

1 UNCLASSIFIED

PART OR CONTROL NUMBER	REVISIONS		DESCRIPTION
	ISS	CLASS REVIEW	
X	A		DRAWN BY - E. MONTOYA 10/18/90 CHECKER - ABERCROMBIE 9-21-91 ENGINEER - D. PALMER APPROVED - PALMER

D

D

C

C

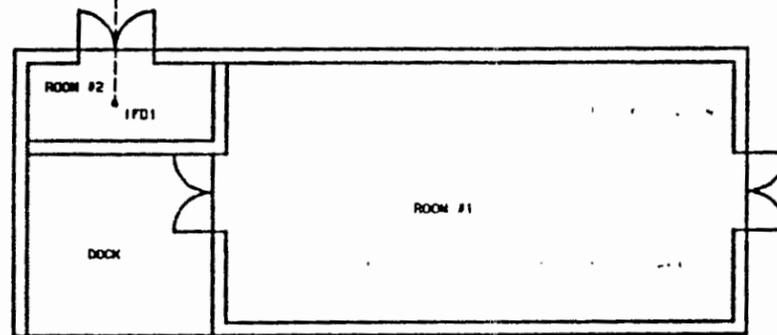
B

B

A

A

16-285-OPN-1
 LOCATION OF
 OUTFALL NOT
 LOCATED



FIRST FLOOR

LEGEND
 1FD1 FLOOR DRAIN

PART CODE		LOS ALAMOS NATIONAL LABORATORY	
SHEET	2	TITLE	(UNC) TITLE CLASSIFICATION
ISSUE	A	FLOOR DRAIN TA-16-285	
PART CLASSIFICATION		UNCLASSIFIED	
DRAWING CLASSIFICATION		SIZE	DRAWING NUMBER
UNCLASSIFIED		C	13Y-192133
THIRD ANGLE PROJECTION		09-26-91 12:28	FSCN 88516 SCALE SHEET 2 OF
STATUS		ORIGIN LA-ICEMPLUS-V2.03	

UNCLASSIFIED 4

3

2

1 UNCLASSIFIED

UNCLASSIFIED 4

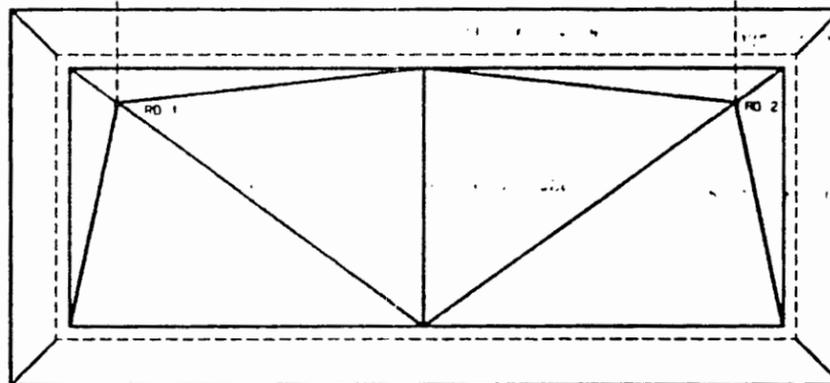
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2

UNCLASSIFIED 1

PART OR CONTROL NUMBER	CLASS REVIEW		DESCRIPTION
	ISS	REVIEW	
N/A	A	LS	DRAWN BY E. MONTDIA 10/25/90 CHECKER ADERCPOMTIE 3 21 91 ENGINEER D. PALMER APPROVED PALMER

16-285-OPN-1
 LOCATION OF
 OUTFALL NOT
 LOCATED



ROOF

LEGEND

RD----RAIN DRAIN

LOS ALAMOS NATIONAL LABORATORY			
PART CODE	SHEET 3	TITLE	UNC1 TITLE CLASSIFICATION
ISSUE A		ROOF DRAIN PLAN	TA-16-285
PART CLASSIFICATION	UNCLASSIFIED	SIZE	DRAWING NUMBER
DRAWING CLASSIFICATION	UNCLASSIFIED	C	13Y-192133
ENGLISH (FT/IN)	09-26-91 11117	750M 88516	SCALE SHEET 3 OF -
THIRD ANGLE PROJECTION	STATUS	ORIGIN	LA-1CEPLUS-V2.03

UNCLASSIFIED 4

3

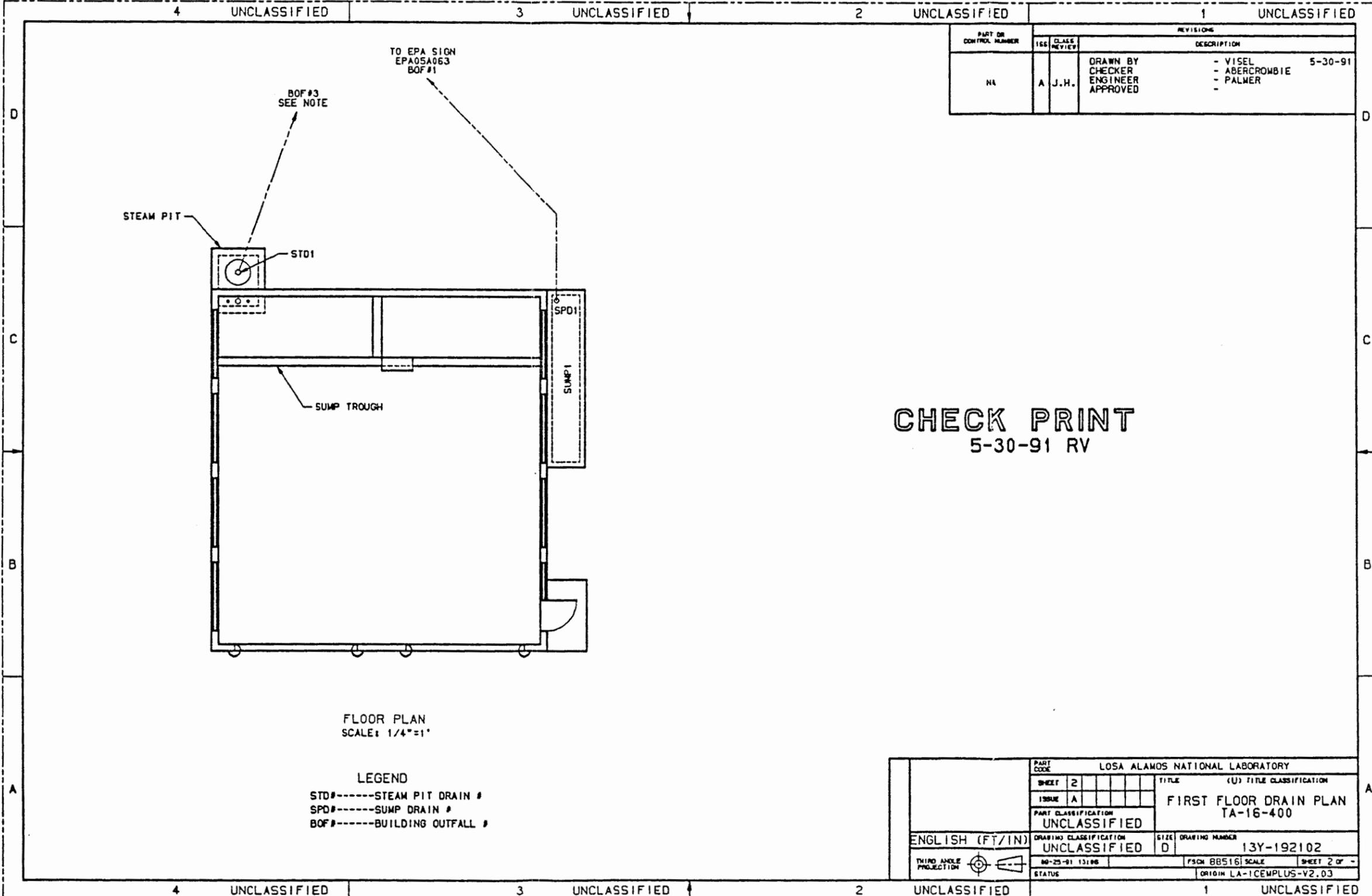
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UNCLASSIFIED 1

4 UNCLASSIFIED	3 UNCLASSIFIED	2 UNCLASSIFIED	1 UNCLASSIFIED								
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:15%;">PART OR CONTROL NUMBER</th> <th style="width:5%;">ISS</th> <th style="width:10%;">CLASS REVIEW</th> <th style="width:70%;">REVISIONS DESCRIPTION</th> </tr> <tr> <td style="text-align:center;">N/A</td> <td style="text-align:center;">A</td> <td style="text-align:center;">J.H.</td> <td> DRAWN BY CHECKER ENGINEER APPROVED - VISEL - ABERCROMBIE - PALMER 5-28-91 </td> </tr> </table>		PART OR CONTROL NUMBER	ISS	CLASS REVIEW	REVISIONS DESCRIPTION	N/A	A	J.H.	DRAWN BY CHECKER ENGINEER APPROVED - VISEL - ABERCROMBIE - PALMER 5-28-91
PART OR CONTROL NUMBER	ISS	CLASS REVIEW	REVISIONS DESCRIPTION								
N/A	A	J.H.	DRAWN BY CHECKER ENGINEER APPROVED - VISEL - ABERCROMBIE - PALMER 5-28-91								
D			D								
C			C								
B	<h1 style="margin:0;">TA - 16 - 400</h1> <h2 style="margin:0;">INDEX SHEET</h2> <p style="margin:0;"> 13Y-192102 SHT 1----SITE DRAINAGE PLAN 13Y-192102 SHT 2----FIRST FLOOR PLUMBING DRAIN PLAN 13Y-192102 SHT 3----ROOF DRAIN PLAN 13Y-192102 SHT 4----POTENTIAL EFFLUENT 13Y-192102 SHT 5----FIRST FLOOR ELECTRICAL HAZARD PLAN 13Y-192102 SHT 6----FIRST FLOOR EVACUATION PLAN </p>		B								
A			A								
4 UNCLASSIFIED	3 UNCLASSIFIED	2 UNCLASSIFIED	1 UNCLASSIFIED								

CHECK PRINT
5-29-91

LOS ALAMOS NATIONAL LABORATORY	
SHEET 0	TITLE (U) TITLE CLASSIFICATION
ISSUE A	INDEX SHEET TA-16-400
PART CLASSIFICATION UNCLASSIFIED	
ENGLISH (FT/IN)	DRAWING CLASSIFICATION UNCLASSIFIED
SIZE 0	DRAWING NUMBER 13Y-192102
THIRD ANGLE PROJECTION	89-25-91 13114
STATUS	PSDW 88516 SCALE 1/1 SHEET 0 OF - ORIGIN LA-ICEMPLUS-V2.03



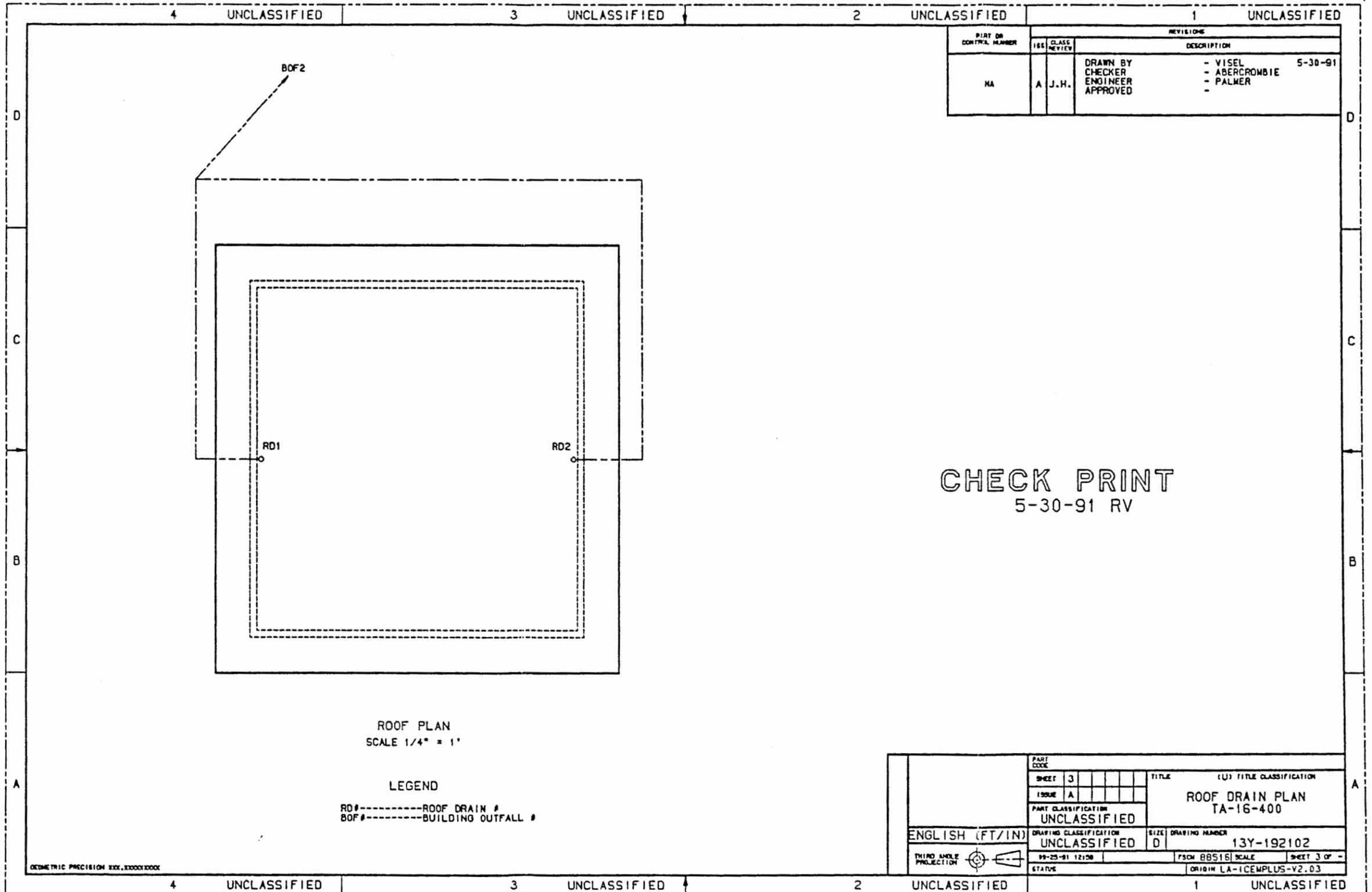
PART OR CONTROL NUMBER	ISSUE	CLASS REVIEW	REVISIONS	
			DESCRIPTION	
NA	A	J.H.	DRAWN BY CHECKER ENGINEER APPROVED	- VISEL - ABERCROMBIE - PALMER
				5-30-91

CHECK PRINT
5-30-91 RV

FLOOR PLAN
SCALE: 1/4"=1'

LEGEND
 STD#-----STEAM PIT DRAIN #
 SPD#-----SUMP DRAIN #
 BOF#-----BUILDING OUTFALL #

PART CODE				LOSA ALAMOS NATIONAL LABORATORY			
SHEET 2		ISSUE A		PART CLASSIFICATION UNCLASSIFIED		TITLE (U) TITLE CLASSIFICATION	
DRAWING CLASSIFICATION UNCLASSIFIED		SIZE D		DRAWING NUMBER 13Y-192102			
ENGLISH (FT/IN)		THIRD ANGLE PROJECTION		80-25-91 13100		FROM BB516 SCALE SHEET 2 OF -	
STATUS		ORIGIN LA-1CEPLUS-V2.03					



CHECK PRINT
5-30-91 RV

ROOF PLAN
SCALE 1/4" = 1'

LEGEND
RD#-----ROOF DRAIN #
BOF#-----BUILDING OUTFALL #

PART OR CONTROL NUMBER	ISSUE		REVISIONS		DATE
	ISS	CLASS REVIEW	DESCRIPTION		
NA	A	J.H.	DRAWN BY CHECKER ENGINEER APPROVED	- VISEL - ABERCROMBIE - PALMER	5-30-91

PART CODE		TITLE		(U) TITLE CLASSIFICATION	
SHEET	3	ROOF DRAIN PLAN		TA-16-400	
ISSUE	A	UNCLASSIFIED			
DRAWING CLASSIFICATION		SIZE	DRAWING NUMBER		
UNCLASSIFIED		D	13Y-192102		
ENGLISH (FT/IN)		STATUS		ORIGIN LA-ICEMPLUS-V2.03	
THIRD ANGLE PROJECTION		99-25-91 12150	PSCH 88516 SCALE		SHEET 3 OF -

ISO METRIC PRECISION XXX.XXXXXXXX

UNCLASSIFIED 4

3

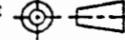
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1 UNCLASSIFIED

PART OR CONTROL NUMBER	REVISIONS	
	ISS	CLASS REVIEW
X	A	DRAWN BY CHECKER ENGINEER APPROVED
		- VISEL 11-7-90 - ABERCROMBIE - PALMER

BLDG OUTFALL NO	BLDG ROOM NO	DRAIN NO	POTENTIAL EFFLUENT
BOF1	SUMP	SPD1	H ₂ , OIL, WATER, DETERGENTS, SOLVENTS, BATTERY ACID
BOF2	ROOF	RD1	H ₂ O-R
BOF2	ROOF	RD2	H ₂ O-R
BOF3	STP	STP1	H ₂ , OIL, WATER, DETERGENTS, SOLVENTS, BATTERY ACID

CHECK PRINT 5-30-91 RV

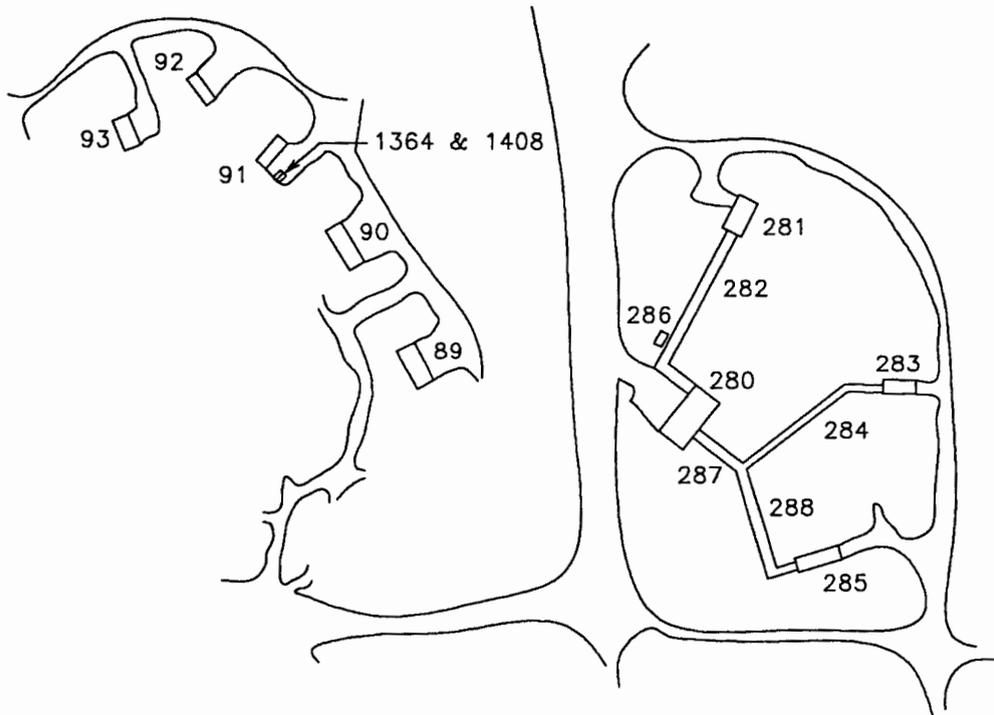
PART CODE		TITLE (UNC) TITLE CLASSIFICATION	
SHEET	4	DRAIN SCHEDULE TA-16-400	
ISSUE	A		
PART CLASSIFICATION UNCLASSIFIED		SIZE	DRAWING NUMBER 13Y-192102
ENGLISH (FT/IN)		DRAWING CLASSIFICATION UNCLASSIFIED	STATUS
THIRD ANGLE PROJECTION 		09-25-91 13110	FSCM 88516 SCALE 1/1 SHEET 4 OF - ORIGIN LA-1CEMPLUS-V2.03

UNCLASSIFIED 4

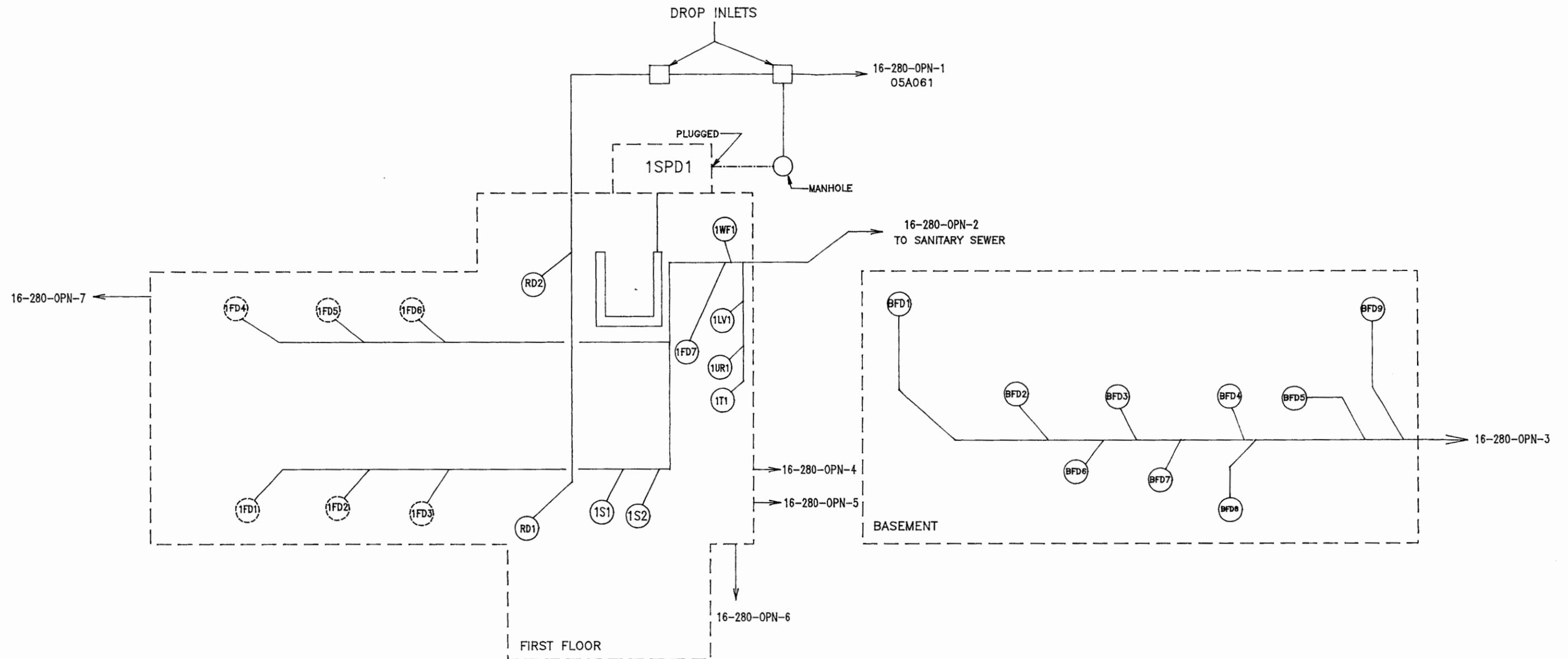
3

2

1 UNCLASSIFIED



SANTA FE ENGINEERING, LTD.			
TA 16-89/280 BUILDING PLOT PLAN		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/8/92
SUBMITTED		RECOMMENDED	
		APPROVED	
Los Alamos		Los Alamos National Laboratory Los Alamos, New Mexico 87545	
		SHEET	OF
CLASSIFICATION		REVIEWER	
REQUESTING DIVISION		DATE	
REQUESTING GROUP	LAB JOB NO.	DRAWING NO.	REV.
	11056-9	FIGURE 1	



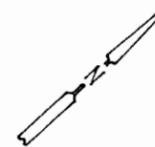
LEGEND

- FD - FLOOR DRAIN
- LV - LAVATORY
- PD - PIT DRAIN
- RD - ROOF DRAIN
- S - SINK
- SPD - SUMP DRAIN
- T - TOILET
- UR - URINAL
- WF - WATER FOUNTAIN

NOTES

NOTE 1 : THIS SCHEMATIC BASED ON DRAWINGS FROM WX-12 AND ENGINEERING DRAWINGS C-10999, C-11005, C-11017, C-11018, C-11048 AND R-2818

NOTE 2: DRAINS WITH DASHED CIRCLES ARE PLUGGED

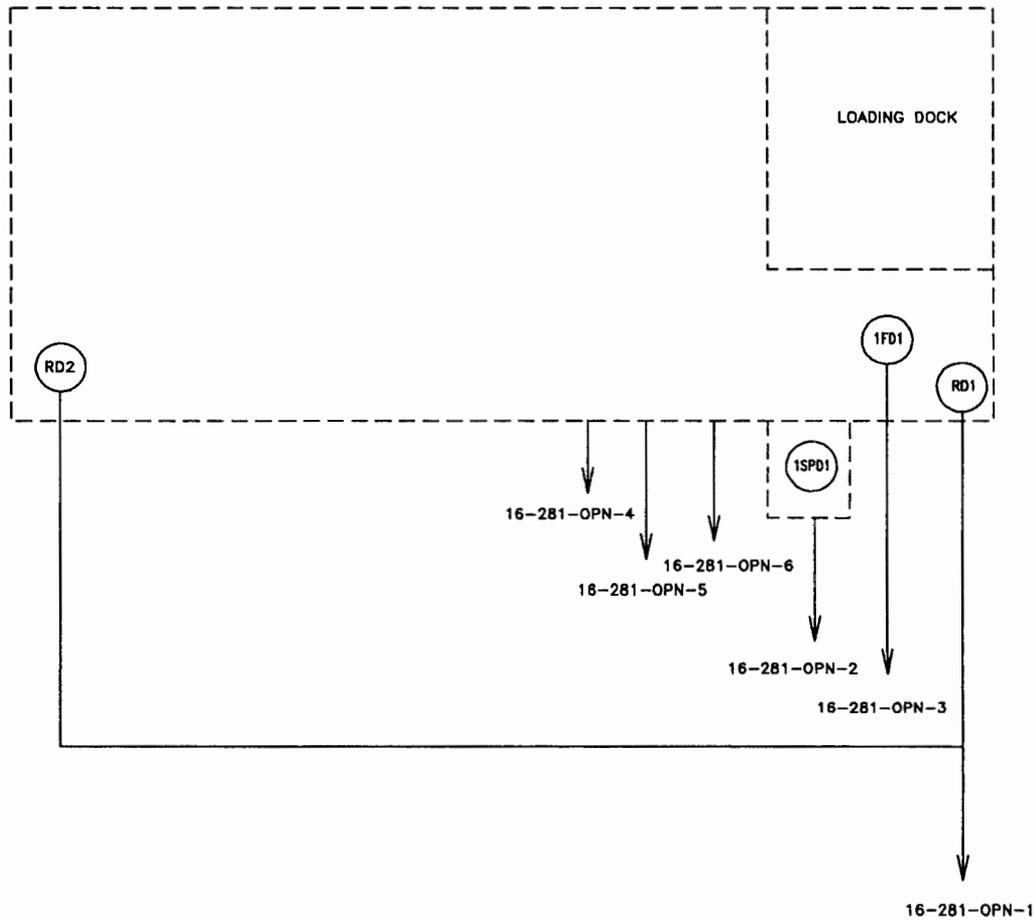


SANTA FE ENGINEERING, LTD.

TA 16-280 BUILDING
DRAIN SUMMARY

DRAWN	PEB
DESIGN	PEB
CHECKED	LBA
DATE	5/11/92

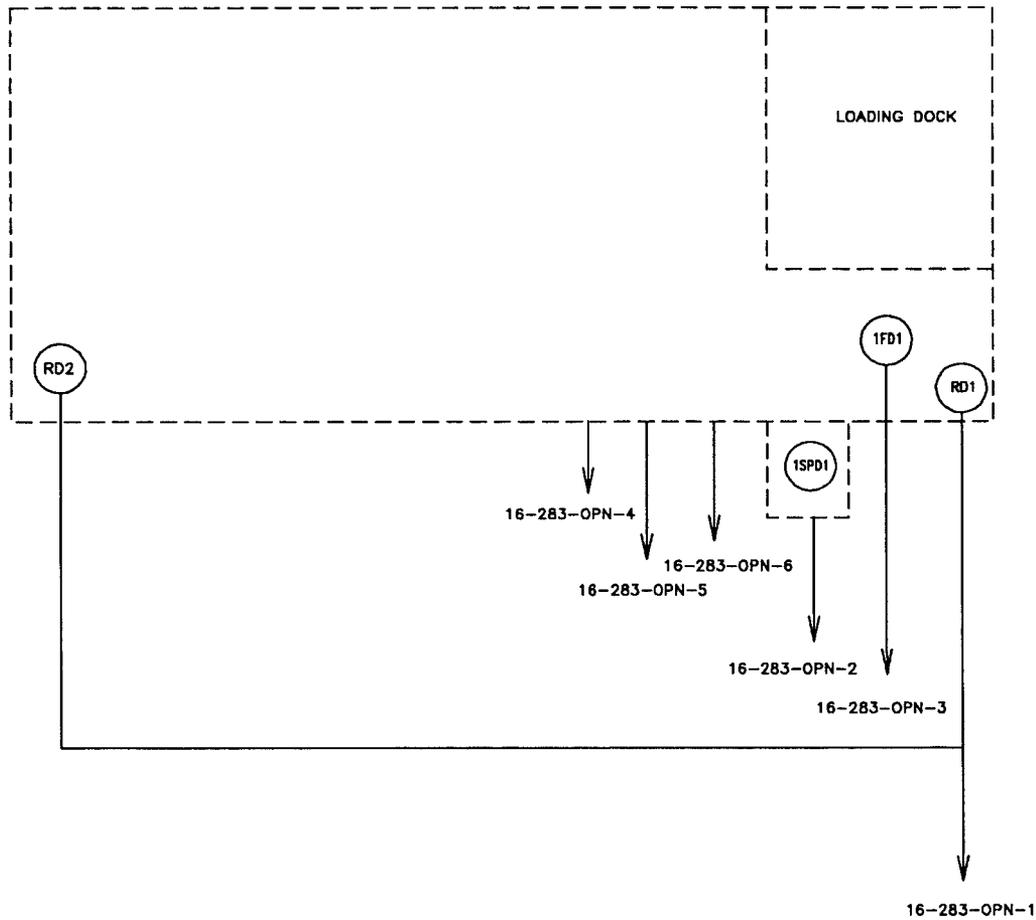
SUBMITTED	RECOMMENDED	APPROVED	SHEET	OF
Los Alamos Los Alamos National Laboratory Los Alamos, New Mexico 87545				
CLASSIFICATION	REVIEWER	DATE		
REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.		REV.
REQUESTING GROUP	11056-9	FIGURE 2		



LEGEND
 FD - FLOOR DRAIN
 RD - ROOF DRAIN
 SPD - SUMP DRAIN

NOTES
 NOTE 1 : THIS SCHEMATIC BASED
 ENGINEERING DRAWINGS
 C-11010, C-11012,
 C-41517, R-2820,
 R-2822 & R-2824

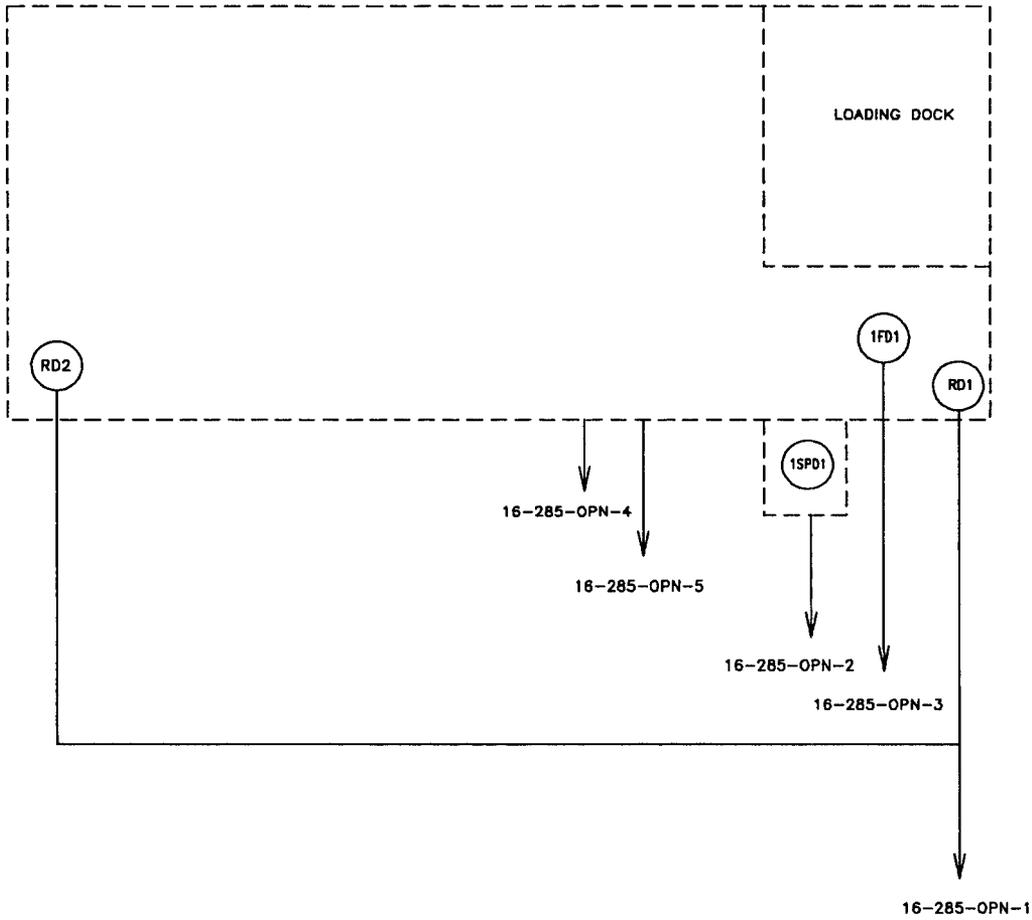
SANTA FE ENGINEERING, LTD.			
TA 16-281 BUILDING DRAIN SUMMARY		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/11/92
SUBMITTED		RECOMMENDED	APPROVED
Los Alamos		Los Alamos National Laboratory Los Alamos, New Mexico 87545	
CLASSIFICATION		REVIEWER	DATE
REQUESTING DIVISION	LAB JOB NO.	DRAWING NO.	REV.
REQUESTING GROUP	11056-9	FIGURE 3	
		SHEET	OF



LEGEND
 FD - FLOOR DRAIN
 RD - ROOF DRAIN
 SPD - SUMP DRAIN

NOTES
 NOTE 1 : THIS SCHEMATIC BASED
 ENGINEERING DRAWINGS
 C-11010, C-11012,
 C-41517, R-2820,
 R-2822 & R-2824

SANTA FE ENGINEERING, LTD.			
TA 16-283 BUILDING DRAIN SUMMARY		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/11/92
SUBMITTED		RECOMMENDED	
		APPROVED	
Los Alamos		Los Alamos National Laboratory Los Alamos, New Mexico 87545	
		SHEET	OF
CLASSIFICATION		REVIEWER	
REQUESTING DIVISION		DATE	
REQUESTING GROUP		LAB JOB NO.	DRAWING NO.
		11056-9	FIGURE 4
		REV.	

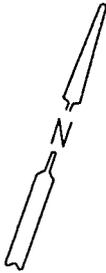


LEGEND

FD - FLOOR DRAIN
 RD - ROOF DRAIN
 SPD - SUMP DRAIN

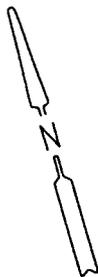
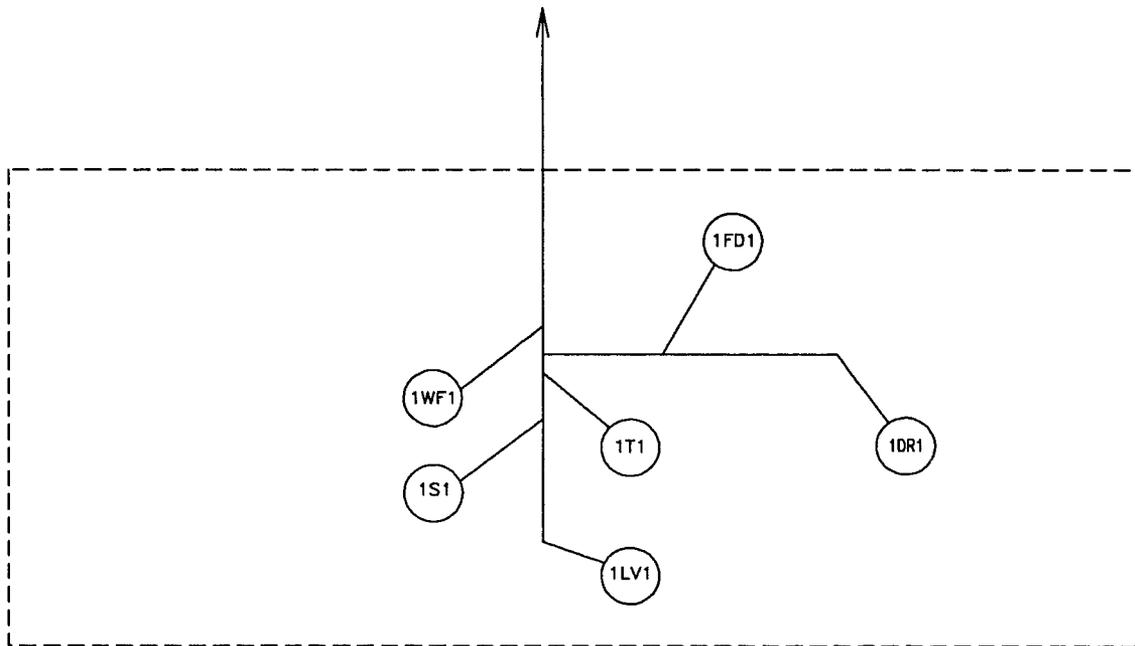
NOTES

NOTE 1 : THIS SCHEMATIC BASED
 ENGINEERING DRAWINGS
 C-11010, C-11012,
 C-41517, R-2820,
 R-2822 & R-2824



SANTA FE ENGINEERING, LTD.			
TA 16-285 BUILDING DRAIN SUMMARY		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/11/92
SUBMITTED	RECOMMENDED	APPROVED	
Los Alamos		Los Alamos National Laboratory Los Alamos, New Mexico 87545	
		SHEET	OF
CLASSIFICATION		REVIEWER	
REQUESTING DIVISION	LAB JOB NO.	DATE	
REQUESTING GROUP	11056-9	DRAWING NO. FIGURE 5	
		REV.	

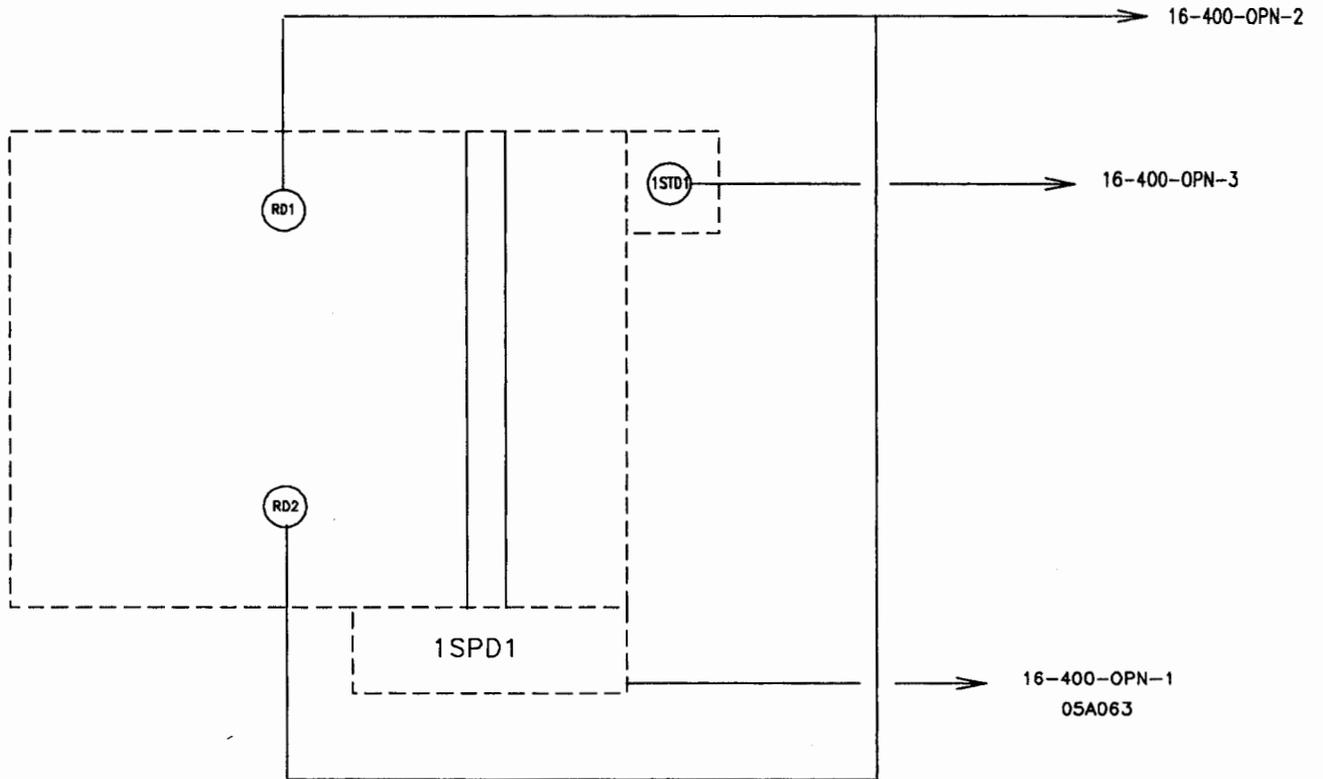
TO SANITARY SEWER
16-286-OPN-1



LEGEND
 DR - DRAIN
 FD - FLOOR DRAIN
 LV - LAVATORY
 T - TOILET
 WF - WATER FOUNTAIN

NOTES
 NOTE 1 : THIS SCHEMATIC BASED
 ENGINEERING DRAWINGS
 C-11055 & R-2823

SANTA FE ENGINEERING, LTD.			
TA 16-286 BUILDING DRAIN SUMMARY		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/11/92
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	11056-9	FIGURE 6	



LEGEND

- DT - DRAIN TROUGH
- RD - ROOF DRAIN
- PD - PIT DRAIN

NOTES

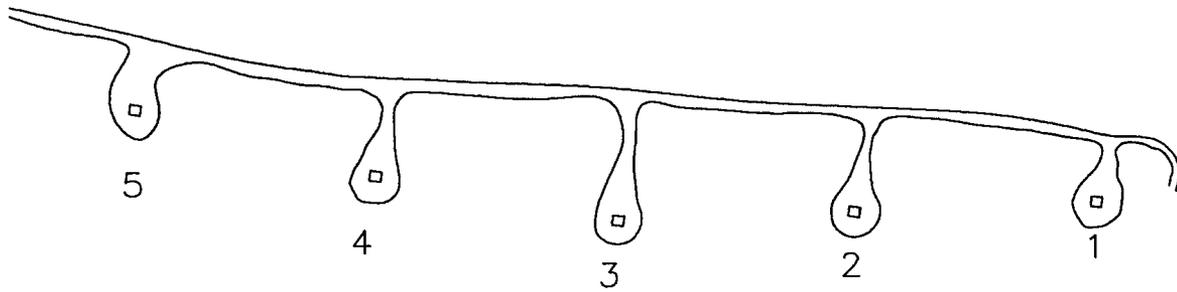
NOTE 1 : THIS SCHEMATIC BASED ON DRAWINGS FROM WX-12 AND ENGINEERING DRAWINGS C-16347, C-16350, C-16351, C-43757, AND R-2864

SANTA FE ENGINEERING, LTD.

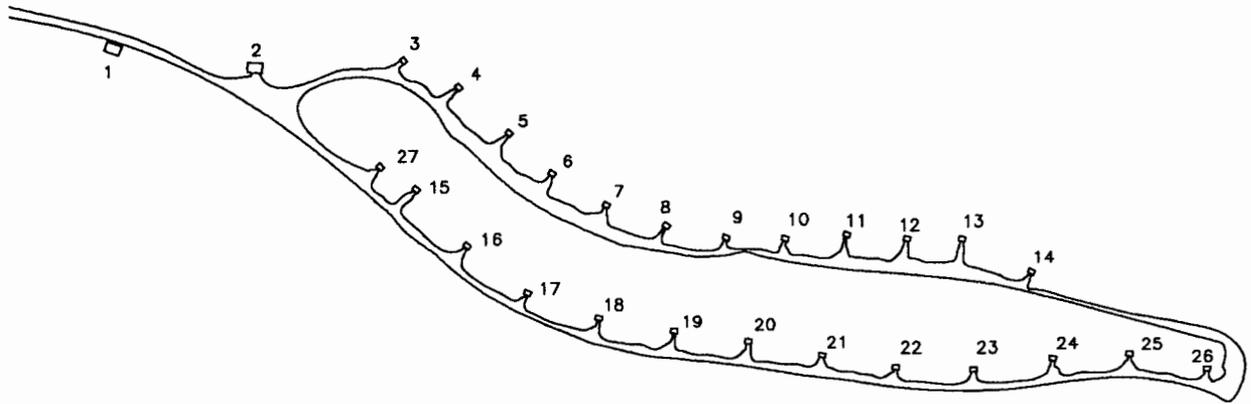
**TA 16-400 BUILDING
DRAIN SUMMARY**

DRAWN	PEB
DESIGN	PEB
CHECKED	LBA
DATE	5/11/92

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	11056-9	FIGURE 7			



SANTA FE ENGINEERING, LTD.			
TA-28 PLOT PLAN		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/8/92
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	11056-9	FIGURE 8	



SANTA FE ENGINEERING, LTD.			
TA-37 PLOT PLAN		DRAWN	PEB
		DESIGN	PEB
		CHECKED	LBA
		DATE	5/11/92
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	11056-9	FIGURE 9	